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AN ECLECTIC DELIBERATION ON ONE PROFESSIONAL
DEVELOPMENT INSTITUTE: A DESIGNER REFLECTS

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of the requirements for the

Ph.D. degree in Curriculum, Teaching, &
Educational Policy

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**AN ECLECTIC DELIBERATION ON ONE PROFESSIONAL DEVELOPMENT
INSTITUTE: A DESIGNER REFLECTS**

VOLUME I

By

Cherice Michelle Montgomery

A DISSERTATION

**Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of**

DOCTOR OF PHILOSOPHY

Curriculum, Teaching, & Educational Policy

2009

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ABSTRACT

**An Eclectic Deliberation on One Professional Development Institute:
A Designer Reflects**

By

Cherice Michelle Montgomery

The contexts in which language teaching and learning occur have changed significantly in the last decade. The challenges and opportunities inherent in these shifting contexts necessitate substantive changes in the typical practice of many world language educators. However, the “explain, train, and maintain” approaches commonly used in professional development do not adequately develop the creative skills educators need in order to successfully or responsively innovate within their local contexts. Furthermore, relationships among pedagogical interventions and teacher learning are not well understood. This qualitative study drew on design-based research perspectives and multiple theoretical lenses to explore how 21 world language educators working in K-12 and higher education experienced an eight-day professional development institute that was co-facilitated by the researcher. Data sources included institute artifacts; field notes from informal telephone conversations with participants; pre-, post-, and follow-up surveys; a post-institute evaluation report; and digital videotapes. Findings contribute theoretical and pedagogical insights about tensions in strategies that may support and constrain participants’ learning, and highlight the influence of attention, recontextualization, transliteracy, motivation, sustained reflection, and social interaction on the creative processes of learning.

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2009**

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DEDICATION

To my Savior, Jesus Christ, who has borne this burden in ways I still don't fully understand.

To my family, for listening with love and responding with wisdom to the steady stream of tears that accompanied this process.

To Ann Lawrence, for showing me that writing is truly a social process, and that sometimes the power to create change is buried in what is "conventional."

To Anny Fritzen, who taught me to find joy in the journey, who has been my cheerleader at every step, and without whom I never would have had the strength to complete this task. "*Firecracker, firecracker, boom, boom, boom!*"

To the Bartlett, Hatch, Harrington, Hogan, Jarvis, Johnson, McQueen, Owen, & Steed families for providing me with a home away from home.

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To Judy Berry-Bravo, who first suggested that I should pursue a Ph.D.

To Marcia Rosenbusch, for believing in my potential, for focusing on my strengths, for investing so much in my professional growth, and for taking the risk to trust my unconventional vision of professional development over & over again.

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To my students at SEHS who taught me truth, my students at BYU for their patience and understanding during the final stages of this process, and my students at MSU who gave my "Blue" self the energy to "keep on swimming!"

To Tonya Huber-Warring, who gave me a better education than any graduate school ever could simply by being herself, and in so doing, provided me with the professional skills and experiences that made this possible.

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PREFACE

The Test

Standardized
For the fourth time
But it didn't help
Her make sense

What was
Didn't matter
She felt

Her meaning
Reduced
Like a fraction
No remainder.

(Montgomery, 2008)

After listening to a patient explanation of the mathematics behind some standardized test data for the fourth time, it still didn't make sense. A flood of memories filled my mind—sitting at the kitchen table in tears at 10 o'clock at night as my father patiently tried to explain some equation or another for the fourth time, hours spent at my desk grading essays in English with the Analytic Rating Guide because of administrative concerns over low test scores (even though I taught Spanish), the blank faces of kids who had begun to believe that they were no more valuable than the low test scores on their papers. “I *hate* math!” I exploded.

Then a wave of fractals, Julia sets, and Escher's tessellations rose to the surface, and I realized that I was mistaken. I didn't hate *that* math. *That* math

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was beautiful, exquisite! “Well, I guess I don’t hate math, I just hate how it makes me feel sometimes!”

This discrimination of figure from ground was a liberating moment for me. Sudden insight reframed my prior experiences in a way that empowered me to understand math, my relationship to it, and myself differently. This new perspective helped me to recognize the connection between emotion and perception—freeing me from the erroneous belief that math is inherently unpleasant. It also impressed upon me the fact that emotion trumps cognition, and underscored that “how it feels” is the enduring residue of experience. I realized that changing how school felt to my students, and later, to the teachers for whose professional development I became responsible, was a critical step in helping them to learn.

This study is a snapshot of one of my many efforts to change how professional development “feels” for teachers. Although it is a story with many characters, ultimately, it only represents one perspective—mine—which means it is necessarily limited and incomplete. This is true of all stories—and of all studies. Crafted from the same raw materials (characters, key events, themes), but presented from a different point of view, each study takes on an identity and meaning of its very own. This is the nature of human experience, and weaving a coherent story from the layers of experience that students and teachers bring with them is the essence of teaching.

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KEYS TO SYMBOLS AND ABBREVIATIONS

ACTFL – American Council on the Teaching of Foreign Languages

EFL – English as a Foreign Language

ESL – English as a Second Language

ESOL – English for Speakers of Other Languages

FL – foreign language

K-12 – Kindergarten through 12th grade

LCTLs – less commonly taught languages

LOTE – languages other than English

NFLRC – National Foreign Language Resource Center

PD – professional development

PSA – public service announcement

RISE – Research Institute for Studies in Education

SL – second language

TESOL – Teaching English to Speakers of Other Languages

TL – target language

U.S. – United States

WL - world language

CHAPTER 1

INTRODUCTION

World language educators have always believed that the ability to speak a foreign language¹ is an essential skill, but the public has not always shared this perception. However, recent concerns regarding national and economic security, concomitant changes in funding priorities, and resultant shifts in national and state policy have resulted in a call for the expansion of foreign language education in the United States. New legislation has been enacted and additional funding initiatives proposed in order to accomplish this. The intent of this legislation is to strengthen the translingual proficiency and transcultural competence of U.S. citizens. These changes in federal policy have raised the visibility and the accountability of foreign language education to a national level of attention (Malone, Rifkin, Christian, & Johnson, 2003; MLA Ad Hoc Committee on Foreign Languages, 2007; Rosenbusch, 2005).

¹ The phrase *foreign language* (FL) is commonly used to refer to many different facets of language teaching and learning. Other terms for which *foreign language* is often used as a synonym include: English as a Foreign Language (EFL), English as a Second Language (ESL), English for Speakers of Other Languages (ESOL), Foreign Language (FL), heritage language, Languages Other Than English (LOTE), second language (SL), Teaching English to Speakers of Other Languages (TESOL), and world languages (WL). Although in a very general sense, each of these language teaching and learning contexts could be encompassed by the phrase *foreign language*, each term highlights important distinctions in the content, context, and challenges inherent in particular kinds of language learning circumstances (Kramsch, 2008; Larsen-Freeman & Freeman, 2008). In this study, the phrases *foreign language* and *world language* will be used to refer to language learning contexts in the United States in which students are learning an additional language other than English in a setting where the classroom is likely to be the primary and most significant source of exposure to it. Presently, the field is in the middle of a transitional period during which both the terms *foreign language* and *world language* are currently in use. Consequently, I will use them interchangeably.

Statement of the Problem

States, universities, and K-12 schools are responding to the unique opportunities this climate has created by establishing new early language learning programs, developing courses in less commonly taught languages (LCTLs), and introducing new minimum requirements for language study. They are also implementing new distance and online language learning programs. These actions have created many challenges for classroom teachers. They must suddenly develop age-appropriate curricula and pedagogy for these new programs, while bearing in mind the needs of an increasingly diverse student population and the affordances and constraints of the new technologies that will be used to disseminate much of what they develop. Meanwhile, the profession is pressuring educators to align the pedagogy manifest in these products with major shifts in the field's thinking about second language acquisition and the development of proficiency.

Implicit in these changing contexts is the need for teachers to learn a great deal, and thus, a substantial need for high quality professional development. Existing professional development, which is seldom content-specific and does not reflect these new contexts, is inadequate in meeting this need. Additionally, few studies directly address high quality professional development in world language education—particularly in light of the changing climate and pedagogy of the field. As a result, studies of professional development initiatives in world language education that grapple with these challenges are needed.

Purpose of the Study

This study investigates how world language teachers experienced an 8-day, research-based, summer professional development institute that sought to align itself with best practices in world language pedagogy in order to prepare world language educators to successfully respond to the changing professional contexts outlined above. It explores what participants said they learned, how they explained their learning, and to what factors they attributed breakdowns in their learning.

Research Questions

Design-based research perspectives offer a particularly fruitful approach to exploring key issues surrounding the provision of professional development in world language education. Design-based research seeks to obtain a deeper knowledge of learning in specific contexts, to generate theories about that learning, and to apply that understanding in iterative cycles of design in order to create innovative learning environments and instructional tools that can sustain learning in practice (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003; Shavelson, Phillips, Towne, & Feuer, 2003; The Design-based Research Collective, 2003). The context-sensitive, theory-driven, pragmatically-oriented focus of design-based research makes it an especially useful tool for designing and investigating potentially innovative responses to the changing contexts, shifting theoretical paradigms, and practical concerns currently facing world language education. This study uses a design-based approach to research to

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explore the impact of a professional development institute on teacher cognition and learning through the following research questions:

- 1) What actually happened during the institute and how well did the conception of this professional development institute align with its enactment?
- 2) What did institute participants say they learned about the content presented in the institute?
 - Designing and enacting compelling learning environments and experiences?
 - Institute content (focus topic areas, mentoring/leadership/change)?
 - Technology?
 - Other things they learned?
- 3) How did institute participants explain their learning (and/or breakdowns in their learning) with regard to this professional development experience?

Significance of the Study

The findings from this study make significant contributions to the knowledge base regarding effective professional development in foreign language education. Specifically, they deepen our understanding of how some participants experience certain kinds of content during professional development sessions. They also identify some of the mechanisms which may mediate cognition, facilitate learning, and constrain the learning of world language teachers with leadership responsibilities. It is anticipated that these findings will enable policymakers, funding agencies, and professional development providers

to make more informed decisions about the content, rationale, and processes used in future professional development experiences that seek to effect change in foreign language teaching and learning in the United States.

Preview of the Organization & Content of the Dissertation

A brief description of the content of each of remaining chapters of this dissertation appears below.

Chapter 2 reviews three bodies of literature relevant to this study—federal policy regarding world language education, pedagogical challenges that have emerged in conjunction with the enactment of these policies, and the role that professional development in world language education may play in addressing these challenges. The chapter concludes with a list of the research questions that guided this study.

Chapter 3 considers the potential contributions that design-based research perspectives may make to this study and details several challenges inherent in design-based approaches to research. It also provides information on the participants, data sources, procedures for data collection and analysis, limitations of the study, and ethical considerations of this study. The findings of the study are presented in Chapters 4-9.

Chapter 4 provides a detailed description of what happened during the institute and discusses some of its implications for this study.

Chapter 5 refers to literature on adult learning, expertise and attention, and flow experiences to identify components of and patterns in participants' compelling experiences.

Chapter 6 considers literature on transfer, multiple representations, cognitive flexibility, and visual cognition to better understand what participants say they learned from their summer institute experience—particularly those aspects of the institute that they reported as having transferred into their professional practice.

Chapter 7 uses the lens of transliteracy to interpret data regarding participants' technology use.

Chapter 8 relies on the lenses of play, arts-based representations, and motivation to understand the influence of the pedagogical strategies that participants said contributed to their learning during the summer institute which serves as the context for this study.

Chapter 9 returns to the literature on expertise, professional development, and teacher learning to make sense of the breakdowns participants reported in their learning during the summer institute.

Chapter 10 selectively explores the relationships among these various bodies of literature and their implications for the future design and study of professional development in world language education.

CHAPTER 2

REVIEW OF RELEVANT LITERATURE

This chapter outlines the policy context in which this study takes place. It begins by describing changes in federal policies and funding priorities that have impacted world language education. Next, it outlines the unique pedagogical challenges that state and local responses to these shifting federal priorities have created for classroom teachers. Finally, it explores how professional development has sought to address these challenges through research and practice. The chapter concludes with a list of the research questions that emerged from this review of the literature and subsequently guided this study.

Federal Appropriations & Foreign Language Education

Recently, foreign language education has been invoked by leaders in business, education, and government as a critical tool for enhancing national security, ensuring economic competitiveness in international markets, and addressing the growing presence of language minorities in public schools in the United States (America Competes Act, 2007; Bell-Rose & Desai, 2005; Brecht & Rivers, 2000; Chu, 2005; Clair, 2000; Committee for Economic Development, 2006; Levine, 2005; Lost in Translation, 2007; Powell & Lowenkron, 2006; Providing Resources to Improve Dual Language Education Act of 2007 (PRIDE Act), 2007; Tare, 2006). Consequently, millions of dollars have been appropriated by The Department of Education, the Department of Defense, the Department of State, and the Office of the Director of National Intelligence in support of a wide range of initiatives that seek to expand foreign language

education in the United States. These include Foreign Language Assistance Program (FLAP) Grants, the Fulbright Foreign Language Teaching Assistant Program, High School Summer Language Institutes, the National Flagship Language Initiative, STARTALK, and the National Security Language Initiative Youth Program (NSLI-Y)². These programs are designed to encourage early language learning, to increase student enrollment in language courses, and to develop and expand continuous, well-articulated, K-16 language programs. The hope is that these initiatives will augment the number of highly qualified language teachers in the United States and increase the number of citizens who develop advanced linguistic proficiency (especially in languages considered critical to the national security of the U.S. such as Arabic, Chinese, Hindi, Japanese, Korean, Pashto, Persian-Farsi, Portuguese, Russian, and Serbian-Croatian) (Brecht & Rivers, 2000; Powell & Lowenkron, 2006; U.S. Department of Education, 2007; U.S. Department of State, 2008).

Federal Legislation & Foreign Language Education

Recently Enacted Federal Legislation

New legislation such as Public Law 110-69 has been enacted to bolster these efforts (America Competes Act, 2007), and additional legislation has been proposed in both the House and the Senate to further expand the reach and impact of efforts to increase foreign language proficiency in the United States. Proposed legislative actions would provide significant funding for K-16 language learning partnerships that create articulated, standards-based, content-related,

² Grant number P229A020023, a grant similar to those listed above, from the U.S. Department of Education, Office of Postsecondary Education, Center for International Education funded the professional development institute that serves as the context for this study.

technology-infused programs which foster advanced foreign language proficiency in critical needs languages (Mandarin Language Teaching Grant Act, 2007; National Security Language Act, 2007). In order to ensure that teachers are well prepared to staff such programs, the legislation also calls for intensive summer professional development and teacher-to-teacher training programs (College Opportunity & Affordability Act of 2008; Homeland Security Education Act, 2007; S. Rep. No. 110-231, 2007; Strengthening America's Innovation and Competitiveness Act, 2007; Teacher Excellence for All Children Act of 2007; 21st Century National Defense Education Act, 2006; U.S.-China Language Engagement Act, 2007).

State & Local Responses to Federal Initiatives

In response to these signals that foreign language proficiency is a federal priority (as well as to reports that extol its academic, cognitive, economic, and political advantages), states are adding mandatory language study to their high school graduation requirements (Dounay, 2007; Kittok & Wertz, 2008), and parents and community members are pressuring school administrators to rapidly develop additional programs in elementary and middle schools. Meanwhile, more university programs are insisting that students enroll in world language courses as part of their degree requirements. Enrollments in language courses are also steadily increasing (Furman, Goldberg, & Lusin, 2006). However, these actions, in conjunction with a shortage of world language teachers (Long, 2000; Lucke, 1998; Murphy, DeArmond, & Guin, 2003; Swanson, 2008; Swanson &

Moore, 2006/2007), are creating many challenges for teachers at the classroom level.

Challenges Classroom Teachers Face

Distance Education & Online Learning

Some school districts are turning to distance education and online learning as a way of meeting the increasing demand for language teachers and programs. In many cases, these courses are implemented quickly without increasing staff or technical support. Many such programs also fail to allocate any additional resources for curriculum development, professional training, or technological infrastructure (Brecht & Rivers, 2000; White, 2006). This creates tremendous challenges for the instructors of distance learning courses who are often juggling the realities of face-to-face courses in addition to the courses they teach at a distance. Many are not provided release time to create new curriculum that is appropriate to a virtual environment. As a result, they are often forced to adapt existing curriculum so that it can be delivered through new technology without fully addressing the pedagogical realities involved in learning at a distance. This creates special problems (and opportunities) for a subject area in which regular opportunities to communicate with speakers of the target language is a primary goal—especially given that the teacher may be the only fluent speaker of the language in many classrooms. Additionally, many foreign language teachers lack deep knowledge of technology, pedagogy, and/or content. These three domains comprise what Mishra & Koehler (2006; 2007) call “technological pedagogical content knowledge (TPCK).” Absent this knowledge, it is impossible

for language teachers to develop an understanding of the dynamic, emergent interactions that take place among these three domains. Consequently, very few have the skills they need in order to use technology well in their own classrooms, much less to make adaptations under such pressured circumstances.

Little guidance is available to these teachers through the literature because so much of distance learning research in language education focuses on the affordances and constraints of particular technologies as delivery mechanisms instead of the kinds of curricular adaptations, pedagogical practices, and social relationships that are most responsive to learners' needs in such learning environments (White, 2006). This issue is of special concern to teachers of less-commonly-taught-languages, whose teaching assignments may consist of several distance learning classes, and yet for whom few pedagogical materials of *any* kind exist (Brecht & Rivers, 2000; Janus, 1998; Malone, Rifkin, Christian, & Johnson, 2003).

Less Commonly Taught Languages

There is a steadily growing trend toward programs in less-commonly-taught languages such as Arabic, Chinese, Hindi, Korean, Farsi, and Russian (Al-Batal, 2007; Furman, Goldberg, & Lusin, 2006). However, due to a shortage of language teachers in general (Swanson, 2008), and teachers of less commonly taught languages in particular, these positions are currently being filled by a relatively small pool of educators. The majority of these teachers are heritage speakers of the language they teach and many are not well-versed in the culture of students and schools in the United States (Al-Batal, 2007; Schrier,

1994; Wang, 2007). Although many of these heritage speakers are highly educated, they are often also uncertified, have limited preparation in the pedagogy of language teaching and learning, or lack classroom experience—particularly at the K-12 level (Al-Batal, 2007; Johnston & Janus, 2003; Malone, Rifkin, Christian, & Johnson, 2003; Wang, 2007).

These issues are compounded by the fact that teachers of less commonly taught languages are frequently expected to fulfill the daily responsibilities of language teaching in several different buildings, or even in different states via distance learning technologies (Schrier, 1994). Simultaneously, they are expected to organize the search for quality materials, coordinate curriculum development and program articulation, recruit new students, solve problems, and manage public relations in a variety of different contexts. Often, teachers of critical needs languages are hired by school districts with the expectation that they will provide guidance and expertise in all of these facets of program development and implementation. Such circumstances place tremendous demands on these teachers in terms of communication skills, pedagogical understanding, and technological expertise.

The core of leaders qualified to provide professional development and materials for teaching less commonly taught languages is limited due to the inexperience of many LCTL teachers, the lack of pedagogical training of LCTL university faculty, the infancy of many LCTL programs, and the relatively small pool of teachers who staff them (Malone, Rifkin, Christian, & Johnson, 2003). Consequently, teachers of languages such as French, German, & Spanish are

being called upon to provide mentoring and guidance to these colleagues (regarding community outreach, curriculum design, and program development and articulation) while maintaining the viability of their own programs.

In other words, the rapidly shifting professional landscape created by changes in national policy, federal funding, and state requirements is creating a critical need for all world language educators to learn new skills. They must learn to flexibly adapt to these changes and seek possible solutions to the challenges inherent in their local language programs. These challenges include teacher shortages, increasing enrollments, distance and online learning, and the special obstacles facing programs in less commonly taught languages. Language teachers must also develop the capacity to shoulder the professional responsibilities associated with these challenges while simultaneously learning to address a host of proficiency-related pedagogical issues.

Standards-based, Proficiency-oriented Instruction Consensus Around Central Issues in FL Education

One of the unique features of this historical moment is that there is consensus among many legislators, policymakers, and leaders in world language education around multiple issues that are central to world language education:

- 1) They advocate for language study that begins early.
- 2) They emphasize the development of advanced linguistic proficiency through long sequences of well-articulated instruction.
- 3) They encourage approaches that immerse students in the target language.

- 4) They understand that cultural competence is an essential component of proficiency in another language and, when possible, advise that programs include cultural exchanges and study abroad experiences.
- 5) They recognize that a great deal of communication flows through new technologies and recommend that teachers infuse them into the curriculum in pedagogically sound ways.

This consensus provides clear direction for states and local school districts regarding the nature, structure, content, and implementation of successful world language programs (Bush & Terry, 1997; Curtain & Dahlberg, 2004; Curtain & Dahlberg, 2000; Guntermann, 2006; Met, 1998; National Board for Professional Teaching Standards, 2001; National Standards in Foreign Language Education Project, 1999/2006; Rosenbusch, 1995; Shrum & Glisan, 2005). It also reflects recent changes in the field's understanding of central issues in world language education (Curtain & Dahlberg, 2004; Larsen-Freeman & Freeman, 2008; Magnan, 2007; MLA Ad Hoc Committee on Foreign Languages, 2007; Norris, 1999; Schrier, 2001; Shrum & Glisan, 2005).

The Standards Movement

Many of the changes outlined above are encompassed by the standards movement (National Board for Professional Teaching Standards; National Standards in Foreign Language Education Project, 1999/2006). The movement focuses on the importance of developing communicative proficiency and the value of engaging students with culturally authentic products, practices, and perspectives. It also extols the benefits of creative language use and critical

thinking across a wide range of disciplinary contexts and purposes. It views each of these as foundational to the overarching goal of authentic language use within and beyond the school community (Donato & Tucker, 2007; Gifford & Mullaney, 1997; Guntermann, 2006; MLA Ad Hoc Committee on Foreign Languages, 2007; National Standards in Foreign Language Education Project, 1999/2006).

Professional reforms associated with these ideas seek to foster contextualized, integrative learning environments that give meaning, purpose, and form to learning experiences. This is a departure from traditional approaches to language learning that focus primarily on grammatical structures and vocabulary words, and isolated skill development in areas such as reading, writing, listening, and speaking (Larsen-Freeman & Freeman, 2008; Phillips, 2008). Thompson and Zeuli (1999) explain that “. . . any policy that does not simply endorse existing practice and call for more of it—requires some learning on the part of those who must implement it” (p. 342). For many language educators, these new notions of language teaching demand a dramatic shift in the way they conceptualize what it means to know a language, how they understand their role as teachers, and the pedagogical strategies they employ in carrying out their professional responsibilities (Crookes, 1997; Gifford & Mullaney, 1997; Kumaravadivelu, 1994; Larsen-Freeman & Freeman, 2008; Magnan, 2007; Malone, Rifkin, Christian, & Johnson, 2003).

Pressure to Learn

Many language teachers who once understood language learning to mean teaching grammar through translation are now grappling with the place that

comprehensible input (Krashen & Brown, 2007), neurological research on learning and memory (Kennedy, 2006; Zhang & Wang, 2007), target language instruction, and thematic teaching (Haas, 2000) should occupy in their classrooms. Most have always relied so heavily on a textbook that the idea of curriculum is not only inseparable from it, but also synonymous with it (Crookes, 1997). This is especially important to note because on the one hand, such heavy dependence on the text as the source of curriculum means that teachers who are using textbooks that have not yet embraced these paradigm shifts will be at a significant disadvantage in trying to adjust their own teaching to accommodate the expectations of the standards. On the other hand, as several authors point out, the effects of even the most reform-oriented textbooks are determined primarily by the classroom climate in which they are used, the ways in which students and teachers use them, and the theories and philosophies that influence teachers' pedagogies (Byrnes, 1988; Crookes, 1997) as they do so. This is a problem because in most cases, neither teachers' personal experiences as language learners nor their professional training as language teachers have prepared them to teach in the target language (Schrier, 2001). Most were prepared by teaching assistants whose own professional development was limited (von Hoene, 2008), and few have ever personally experienced cognitively engaging, student-centered approaches such as collaborative learning, design-centered learning, problem-based inquiry learning, or service learning. The university training of most language teachers focuses primarily on literary analysis and interpretation, and thus fails to provide them with the content,

cultural, or pedagogical preparation they need in order to function effectively as classroom teachers (Malone, Rifkin, Christian, & Johnson, 2003). Additionally, they receive little information regarding the sociocultural contexts or political consequences of language teaching (Crookes, 1997; Magnan, 2007).

Hence, determining which of these new understandings to implement, and doing so in strategic ways that are appropriate to specific contexts and learners, will require most world language teachers to learn a constellation of completely new skills first (Peyton, 1997; Phillips, 2008). A focus on equipping teachers with new instructional strategies will not be sufficient to sustain these new practices. In order to implement them successfully, teachers must also increase their language proficiency, cultural knowledge, and ability to draw on other liberal arts as they learn new ways to organize and represent content. They will also need to attend to the ways these practices demand that the roles of teachers and learners be redefined in a fundamental restructuring of the power dynamics in the classroom. Thus, teachers need a great deal of support in expanding their teaching repertoires to include standards-based, proficiency-focused, task-oriented, communicative approaches. They also need assistance in developing alternatives to decontextualized, grammar-focused assessments that are more fully aligned with these changing forms of language teaching and learning (Campbell & Duncan, 2007).

Given this lengthy and diverse list of concerns, along with a cohort of national leaders who will soon be retiring (Schrier, 2001), it is also no surprise that leaders within the world language profession are under tremendous pressure

to learn more about how to craft compelling professional development experiences for their colleagues. The need to support emerging leaders in providing the mentoring and leadership required to effectively address the professional challenges they must confront is urgent. To guide the task of more fully understanding the nature of high quality professional development in world language education, I turn now to the literature on professional development.

Professional Development

An examination of research on professional development reveals that a variety of terms have been used to discuss the concept over the last several decades, and that their definitions vary significantly in terms of the purposes, contexts, strategies, and content to which they refer. For example, in an article regarding the preparation and certification of foreign language teachers, Lange (1983) distinguishes between *teacher preparation*, *teacher training*, and *teacher development*. He explains that teacher preparation generally involves university personnel in organizing learning experiences for preservice teachers, while teacher training tends to imply an end to the learning process once teachers are certified. Teacher development, however, revolves around the presupposition that professional learning extends throughout the length of an educator's career. More than a decade later, Norris (1999) raised similar distinctions, emphasizing that teacher development is actually an extension of initial preparation and training that strengthens language teachers' critical observation, reflection, and decision-making skills. This improves their responsiveness when they are unexpectedly faced with unanticipated challenges in their teaching. More

recently, Diaz-Maggioli (2003) adds a new dimension to these distinctions by expressing strong concern for the purposes of professional development and urging careful discrimination between professional development, evaluation, and supervision. He eschews professional development that focuses on induction, remediation, or evaluation and instead encourages professional development that emphasizes teacher growth. This conception of professional development involves an ongoing, reflective learning process that is relevant to educators' day-to-day responsibilities and promotes teaching that is responsive to students' needs. Such learning operates on two levels according to Diaz-Maggioli—an individual level that requires voluntary participation and involves professional self-disclosure and identity work, and a communal level in that it is supported by communities of practice over time. This is consistent with Vygotsky's (1978) theory that learning takes place on both an individual and a social plane with the support of more knowledgeable others. What is most interesting about Diaz-Maggioli's (2003) conceptions of professional development, however, is his call for differentiation and its accompanying implication that different models of professional development may be equally appropriate, depending on the purpose of the professional development.

Each of the above definitions makes an important contribution to understanding professional development in world language education. However, Diaz-Maggioli's (2003) thoughts are most closely aligned with the conceptions of professional development that informed the design of the professional development institute that serves as the context for this study, as well as my

subsequent investigation of it. Hence, I will use the term professional development to refer to formal, non-evaluative, professional learning opportunities for inservice educators³.

Content of Studies on Professional Development

One of the primary goals of professional development is to create improvements in teachers' classroom practice in order to improve student achievement. However, there is conflicting evidence about whether professional development actually changes teachers' thinking or influences their practice in any significant way (Corcoran, 1995; Guskey, 1994; Guskey, 2002; Thompson & Zeuli, 1999). Existing research maintains that professional development plays an important role in teacher learning (Cohen & Hill, 2000; Garet, Porter, Desimone, Birman, & Yoon, 2001; Hawley & Valli, 1999; Kennedy, 2002; Putnam & Borko, 1997; Thompson & Zeuli, 1999; Villegas-Reimers, 2003), school improvement and reform (Cohen & Hill, 2000; Hawley & Valli, 1999; Newmann, King, & Youngs, 2000; Villegas-Reimers, 2003), and student learning (Kedzior & Fifield, 2004; Kennedy 2002; Muijs & Lindsay, in press; Villegas-Reimers, 2003; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). Yet, few studies actually focus specifically on the effects of professional development on student or teacher learning (Muijs & Lindsay, in press; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007).

³ The connotations that the term *teacher development* evokes do not adequately encompass the range or variety of professional roles and responsibilities that many world language educators fulfill (including administrative, coordination, supervisory, and teaching functions). In order to emphasize the professional nature of teaching (Becker & Riel, 2000; Villegas-Reimers, 2003), to highlight the fact that world language education is comprised of teachers who do more than solely teach, and to underscore that professional growth is equally important for those whose responsibilities do not involve direct contact with students, I purposefully use the *professional development* instead of *teacher development* in this study.

Instead, most studies outline common features of professional development, describe approaches to structuring and implementing it that appear promising, and emphasize characteristics of “effective” professional development (Garet, Porter, Desimone, Birman, & Yoon, 2001; Guskey 2003; Leliveld, 2006). Such characteristics typically derive from teachers’ self-reported perceptions of the professional development collected through surveys (Hill, 2004). The surveys on which they are based are often administered immediately following the professional development. Typically, the surveys ask participants what they liked or disliked about the experience and seldom inquire regarding what teachers have learned. Thus, it is unlikely that they capture meaningful or long-term changes in teachers’ thinking, learning, or implementation of material presented during the session. Given the traditional unpopularity of professional development among teachers (Hawley & Valli, 1999), it is likely that findings from such studies actually reflect more about what is wrong with existing professional development than they do the features of professional development that significantly affect teacher behavior in any lasting way.

Furthermore, researchers such as Kennedy (1998), Shulman (1987), and Thompson & Zeuli (1999) have determined that the content and pedagogy of professional development is, in many ways, more important than its form or structure. Yet, few studies describe a rationale for professional development that goes beyond the need for teachers to learn in order to implement reforms. Those that do still often fail to offer substantive descriptions of the content and pedagogy used to operationalize such rationales. Other studies do not assess

the actual impact of the professional development on teacher cognition or teacher learning (Kennedy, 1998; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). This is especially true with respect to foreign language.

Context of Studies on Professional Development

Given the fact that prior calls for reform have focused heavily on content areas such as math and science, it is no surprise that the majority of research regarding professional development also focuses on math and science—frequently within the setting of elementary education. Professional development studies that are specific to foreign language are limited and often focus primarily on technology integration. Many also take place outside the U.S. educational system. Hence, it is unwise to generalize too much from them regarding professional development within the reform-oriented context of the United States.

Content of Professional Development in K-12 Schools

In keeping with these trends in research, professional development for foreign language teachers has not been a particularly high priority in the schools over the last few decades either. World languages have not been considered a core subject area until recently, and world language teachers have not generally comprised a very large portion of the total school staff. Consequently, they have neither been accorded the status of other “core” content areas, nor the same level of access to professional development funding and opportunities (Lucke, 1998; Rosenbusch, 2005). The nature and content of the learning opportunities provided to foreign language teachers has also been affected by the fact that many states and local districts do not have state supervisors or curriculum

coordinators for world languages. In the absence of someone to organize, plan, and implement subject-specific professional development, district and school-based professional development for world language teachers has frequently focused on general information about teaching and learning, district reforms, and school improvement initiatives. However, some argue that it is unwise to divorce pedagogy from content, noting that teaching arises out of the relationship between content and pedagogy and explaining that teaching is ultimately an act of transforming content *through* pedagogy so that learners can understand it. As Shulman (1987) explains, “To reason one’s way through an act of teaching is to think one’s way from the subject matter as understood by the teacher into the minds and motivations of the learners” (p. 16). Thus, those who wish to change teaching must do more than simply tell teachers what to teach or offer generic strategies for teaching it. Instead, they must guide teachers to a deeper understanding of their subject matter content, and help them refine their ability to choose among pedagogical alternatives in light of reforms, research, scholarship, and the specific challenges of their own teaching contexts (Kumaravadivelu, 1994; Shulman, 1987; Thompson & Zeuli, 1999). Shulman (1986) labels the understanding that results from this kind of guidance “pedagogical content knowledge” (p. 9).

Pedagogy of Professional Development in K-12 Schools

Although pedagogical content knowledge may be a critical site for effecting transformation in world language education, the reform-driven, professional development foreign language teachers are required to attend

instead typically focuses on literacy, math, and science—subjects in which schools are being pressured to narrow achievement gaps. Teacher inservice activities frequently presuppose that these gaps are due to teachers who are somehow deficient and in need of remediation (Hawley & Valli, 1999). Thus, they often employ very instrumental approaches to developing teachers' skills that typically consist of “sit-and-get” sessions in which the facilitator:

- 1) explains new regulations, policies, procedures, or instructional approaches designed to improve both teacher and student performance;
- 2) trains teachers in how to assess and document student performance; and
- 3) introduces “teacher proof” curriculum, instructional strategies, and assessments intended to produce and maintain high levels of student performance.

Although well-intended, reform-driven “explain, train, and maintain” strategies do not directly address language learning, and are incongruent with research on learning, memory, and teacher knowledge (Kennedy, 1998; Shulman, 1987). According to Newmann, King, & Youngs (2000), “...professional development has generally failed to improve teaching, because it is usually implemented in ways that violate key conditions for teacher learning” (p. 259).

Literature on andragogy⁴, a concept popularized by Malcolm S. Knowles that

⁴ Andragogy, often defined as the art and science of educating adults, is frequently contrasted with pedagogy, which is defined as the art and science of educating children. However, in these contrasts, adult learners are characterized as requiring a significant degree of autonomy in their learning, while child and adolescent learners are portrayed as needing instruction that is teacher-planned, organized, and directed. There have been numerous debates in the field about this issue. Robles (1998) points out that these perspectives are based on premises about the nature of knowledge and the purposes of schooling that the proliferation of new technologies invalidates. Even Knowles himself eventually shifted his stance on this issue. Consequently, although developmental differences clearly exist between adult learners and their child and adolescent

refers to the nature of adult learning (Henschke & Cooper, 2006), offers insight into some of those conditions. It explains that key conditions for adult learning include a rationale for the learning that makes sense to the learner, opportunities to draw on their personal experiences as resources for learning, and active engagement with content. Scholarship on andragogy also notes that adult learners require processes that allow them to exercise control over their own learning and tasks which focus on problems they regularly encounter in their professional contexts (Butler, 1992; Hase & Keyon, 2000; Henschke & Cooper, 2006; Illeris, 2003; Murphy, 2005; Terehoff, 2000). Yet Thompson & Zeuli (1999) explain, "In prevailing conception and practice, the content of professional development is largely techniques, its pedagogy is training, and the learning it promotes consists of remembering new things to try in the classroom" (p. 353).

The same is true of common approaches to language teaching which mirror "explain, train, and maintain" methodologies. In such approaches, teachers explain the structure of language to students, train them in verb conjugation, and rely on substitution drills and translation exercises as an important means of developing and maintaining language skills. However, such activities do not adequately develop the cognitive flexibility, cultural fluency, communicative proficiency, or social competence requisite for learners to successfully problem-solve or spontaneously create with language. Such

counterparts, it is important to recognize that adult learners may need more guidance than previously understood, and that autonomy, personal experience, and personally relevant problems may also play a significant role in learning in K-12 contexts. (For a deeper treatment of these issues, see Conner, 2005; Delahaye, Limerick, & Hern, 1994; Holmes & Abbington-Cooper, 2000; Merriam, 2001; Yonge, 1985)

instrumental strategies are also poorly aligned with the current professional knowledge base regarding best practices and pedagogies in world language instruction. Recent scholarship in language teaching and learning indicates that contextualized, carefully scaffolded opportunities for students to use language to collaboratively accomplish meaningful, cognitively engaging tasks with culturally rich materials in technology-infused learning environments can support students in achieving higher levels of target language proficiency (Curtain & Dahlberg, 2004; Lindholm-Leary, 2005; Met, 2004; Shrum & Glisan, 2005). Thus, professional development that relies on “explain, train, and maintain” pedagogies reinforces ineffective practices and fails to require high enough levels of cognitive and emotional engagement from teachers to develop the pedagogical reasoning skills necessary for transformation (Shulman, 1987; Thompson & Zeuli, 1999). It is therefore unlikely to produce any sort of long-term change in world language teachers’ thinking or practice (Hase & Keyon, 2000; Murphy, 2005).

The fact that teachers may seldom have the opportunity to develop such reasoning skills in professional development is of special concern because there are few job-embedded opportunities for foreign language professionals to obtain information, resources, and support regarding the content- and context-specific professional challenges they face on a daily basis. This is of particular consequence because so many serve as the sole representative of their particular target language in their departments, and some are the only language teacher in their entire school or district. This means that teachers who do not acquire this knowledge and skills through formal professional development

opportunities may not have a community of colleagues from whom they can acquire it informally. Teachers who work in schools that cannot afford to provide funding to attend professional conferences are especially disadvantaged in this regard.

In summary, the contexts in which language teaching and learning occur have changed significantly in the last decade. Issues of globalization, national security, and economics have prompted major shifts in federal funding, legislation, and policy. State and local responses to these changes have created a number of challenges for classroom teachers that revolve around issues such as distance education and online learning; less commonly taught language programs; and standards-based, proficiency-oriented approaches to language teaching and learning. World language teachers are under tremendous pressure to make changes in their practice that will address these challenges. Although world language educators have much to learn, they have few formal opportunities to learn it through subject-specific professional development that addresses the changing contexts of the profession. As a result, world language educators lack opportunities to develop the pedagogical content knowledge requisite for addressing the challenges they currently face. Due to a paucity of discipline-specific research, the relationships between pedagogical interventions that might be implemented in a professional development setting and the learning of world language educators are not well understood. Thus, it is difficult to design effective professional development that supports world language educators in addressing the needs of those they serve while responding

proactively to the pressures they currently face. These factors imply a need to experiment with models of professional development that support world language educators in developing the skills necessary for addressing the current challenges of world language education in ways that are specific to the local contexts in which they work. The following chapter discusses how design-based approaches to research are well-suited to addressing these issues because they blend attention to problems of practice with attempts to generate useful theoretical insights.

Questions of Deliberation

The purpose of this study, then, is to contribute to the limited knowledge base on professional development in world language education. Using design-based approaches to research, the study examines how a group of world language educators made sense of the summer professional development institute in which they participated⁵. In keeping with the iterative nature of design-based research, each layer of the study attempts to more fully understand the information participants provided by viewing it from a variety of angles and perspectives. Consequently, each iteration of the investigation progressively draws on additional bodies of literature as new lenses to facilitate further reflective analysis of the data. Through the following questions of deliberation, the study seeks to uncover pedagogical influences in professional development that may have larger theoretical consequences for teacher cognition and learning:

⁵ Chapter 4 provides a detailed description (Kelly, 2003) of the rationale, structure, content, and pedagogy for the institute.

- 1) What actually happened during the institute and how well did the conception of this professional development institute align with its enactment?
- 2) What did institute participants say they learned about the content presented in the institute?
 - Designing and enacting compelling learning environments and experiences⁶?
 - Institute content (focus topic areas, mentoring/leadership/change)?
 - Technology?
 - Other things they learned?
- 3) How did institute participants explain their learning (and/or breakdowns in their learning) with regard to this professional development experience?

⁶ For the purposes of this study, a compelling experience is one that captures attention on an emotional, intellectual, and/or sensory level; stimulates ongoing engagement or participation; and provokes continued reflection over time. In many cases, it also moves the "audience" to further action or change. Chapter 5 explores this topic in depth from participants' perspectives.

CHAPTER 3

RESEARCH DESIGN & METHODS

This chapter considers the nature of design-based approaches to research. It outlines characteristic features of design-based research studies, explores the potential contributions such studies make to theory and practice, and describes the manner in which I applied design-based perspectives to the study of a summer professional development institute for world language teachers.

Design-based Research Perspectives

Although design-based approaches to research take many different forms, in general, they seek to address common problems in learning by initiating, implementing, and investigating innovative practices in educational settings through iterative cycles of design (The Design-based Research Collective, 2003). Design-based inquiry uses prior research to inform the development of learning environments and experiences. The problems that are encountered during initial design phases naturally generate questions that are then explored through further, iterative cycles of design, enactment, analysis, and redesign (Bannan-Ritland, 2003; Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003; The Design-based Research Collective, 2003). These are called “design experiments.” Unlike “experimental research,” which seeks to identify and carefully control particular variables based on a pre-determined sequence of events, “design experiments” are characterized by an ongoing attention to process that responsively redesigns initial artifacts, processes, and theories in light of the

continuous analysis of feedback derived from the testing of both physical and conceptual tools (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003; Shavelson, Phillips, Towne, & Feuer, 2003; The Design-based Research Collective, 2003).

“Gero & Saunders (2000) explain, “Design emergence is therefore a process of constructing new representations of existing beliefs to make explicit features of those beliefs that were previously only implicit” (p. 4). They go on to clarify, “Designing has to be monitored in order to detect significant changes in representation that indicate the addition of new knowledge” (p. 5). Consequently, design experiments often result in the identification and documentation of contextual factors and mechanisms that influence learning. These often include items such as community discourse, curriculum, domain-specific norms, institutional structures, participatory norms, pedagogical reasoning, personal interest, policy levers, professional identity, scaffolding, or social networks (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003; The Design-based Research Collective, 2003). Sometimes, design experiments also catalyze the development of collections of materials based on those factors. Their primary purpose, however, is to abstract emerging patterns from these elements that support the development of domain-specific theories about how learning works in particular contexts (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003; The Design-based Research Collective, 2003). The ultimate goal is to share theoretical implications through interpretive frameworks that guide the design, organization, and implementation of future cycles of inquiry and instruction (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003; The Design-based Research Collective,

2003). This goal, in conjunction with the dialogic nature of design-based research (Schön, 1983), renders it an inherently pedagogical act.

In congruence with this line of thinking, design-based studies view the dialogic processes involved in designing learning environments and experiences as ongoing, pedagogical conversations between the designer, the context, and the work that teach the designer what to do next (Schön, 1983). These conversations encourage purposeful attention to the interplay between the current realities of the situation and the historical factors that have influenced them. They draw the mind to important features of these dynamic interactions, and use aesthetic and rhetorical devices to artfully communicate what these interactions reveal about both the specific design problems at hand, as well as the larger social context (Mishra, Zhao, & Tan, 1999). Each iteration of these conversations offers a new lens that helps the designer to see the relationships between pedagogical perspectives, classroom practice, and artifacts of that practice more clearly. This emphasis on relationships allows design-based researchers to hold *what is*, *what could be*, and *what ought to be* simultaneously in view (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003; Shavelson, Phillips, Towne, & Feuer, 2003; The Design-based Research Collective, 2003). These ideas significantly shaped the direction of this study in ways that will be further elaborated throughout this chapter.

The remainder of this chapter contains a brief overview of the summer institute that serves as the context for this study. Details regarding participant selection, data sources, and a description of the procedures used for data

collection and analysis accompany this overview. The chapter then outlines the iterative design cycles that guided the planning, implementation, and evaluation of the institute this study investigates. This is followed by a discussion of how design-based research might be evaluated with regard to the common research standards of reliability, objectivity, validity, and generalizability. The chapter then explains how the design of this study addresses the challenges raised by these standards and concludes with brief comments on the limitations of this study and the ethical considerations it raised. Images in this dissertation are presented in color.

Context for the Current Study⁷

The National K-12 Foreign Language Resource Center (NFLRC) at Iowa State University offers a series of summer professional development institutes for world language educators⁸ each year. The institutes generally attempt to address current issues in the field of world language education and usually result in a product of some kind. Each institute typically lasts about 8 days and serves approximately 20 participants.

This study was based on the qualitative analysis of data collected regarding 21 world language educators from K-12 and higher education institutions who attended *Mentoring, Leadership, & Change: Designing*

⁷ In keeping with design-based approaches to research (Bannan-Ritland, 2003; Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003; The Design-based Research Collective, 2003), a detailed description of the research context has been provided in the first findings chapter (Chapter 4).

⁸ The term world language educator is used here to highlight the fact that the participants in this institute were not only K-12 classroom teachers, but also state and district supervisors who did not have teaching responsibilities as well as teacher educators and researchers working in university contexts.

Compelling Experiences for 21st Century Learners (MLC 2006). The eight-day professional development institute was co-facilitated by the researcher with two other co-facilitators, and provided an especially useful context for this study because participants who attended it are professionally active individuals who are leaders in the field of world language education. As The Design-based Research Collective (2003) explains:

The need for innovation in education is ongoing, as theories of learning and teaching lead to usable knowledge about and reform of instructional practice. Therefore, development of people who can apply this knowledge (teachers, administrators, policymakers, and researchers) who understand and can orchestrate educational change in context should more explicitly drive design-based research partnerships (p. 8).

The leadership roles of the participants in this study positioned them to be tapped to provide extensive professional development for others. Additionally, Lortie (2002/1975) notes that "leading teachers may have a disproportionate influence on the specification of the curriculum--their decisions influence others" (p. 140). Consequently, understanding the perspectives of participants in this study seemed especially important in providing guidance and recommendations to the profession.

Participants

Criteria for Inclusion in the Study

All 23 world language educators who voluntarily participated in the grant-funded summer institute that I co-designed and co-facilitated at the National K-12 Foreign Language Resource Center (NFLRC) at Iowa State University in 2006 were invited to take part in this study through e-mails and letters sent by U.S. mail. I contacted the NFLRC to obtain updated contact information for as many

participants as I could, and then attempted to locate participants whose contact information was no longer accurate using the internet. I obtained contact information from school websites, conference programs, and messages posted by participants on professional listservs.

In August of 2007, I sent a letter via e-mail and U.S. mail requesting permission from all 23 potential participants to use the following items for research purposes (see Appendices DD & EE):

- artifacts produced during the institute
- institute evaluation forms and reports
- pre-institute surveys
- post-institute surveys
- follow-up surveys
- follow-up interviews
- photographs taken during the institute
- videotapes made during the institute

I followed up with telephone calls to participants in August and September of 2007. The purpose of these calls was to confirm that participants had received the invitation to participate in the study, to explain the study, and to answer any questions they had. I was able to speak personally with all but 5 potential participants, whom I tried to contact both at home and at work on multiple occasions over a period of several months. Nonetheless, 4 of those 5 individuals returned signed consent forms, and one communicated with me via e-mail regarding questions she had. The fifth person did not respond to any of my

communications, and one additional person with whom I was able to speak by telephone did not return a signed consent form. Everyone but those two individuals accepted the invitation to participate in the study.

Sample

Consequently, the convenience sample was comprised of 21 world language educators (2 males and 19 females) representing 18 states from different geographical regions of the country, including the Northeast (ME, NJ, VT), the Midwest (IA, KS, OH, NB, MI), the South (GA, KY, SC, TX), the Southwest (CA, CO, NM), and the Northwest (AK, WA, WY). Drop-in guests and visitors who attended limited portions of the summer institute (such as for a few hours or for a single day) were excluded from the study. The size of this group of participants was appropriate for the design of this study because it was large enough to provide a diverse array of contrasting perspectives on the activities being studied, but small enough to allow the researcher to be thorough.

Demographic Data on Participants

All participants resided in the United States, were fluent speakers of English, and had been practicing teachers for at least 8 years⁹ at the time the institute was held. The majority of the participants were experienced teachers. Eighty-six percent (18 participants) had more than 12 years of teaching experience, 52% (11 participants) had more than 18 years, and 14% (3 participants) had taught or worked in the field of education for 33 or more years.

⁹ Several institute participants did not fully complete all of the demographic portions of institute applications and surveys, or their responses to demographic portions of surveys differed. Consequently, the information in this section is as accurate and precise as was possible within the confines of the data I possessed.

The full spectrum of grade levels was reflected in participants' professional experience—at least 8 participants had experience at the PreK-5 level, 11 at the middle school level, 21 at the high school level, and 10 at the post-secondary level. Eighteen participants also had experience working at more than one level (PreK-5, 6-8, 9-12, Administrative/College/Other). Participants were well-educated and professionally involved. Nineteen participants held advanced degrees, and at least 18 participants were members of three or more professional organizations. Of those 18 participants, 8 were members of five or more professional organizations. Participants also represented a variety of languages (8 French, 4 German, 1 Russian, and 10 Spanish) and at least 2 participants taught more than one language. At least 10 participants also spoke one or more languages other than English in addition to the language they taught. Several participants were also providing mentoring, professional development, or supervision for teachers and programs of less commonly taught languages such as Chinese, even though they were not necessarily speakers of these languages. Additionally, at least 2 participants were heritage speakers of the languages they were teaching and many had traveled or studied abroad in countries where their languages were spoken.

Data Sources

I collected the data for this study from a variety of sources during the planning, implementation, and evaluation of the institute. Each of these three phases of institute work fulfilled a different function and thus, constituted a distinct design cycle (see Figures 3.2, 3.3, and 3.4). The information I collected

during these design cycles included artifacts produced by participants in conjunction with the institute (such as the institute wiki); institute evaluation reports; pre-institute, post-institute, and follow-up institute surveys; extensive field notes from informal telephone conversations with participants; interviews conducted with institute leaders and group facilitators; photographs taken during the institute; and videotapes recorded during institute activities. Prior to beginning this study, I obtained informed consent for the use of existing data, as well as for the collection of new data. Each of these data sources and their contributions to the study are described in more detail below.

Artifacts Produced by Participants in Conjunction with the Institute

The artifacts I examined during the study were comprised of materials from the institute binders, work produced by participants during the institute (such as PowerPoint™ presentations and websites), and content from the institute wiki. They provided information about the content and structure of the institute, as well as about participants' thoughts and feelings prior to and during the institute. I used them to construct a detailed description of the rationale, structure, content, and pedagogy employed during the institute.

Post-Institute Evaluation Report

A publicly available post-institute evaluation report was prepared by the Research Institute for Studies in Education (RISE) at Iowa State University for the purposes of program evaluation (Kemmis 2006). It contained demographic data on participants and summarized their responses to pre-institute and post-institute surveys. The report included statistical analyses of participants' self-

ratings regarding their knowledge and skill levels with respect to each of the focus topic areas before and after the institutes.

Narrative responses taken from the surveys that were included in the report provided information on participants' perceptions of themselves as mentors and leaders, their understanding of topics addressed, their opinions about the pedagogical techniques used during the institutes, and the nature of their professional engagement. I used this report to obtain data regarding the degree to which self-reported changes in participants' knowledge and skills following the institute was statistically significant. I also used it to help me identify potential catalysts of those changes that could guide a more fine-grained analysis of raw survey data, field notes, and interviews with participants.

Pre-institute Survey

The pre-institute survey was co-developed by the Director of the NFLRC and institute leaders for the purposes of providing institute leaders with baseline information about participants' knowledge, skills, needs, and concerns prior to their participation in the institute. Institute leaders then used this information to finalize plans for the institute and customize them to better meet the needs of participants.

The survey consisted of 10 questions, 5 of which called for open-ended responses. In addition to basic demographic information such as how long participants had been teaching or working in the field of education, the survey inquired about four major topics—participants' technology use, their perspectives

regarding compelling experiences, their views on mentoring and leadership, and their prior experience with the focus topics of the institute.

Participants were asked to list the technologies to which they had easy access at home, to mark the technologies to which they had easy access at work from a checklist of possible options, to describe some of the things they did with the technologies to which they had access in each context, and to note the frequency with which they used a variety of new technologies for both personal and professional purposes by marking *I don't know what this is*, *Once a year or less*, *Monthly*, *Weekly*, or *Daily* next to each individual item of a list of technologies.

The survey also asked participants to define the phrase *compelling experience*, to discuss an experience that they had found personally compelling, and to describe a compelling experience they had attempted to create for students or colleagues¹⁰. Additionally, participants were given a series of incomplete statements about a variety of activities related to mentoring, leadership, initiating change, and several other institute topics, and were asked to rate the frequency with which they engaged in these activities on a scale which consisted of the following five options: *Less than once a year*, *At least once a year*, *At least once a month*, *At least once a week*, and *At least once a day*. The final question on the survey asked participants to assess their skill level regarding a list of topics that the institute would address. Choices included: *I am unfamiliar with key concepts and principles*, *I can list key concepts and principles*, *I have experimented with the application of key concepts and*

¹⁰ Compelling experiences are defined and discussed at length in Chapter 5.

principles, I can model how to apply key concepts and principles, and I can correct misconceptions others have about key concepts and principles. I used this data to obtain a baseline regarding participants' prior knowledge, understanding, and skills in applying institute topics to their professional contexts.

Post-Institute Survey

The post-institute survey was co-developed by the Director of the NFLRC and institute leaders for the purposes of program evaluation. The survey consisted of 10 questions, 7 of which called for open-ended responses. It was organized around the same basic categories as the pre-institute survey (technology; compelling experiences; mentoring, leadership, and change; and other institute topics). Several questions on the survey were purposefully designed to parallel specific questions from the pre-institute survey in order to assess changes in participants' knowledge and skills regarding institute topics.

Consequently, participants were asked to describe how they anticipated that their technology use might change as a result of their participation in the institute. They were also asked to define the phrase *compelling experience*, to describe a compelling experience they had during the institute, and to outline a compelling experience they hoped to create for students or colleagues. Several questions asked participants what they understood following the institute that they did not understand prior to it, what processes or strategies had been helpful in facilitating their understanding, and what parts of the institute were least valuable to them. Participants were also given the opportunity to assess their experience with the same list of institute topics they had been given on the pre-

institute survey by marking one of the following responses: *I am UNFAMILIAR with key concepts and principles. I can LIST key concepts and principles. I have EXPERIMENTED WITH THE APPLICATION of key concepts and principles. I can CORRECT MISCONCEPTIONS others have about key concepts and principles. I can MODEL how to apply key concepts and principles.* I contrasted this information with participants' responses to the pre-institute survey as a means of identifying changes in their understanding of institute topics and/or shifts in their perspectives. I also used participants' responses to help me construct a deeper understanding of how they had experienced the institute, as well as to identify important elements of their experiences that the survey questions did not ask about directly.

Follow-up Institute Survey

The follow-up institute survey was co-developed by the Director of the NFLRC, institute leaders, and the Assistant Director of the Research Institute for Studies in Education (RISE) for the purposes of evaluating program impact. The survey consisted of 18 questions, 7 of which called for open-ended responses. The first four questions asked participants to rate their communications with institute leaders and other participants using *Too little, About right, Too much, and Not applicable*. Questions 5 through 9 asked participants to rate their engagement with the NFLRC, the professional utility of the institute, the degree to which participation in the institute influenced their classroom teaching, and about other topics designed to elicit feedback on the work of the NFLRC (such as whether or not they would recommend NFLRC institutes to other educators).

The six choices for rating these items were: *Strongly disagree*, *Disagree*, *Somewhat disagree*, *Somewhat agree*, *Agree*, and *Strongly agree*.

The survey also contained open-ended questions about which institute experiences had the greatest impact on participants' teaching in the year following the institute, how institute experiences with technology had influenced participants' teaching, and how they had shared the concept of compelling experiences with colleagues. Participants were also asked to explain what a picture of the cultural triangle¹¹ from the National Standards (National Standards in Foreign Language Education Project, 1999/2006) meant to them (see Figure 3.1).

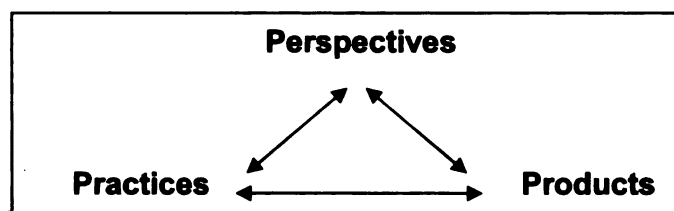


Figure 3.1. The cultural triangle from the National Standards (National Standards in Foreign Language Education Project, 1999/2006).

Participants also rated the degree to which a lengthy list of instructional strategies had influenced their understanding of the concepts presented during the institute using the following five options: *Don't remember the strategy*, *No*

¹¹ Culture is one of the five goal areas from the National Standards for Foreign Language Learning. The Standards note that culture is comprised of three crucial components: products, practices, and perspectives. The word "*products*" refers to artifacts produced by a culture (such as art and artesanry, clothing, food, literature, music, etc.). The word "*practices*" encompasses cultural customs (including daily routines, holiday traditions, and patterns of social interaction). The word "*perspectives*" addresses the beliefs, values, understandings, and world views that motivate, guide, and shape life within the culture. The standards emphasize that in order to gain a deep understanding of a culture, it is not enough to understand its products, practices, or perspectives in isolation. The cultural triangle is especially important because it emphasizes that students and teachers must attend to the dynamic, relational nature of these three elements.

impact, Limited impact, Some impact, and Powerful impact. Participants were then given that same list of strategies and asked to mark which ones they were experimenting with in their classrooms. Additionally, they were given space to describe a compelling experience they had created for students or colleagues, to list the strategies they had used to make it compelling, and to note what indications they had that it was compelling for their intended audience. The survey also inquired regarding what participants now understood about teaching, learning, mentoring, leadership, and/or change that they did not understand immediately following the institute, and asked them to list any questions they still had about the concepts addressed during the institute. I used this data to refine my understanding of contrasts between the pre- and post-institute surveys, to further illuminate comments participants made on the pre- and post-institute surveys, and as a source of insights regarding the longer-term effects of the institute on participants' professional thinking and actual practice.

Extensive Field Notes from Informal Telephone Conversations with Participants from both Institutes

I telephoned each potential participant in order to confirm that they had received materials explaining the study, and to answer any questions they had. During these phone calls, I asked participants about their current professional activities and how they related to what participants remembered of their experiences during the institute. I took extensive field notes during these phone calls, which ranged from 5 to 49 minutes in length, with an average length of about 33 minutes. The field notes often included verbatim transcriptions of statements made by participants during the conversations. I used field notes

from conversations with participants who signed consent forms to validate and interpret data from the institute evaluation reports and participants' survey responses.

Semi-structured Interviews with Participants

I conducted a semi-structured interview with a participant who had participated in both *Mentoring, Leadership, & Change 2006* as well as in the *Mentoring, Leadership, & Change 2003*¹² institute which I also co-facilitated. Her ability to contrast her experiences in the two institutes also helped me to identify features of the 2006 institute that were especially important to explore. Additionally, I used her comments as sources of alternative interpretations of some of the findings revealed by my preliminary data analysis. There was one other participant who also attended both institutes. Although I also tried to contact this participant multiple times by telephone and e-mail in order to schedule an interview, I was unsuccessful in doing so. Nonetheless, the interview with the other participant provided useful insights, so it is included in the study with the recognition that it represents only one participant's perspective.

Photographs Taken During the Institute

A limited number of photos were taken during the institute for use on brochures, publications, and the NFLRC website. I used them to support the construction of a detailed description of the institute.

¹² Although the 2003 institute is not the focus of this study, the comparisons and contrasts this participant drew between the 2003 institute and the 2006 institute during the interview helped to explain some of the findings from the 2006 institute. Consequently, even though she is the only participant whom I formally interviewed, I have included her interview as an important source of data that was not available from any of the other data sources.

Digital Videotapes of the Institute

The Director of the NFLRC videotaped a majority of the institute each day, resulting in a collection of 18, one-hour videotapes. I used these tapes to verify and triangulate the detailed description of the rationale, structure, content, and pedagogy of the institute, as well as to corroborate and further illuminate data from other sources.

Data Collection

Pre-institute, post-institute, and follow-up institute surveys are commonly administered as part of the NFLRC's normal evaluation process, which has been designed to document the impact of summer institutes on the world language profession. Videotapes are made during the institutes for archival purposes, as well as for the development of future professional development materials. Consequently, the bulk of the data for this study was collected as a regular part of the design, implementation, and evaluation of the institute.

I received IRB approval to begin this study in July of 2007. Then, in preparation for this study, I contacted the Research Institute for Studies in Education (RISE) at Iowa State University requesting permission to use the survey data. They informed me that I needed to obtain written permission from the National K-12 Foreign Language Resource Center to use it for research purposes, and informed consent from participants, which I did (see Appendices DD, EE, and FF). I then requested access to the data from RISE, who provided copies of the institute evaluation report and all of the survey data electronically. In the meantime, the NFLRC mailed the videotapes to me. I generated the

majority of my field notes during informal telephone conversations with participants in August and September of 2007, and added to them as I had other conversations with participants during the course of the research. I conducted the semi-structured interview in November of 2007 at ACTFL, a professional conference for language educators. The remaining data pertaining to this study was already publicly available, or already in my personal possession as a result of my role as a co-designer and co-facilitator of the institute. Publicly available items included the institute wiki and the institute evaluation report, while items in my personal possession included institute binders, materials, and photographs.

Data Analysis

Design Cycles

After obtaining informed consent from participants in this study, I employed a collection of qualitative methods to examine how they made sense of their practice, their learning, and the professional development in which they participated. I used a design experiment approach to conduct a qualitative analysis of data that was generated during the conception, enactment, and evaluation of the institute. As mentioned previously, each of these three phases of institute work fulfilled different functions and generated different kinds of information as a result. Thus, each constituted a distinct design cycle (see Figures 3.2, 3.3, and 3.4). Data was collected from each of these design cycles, which spanned a five-year period (2003 to 2007) and encompassed pre-institute, during institute, and post-institute activities.

The first column of each figure lists the data sources that were used to inform the design of that phase of the institute work. The actions and products yielded by information gleaned from these data sources are shown in the second column of each figure. In the third column of each figure, a list of artifacts generated in conjunction with the actions taken in the second column appears. These artifacts served as sources of feedback and enabled data-driven evaluation of the efforts listed in the Enactment Column (Column 2).

New Combinations Make New Possibilities Visible

Figure 3.2 demonstrates the cyclical nature of the design and planning of the 2006 institute. It shows that the original conceptualization of the 2006 institute was grounded in information gathered from the New Visions Conferences. When this information was combined with additional ideas gathered from research and scholarship, it resulted in a Mentoring, Leadership, and Change summer institute in 2003. The data obtained from participants at the conclusion of the 2003 was gathered in an external evaluation report prepared by the Research Institute for Studies in Education (RISE). When information from this report was combined with information from other sources, such as doctoral seminars, research, scholarship, and current national trends, it made a completely new set of possibilities visible to institute leaders that were not evident in previous design iterations. These new ideas were used to determine how the subsequent institute offered in 2006 would be structured, as well as the nature of the participants who would be invited to attend. The application materials submitted by potential 2006 institute participants fed the decision-

making processes involved in the development of pre-institute tasks and materials. As participants completed these tasks in preparation for attending the institute, the products they created provided institute leaders with more new information that caused us to revise our original conceptions of the institute once again. This yielded a need for additional information which was enacted in the form of a pre-institute survey.

Thus, Figure 3.2 illustrates the iterative nature of the design of this professional development institute. This figure also highlights that the decision-making involved during the planning phase was based on a steady flow of access to input from new sources of information. This ongoing flow of information was constantly changing, aggregating, and combining, and altered the decision-making options available to institute leaders by enabling them to see new possibilities of which they were not previously aware. This led to a continual redesign of the way institute leaders had originally conceived and planned to enact the 2006 institute. It is also important to note that ALL of this design and redesign occurred over a 7-year period prior to the point where participants actually attended the institute in the summer of 2006. This is especially critical because so many studies of professional development do not begin until the point the professional development was enacted. In failing to consider the planning phase of professional development sessions, such studies effectively render invisible a myriad of decision-making points that occur prior to the professional development which may have substantial bearing on the actual enactment phase.

Information Shapes Actions

Figure 3.3 illustrates that information gathered from participants shaped actions taken by institute leaders during each iteration of the enactment of this institute. In a parallel fashion, the manner in which institute leaders acted on each of these sources of information provided by participants resulted in artifacts that then became new sources of information that institute leaders could examine in preparation for future decision-making. Put another way, the design cycle of the enactment phase of this institute formed a feedback loop in which each action resulted in one or more products that provided feedback on the action which informed the next set of logistical and instructional decisions.

Actions Yield Products Which Generate New Questions

Figure 3.4 demonstrates that initial institute evaluation activities (such as post-institute and follow-up surveys) which occurred during the first iteration of the assessment cycle resulted in a product (the institute evaluation report). This product, when combined with other sources of information, generated new questions. These questions led to further investigation (i.e., the 2003 pilot study) which provided new information that led to still more questions. These questions became the foundation for a program of research. In other words, this figure illustrates that when a design-based approach is applied to program evaluation, the iterative nature of such an approach can initiate, implement, and sustain an ongoing program of research.

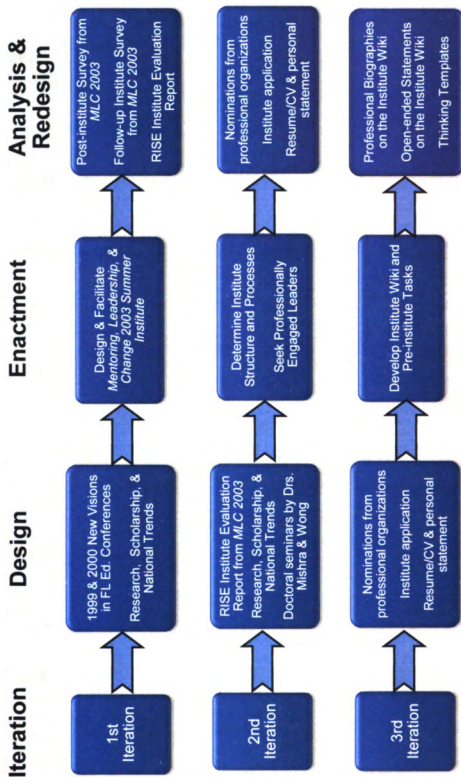


Figure 3.2. Design Cycle 1: Planning the structure & content of the 2006 institute.

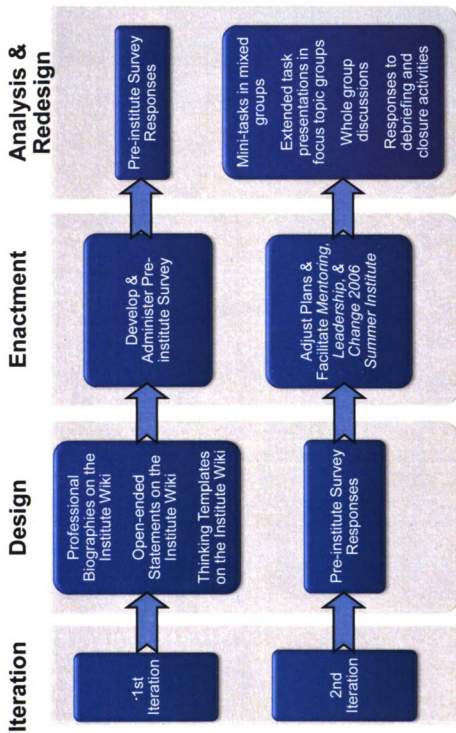


Figure 3.3. Design Cycle 2: Implementing the 2006 institute.

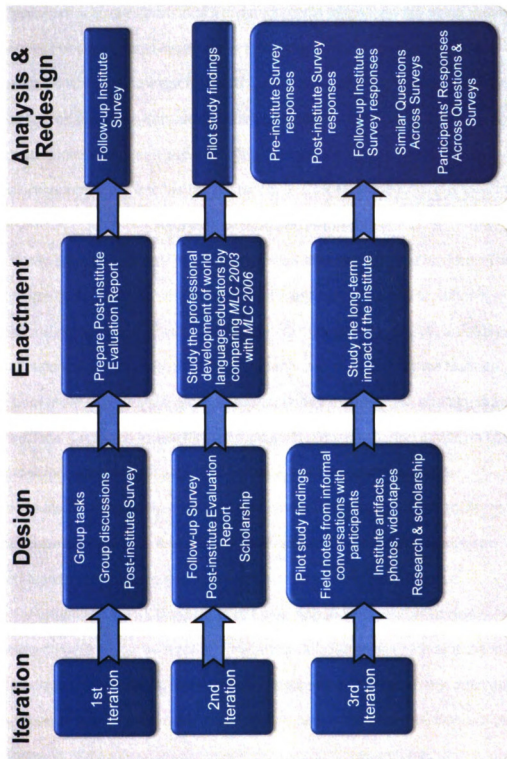


Figure 3.4. Design Cycle 3: Assessing the 2006 institute's impact.

When read horizontally, each figure demonstrates how data collection and analysis from a single iteration of the design cycle influenced the design and enactment of subsequent iterations in the cycle. Taken together, the three figures also illustrate how each design cycle built upon the previous one. Thus, these figures provide a detailed picture of the complex, iterative nature of the processes involved in designing and facilitating the summer professional development institute that serves as the context for this study.

Analysis of Institute Artifacts

My analysis of these design cycles was also iterative and layered. The first stage of the analysis sought to answer Research Question 1: *What happened during the institute?* Consequently, I sought to generate a detailed description of the rationale, structure, content, and pedagogy of the institute.

In order to prepare a detailed description of the rationale and structure of the institute, I referred to a variety of materials. These included materials used to promote the institute on the NFLRC website, the printed materials that participants were provided in the institute binder, statements made on the home page of the institute wiki, and electronic documents sent to participants and group facilitators (such as letters welcoming them to the institute).

I examined the institute schedule (see Appendix G) and materials contained in the binder in order to construct a detailed description of the content and pedagogy used during the institute. I then cross-referenced this information with other electronic documents generated in conjunction with the institute (such as letters to participants, PowerPoint™ presentations, worksheets, and e-mail

correspondence with the other institute leaders). By doing so, I hoped to ensure that the description was a faithful representation of what had actually occurred during the institute, rather than solely reflecting what the institute leaders had intended.

Analysis of Institute Photos

I examined the photos from the institute to which I had access to see if they raised any questions or confirmed any findings. Since I only had 10 photos in my possession and no additional ones were posted on the NFLRC website (as is customary), this portion of the analysis was not particularly helpful. Consequently, I turned to digital videotapes recorded during the institute for additional information.

Analysis of Institute Videotapes

I triangulated the data mentioned above with an analysis of 18, one-hour videotapes from the institute. The purpose of this analysis was only to outline the activities which took place during the institute and to note the pedagogical strategies used during each activity. It was not used to make inferences about what participants were learning. Since most of the institute activities lasted for at least 5 to 10 minutes, I decided to examine each videotape in 5-minute increments. I fast-forwarded through each of the videotapes, pausing every 5 minutes (as indicated by the counter on the digital videocamera) to play them. I recorded what was occurring on the videotapes at each of these points in time in terms of content, structure, and pedagogy. When I stopped the tape, I noted the primary topic with which participants were engaged (i.e., conceptual content

regarding mentoring, leadership, or change; design frames such as architecture or music; focus topic information such as differentiated instruction or teacher preparation; or literacy and technology). I also listed the strategies that institute leaders were using to engage participants with this content, and recorded whether participants were working in pairs, focus topic groups, mixed groups, or as whole groups. This process allowed me to expand incomplete information, to correct errors, and yielded a representative picture of the actual content, sequence, and pedagogy of institute activities.

Analysis of Institute Evaluation Report

In the second stage of the analysis, I considered the findings from a 46-page, publicly available evaluation report on the institute [prepared by the Research Institute for Studies in Education (RISE) at Iowa State University] to determine what participants said they learned from the professional development in which they participated (Research Question 2) and to what factors they attributed that learning (Research Question 3). Wilcoxon signed-ranks tests on matched pairs revealed statistically significant ($p < .01$) increases in participants' self-ratings of their knowledge in 8 of the 19 content areas that were evaluated (Kemmis, 2006). It was unclear whether these increases reflected the fact that participants felt they knew less about these topics than the others addressed during the institute (thus accounting for increases in their learning), or whether these increases were correlated with the pedagogical approaches used to present these particular topics. Consequently, I sought additional details from the narrative portions of the report.

I analyzed the narrative data from the evaluation report by open coding it according to emergent categories. The goal was to identify recurring themes and patterns in participants' responses that could serve as criteria for determining what merited further exploration (Maykut & Morehouse, 1994) in participants' raw pre- and post-institute survey data. I took care to note turning points, statements about changes in perspective, and factors to which participants attributed these shifts. In participants' responses to questions about what they had learned, five topics were mentioned frequently: 1) new perspectives regarding the needs, interests, and learning styles of students; 2) the importance of adjusting instruction to the individual needs of those they serve; 3) the value of making layered connections across subject areas and of using multimedia to dimensionalize classroom experiences; 4) the foundational nature of personal relationships and professional networks in mentoring and leadership; and 5) the idea that a leader's ability to initiate and sustain change depends on the ability to view things from multiple perspectives, create buy-in, offer choices, and make room for multiple voices.

Participants attributed their learning to both institute content and processes. I looked for evidence in the evaluation report (dis)confirming the value of the strategies participants had noted. I reasoned that if a strategy had been especially valuable, participants would mention it when asked to describe compelling experiences they had during the institute, would refer to it when outlining compelling experiences they hoped to create for others following the institute, or would name it when listing strategies that had facilitated their

understanding. Hence, I examined relevant sections of the 2006 report (Kemmis, 2006), highlighting each strategy that was mentioned in a different color. I then aggregated the results into a single list. Strategies mentioned most frequently included conceptual layering, design frames, field trips taken during the institute, hands-on creation of different products (such as metaphors, podcasts, videos, etc.), learning centers, modeling of institute concepts, multimedia, multisensory examples and materials, reflection and synthesis tasks (including discussions and graphic organizers), responsiveness to participants' needs, and triangles. Several participants also noted that specific topics addressed during the institute had enabled them to "see" new ways to approach their mentoring and leadership responsibilities. These included filmmaking, newscasting, and marketing.

Analysis of Field Notes

In order to more fully understand participants' comments and experiences, I examined data from extensive field notes taken during informal telephone conversations with 14 participants. The field notes often included verbatim transcriptions of statements made by participants during the conversations, which ranged from 5 to 49 minutes in length, with an average length of about 33 minutes. I made an initial pass through this data, highlighting portions that seemed particularly relevant in different colors (pink for pedagogy, yellow for relationships, etc.). As I read through the field notes, I also used the *Insert New Comment* feature in Microsoft Word to record the questions that occurred to me and to associate my reflections with specific sections of participants' comments (see Figure 3.5 for a representative example).

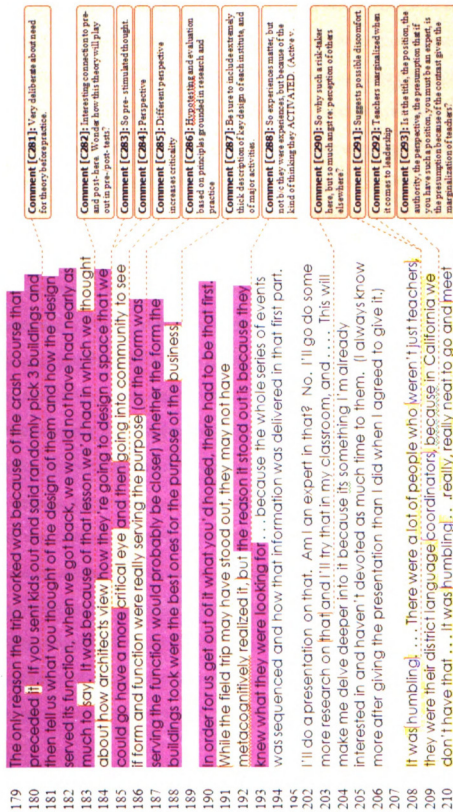


Figure 3.5. Screenshot of preliminary reflections on field notes taken during informal conversations with participants one year following the institute.

I then used a process of open coding to identify recurrent themes within the data. I copied text directly from my field notes into a spreadsheet, using the preliminary notes and reflections described above to guide my coding of this text (see Figure 3.6 for a representative example). I also allowed new categories to emerge. These categories included topics like *experts, funding (for equipment, professional development, and programs), motivation, overcoming professional barriers and challenges, professional activity (professional development and projects in which participants were involved)*. In order to accommodate these new categories, some iterative recoding of previously coded portions of text was necessary. Once I had finished, I tallied the number of responses in each category and compiled the responses from each category into a single cell for easy reference. I then generated a summary of each category, as well as of the key information each participant had provided during my conversations with them. Finally, I compared the emergent codes with those from my analysis of the evaluation reports and videotapes and revised my master list of codes based on the new data. For example, although only 6 participants mentioned the idea of expertise in their survey responses, 9 additional participants did so during the informal telephone conversations. This suggested that expertise might be a useful category. A category I had labeled *knowers* contained 8 additional responses. This provided growing evidence that *expertise* was emerging as a viable category and should also be added to my master list.

A		B		C		D		E		F	
Code (# instances)		Summary		Compiled Responses		Participant E		Participant G		Participant M	
1	Knowers - 8 + CM	Isolation (Participant F, 400-413), changes self-perception of capacity and value - Selected feel special, honored, to be chosen affirms worth, gives access to social capital, select group, confidence, skill development, status		Teachers just want to feel chosen special. An honor to be chosen. You're chosen, we think you're worthy. Flattered, gives you confidence (Participant A, 33, 38). Response has been overwhelming - move into a different room. (her		The resources there and the wealth of talent I had been to a previous institute and I don't know if that colored my experience there or not. I forgot a lot of things that you think you know because it is going to be different. I went through a lot of uncomfortableness		I don't know about expertise, I have a lot of involvement. I'm still working on increasing my own expertise and that's part of why I'm so involved. (Participant G, 7-8), the focus there for me was really on truly designing instruction rather than on		I call it category pile. I've used that one in my class. Then you could have a dialogue on these things. I think that, uh, the other thing I would say, is giving us an opportunity to try a lot of things so we had a little bit of confidence to go out and spread the word. Because	
		Modeling is an important part of mentoring (Participant M, 136-147; Participant E - We should model relationships, process - Chance, 794-797, immediate practical application - Participant F, 87-91). Modeling facilitates recognition of feasibility		Because, as there's pressure being applied to the side, there would be some sort of motivation—let's say intrinsic—why would the teacher want to know about this or care to know about this to want to consider this pressure, and there's going		same one - (the architecture, having the key principles) explained to us, a crash course in architectural theory, and then a chance to go experience it and then come back and debrief on that experience, the		But sometimes it shifts you so much you can't travel that same path. You have to go to a new parallel path now that you have this information—how dare you not share it. Particularly along the lines of what you kept pounding it into our heads, 21st Century		I have a nice part of that creative class they talk about. The Rise of the Creative Class. She did an animation with the Lord of the Rings in New Zealand	
3	Relationships - 8 + CM	Beliefs connected to identity, won't bear them to a stranger (Participant C, 168-169). Presenter gives access and entry to community (Participant C, 174-179), presenter brings experiences, expertise, role to share (Participant C, 184-186). Length of the session,		And, no one likes to bear their beliefs to a complete stranger, or they do it very, very guardedly. (Participant C, 168-169). And, here's an interesting thought. Part of the role of the presenter—let's use (name of colleague) as an example—[unintelligible]		Some of those things are important to, because I guess as mentors and role models in whatever, whatever institution we're working for, whether we're at the university level or elementary level or high school level, we're trying to model relationships, and		[Name of colleague] and I are part of the leadership team. You have to have university people in charge of that. (Participant G, 70-71). [Name of another colleague] - who's our person who is the Executive Director, she agrees with me in certain places		I interviewed the title ... she interviewed the title ... kids, 7-8 years old, and then	

Figure 3.6. Screenshot of representative open coding worksheet for field notes.

Analysis of Pre-, Post-, and Follow-up Institute Surveys

In order to obtain a more fine-grained picture of what had occurred during the institute, I next analyzed survey data from each of the design cycles separately. This data consisted of pre-institute, post-institute, and follow-up institute surveys that were administered to participants through an online survey tool called Survey Monkey (<http://www.surveymonkey.com>). I downloaded these survey results into an Excel spreadsheet. When I did so, Survey Monkey placed participants' responses to each survey question in separate worksheets. This allowed me to focus on participants' responses to individual questions.

I coded each survey separately, question by question (see Figure 3.7 for a representative example). Using simple frequency tabulations, I attempted to uncover patterns in the survey questions containing demographic and numerical data. For some questions, I made note of where the largest clusters of responses fell by bolding those numbers in the spreadsheet (see Figure 3.8).

A Response #	B Participant Survey Responses	C 11 - Relationships	D 3 - Hard	E Context	F 3 - Problems
1 33 Responses	changed their relationships with one another, made them think/process, took time-- happened over several days (cook time) = need for longer PD. "I didn't know it was compelling at the time" (Post5 19); suggests cook time mpt. and surveying participants immediately following PD won't tap such insights, time for intellectual growth, time to network. Post-survey - 6 compelling out of class, 5 networking, 6 tech, 3 triangles, 3 field trip. Focus on leader action combined with participant thinking.	24 - Relationships	3 - Hard	Tally & Analyze	8 - Problems (overcoming challenges)
2 Pie7 1	It is difficult to think of one compelling experience. Several occasions come to mind: child birth (I was never the same person), child rearing (the joys and difficulties, art-the first time I saw the French impressionists' paintings at the Jeu de Paume (the overwhelming beauty and the awe I felt for the artists), my first experience living in Paris, which was also my first experience living in a large city (the sense of independence and self-confidence that emerged), my second year teaching when I realized that I could help students learn and make an impact on their lives.		difficult to think of one occasion (several occasions come to mind)	child birth, child-rearing	difficulties
3 Pie7 2	When I was 25 years old, I spent 8 months travelling in Costa Rica, Guatemala, and Honduras. A friend and I left with our backpacks and an open-ended ticket. It gave me a chance to think about what I wanted my life to look like while I was having this amazing adventure. It was then that I decided that I wanted to go into teaching.	A friend and I		Travel	
4 Pie7 3	I was attending a LOTE 2 day summer workshop. Back then we were required to attend a specific number of professional development sessions. The team of presenters were from Long Island NY, and were sharing their communicative teaching model. What made the experience compelling for me is that I suddenly realized that I could facilitate speaking practice in a more realistic way in the classroom. I had always known that my students were not speaking German as much as they should; I just couldn't figure out how to make it a natural part of my lesson cycle. It was an "aha" moment for me. It changed my teaching totally.	sharing their communicative teaching model		LOTE summer workshop	

Figure 3.7. Screenshot of representative open coding worksheet (from Pre-Institute Survey Question 7).

Mentoring, Leadership, & Change Pre-Institute 2006 Survey

How often do you use the following technologies, both personally and professionally? (Please mark only one response per item.)

		I don't know what this is	Once a year or less	Monthly	Weekly	Daily	Rating Average
3	Answer Options	7	7	2	1	0	1.789474
4	Audio Editing Program (such as Audacity or Sound	2	10	4	0	0	2.111111
5	Blogs	1	6	4	6	0	3
6	Database/Spreadsheet (such as Microsoft Access)	0	4	9	3	2	3.2
7	Digital Camera	0	4	7	1	1	2.7
8	Digital Video Camera	1	8	7	1	0	4.8
9	Email	1	0	0	0	17	1.105263
10	Flickr	15	2	0	0	0	1.157895
11	Machinima	16	0	0	1	0	2.611111
12	MP3 Player (such as an iPod)	1	10	1	1	3	2.842105
13	Photo Editing Program (such as Photoshop)	0	5	8	4	0	2.052632
14	Podcast	4	8	4	1	0	3.65
15	Presentation Program (such as PowerPoint)	0	1	7	9	1	1.666667
16	RSS/XML Feeds & Aggregators (such as Bloglines)	14	2	0	0	0	4.75
17	Search Engine (such as Google or Yahoo)	0	0	0	5	13	1.421053
18	Social Bookmarking/Toggling (such as del.icio.us)	15	0	0	1	1	1.947368
19	Video Editing Program (such as iMovie or Pinnacle	4	10	3	0	0	1.277778
20	Vlog or Vodcast	12	4	0	0	0	2.368421
21	Web Authoring Tool (such as Dreamweaver, Frontpage,	3	9	3	2	0	2.052632
22	Webquests	4	10	3	0	0	4.95
23	Word Processing Program (such as Microsoft Word or	0	0	0	1	17	2.473684
24	Wikis	1	10	2	4	0	

Figure 3.8. Screenshot of frequency tabulations for Pre-Institute Survey Question 5 emphasizing clusters of participant responses.

Next, I made a preliminary pass through the narrative responses to each survey. Participants were identified by number on the raw data spreadsheets. Additionally, survey responses were reported on the raw data spreadsheets in the order in which they were received from participants (and that order was different for each of the three surveys). Consequently, I did not know the identity of the participants during my initial coding of each survey. During this initial coding, I simply read through the narrative responses, noting general impressions and themes that emerged at the bottom of each worksheet as I did so.

Following this initial pass through the data, I performed a more detailed analysis. I created a new Excel worksheet for each survey question on which I conducted and recorded this work. From the raw data spreadsheets, I copied and pasted each open-ended response (along with the number of the participant who provided it) into one of these new coding worksheets. My next step was to read each response. I copied segments from each response that seemed important into their own separate columns to the right of the original response. As I did so, I highlighted that portion of the response in the original column so I could see what parts of the response I had already used. I then coded each box, bolding the part of the excerpt on which my coding was based. I repeated this process with each individual participant's responses, adjusting my codes as necessary based on each iteration of new data. Figure 3.7 illustrates that as I added new responses down Column B, I also added new codes based on the information participants provided in their responses. For example, the first

participant's response says it is difficult to think of just one compelling experience. Consequently, I added the code "*hard*" to the right of the response, copying the relevant part of the response into that box. The participant then goes on to describe several different contexts for various compelling experiences she had. Thus, in the next box, I added the code "*context*" to the next box on the right and, once again, copied the relevant part of the response into the box. I continued in this fashion with the first participant's response until all the segments of the response that seemed important had been coded. I then moved to the next response and repeated the process. Figure 3.7 also shows that the code "relationships" was so prominent across participants' responses that I finally moved the column to the front of the spreadsheet so that I did not have to keep scrolling across to enter information in it. (The numbers at the top of each box in Row 1 indicate the total number of responses that pertained to that code.) I considered moving other columns for the same purpose, but then realized that in doing so, I would lose the sequential record of the emergence of the codes, so I refrained from doing so.

Initial coding categories were informed by findings from a previous pilot study which drew on data from the 2006 institute report (Kemmis, 2006) and multiple data sources from a similar institute in 2003. These initial coding categories included *compelling*, *instructional strategies*, *metaphors*, *perspective*, *relationships*, and *triangles*. The goal was to determine whether those categories merited further attention during the course of this particular study. These codes represented topics and strategies we had purposefully employed during the

institute, hence these codes enabled me to evaluate the degree to which these targets had any lasting impact on participants. As new codes emerged (such as *layers, modeling, motivation, and time*) I iteratively recoded the responses I had previously analyzed. Given the intended focus of this study, I tried to be especially attentive to patterns in participants' thinking regarding the overarching topics of professional development, pedagogical strategies, personal perspectives, and practice.

I attempted to uncover patterns in the narrative responses by tallying the total number of responses related to each code next to the code, summarizing the nature of the data related to each code, and then examining the overall results within each survey question for patterns. This gave me a sense of which codes I should attend to carefully when analyzing subsequent survey questions.

I repeated these processes for the Post-institute and Follow-up Institute Surveys. In cases where survey responses from each of these different surveys addressed a similar topic, I continued coding on the same spreadsheet, but changed the background color to indicate that the data source was from a different survey (see Figure 3.9). Pre-institute Survey responses were coded in yellow, Post-institute Survey responses in green, and Follow-up Institute Survey responses in blue. (The blue cells are not visible in the screenshot of this spreadsheet shown in Figure 3.9, but they do appear toward the bottom of this same spreadsheet.) I used the findings from this analysis to revise my master list of coding categories.

A	B	C	D	E
Response #	Response (Modeling/Self perception)	Modeling - 13 + 2 negative (+12 implied - 3 negative)	Knowledge (Context, Prior Knowledge) - 6	Challenge (Gap/Problem) - 15
1	26 Responses	Searched for model - example - could search for demonstrate observe ignored "example" (as in for example). See also Motivation -> Support An experience that motivates me to learn more and incorporate the object of the experience into my teaching. It shows me the possibilities out there for the "item" and leaves me wanting more	Knowledge (Trends to relate to an individual's basic habit of mind/practice that provides context or setting which helps give meaning to the "Aha!" awareness or realization in Skills section) - 6	Challenge (Gap/Problem) - 15. Typically something they couldn't do or need to know to do something how, or a barrier to something they want to do in a few cases)
2				
3	Ppt 7	I was attending a LOTE 2 day summer workshop. Back then we were required to attend a specific number of professional development sessions. The team of presenters were from Long Island NY, and were sharing their communicative teaching model. What made the experience compelling for me is that I suddenly realized that I could facilitate speaking practice in a more realistic way in the classroom. I had always known that my students were not speaking German as much as they should. I just couldn't figure out how to make it a natural part of my lesson cycle. It was an "Aha" moment for me. It changed my teaching totally.	It shows me the possibilities out there for the "item"	
4	Ppt 7 3		The team of presenters were from Long Island NY, and were sharing their communicative teaching model.	I just couldn't figure out how to make it a natural part of my lesson cycle.
5	Ppt 7 16	On May 21, 1989 at 8:30 in the morning my son, Evan was born 16 weeks prematurely. I couldn't go and see him for 2 weeks. I was told he was severely handicapped. I couldn't face the thought of seeing my baby, loving him, and then losing him. It took me much of Evan's first day of life, and much soul-searching, to be able to go see him. - I now have access to more websites that are useful (ones that I would not have had the time or foresight to have looked for myself). I check the wiki every week, and I also am now checking Woot every day (Thanks Cindy!!!) - I am in the process of looking for grants so that I can get a laptop and an LCD projector in my class. I really enjoyed the movie and commercial clips that you both tied into the presentations - they "hooked" me and I know that they would do the same for my students (who tend to be even more ADO than I am!)	The doctors said he had only a 10% chance of surviving. If he did survive, he would certainly be severely handicapped. I couldn't face the thought of seeing my baby, loving him, and then losing him. It took me much of Evan's first day of life, and much soul-searching, to be able to go see him. - I now have access to more websites that are useful (ones that I would not have had the time or foresight to have looked for myself). I check the wiki every week, and I also am now checking Woot every day (Thanks Cindy!!!) - I am in the process of looking for grants so that I can get a laptop and an LCD projector in my class. I really enjoyed the movie and commercial clips that you both tied into the presentations - they "hooked" me and I know that they would do the same for my students (who tend to be even more ADO than I am!)	I couldn't face the thought of seeing my baby, loving him, and then losing him. It took me much of Evan's first day of life, and much soul-searching, to be able to go see him. - I now have access to more websites that are useful (ones that I would not have had the time or foresight to have looked for myself). I check the wiki every week, and I also am now checking Woot every day (Thanks Cindy!!!) - I am in the process of looking for grants so that I can get a laptop and an LCD projector in my class. I really enjoyed the movie and commercial clips that you both tied into the presentations - they "hooked" me and I know that they would do the same for my students (who tend to be even more ADO than I am!)
6	Ppt 3 4		I know that they would do the same for my students (who tend to be even more ADO than I am!)	ones that I would not have had the time or foresight to have looked for myself)

Figure 3.9. Screenshot of representative coding worksheet containing responses from across different surveys and survey questions.

Once I had developed the master list of codes, I used the search function of the spreadsheet to locate key words compiled from the original coding sheets I had created from the individual Pre-, Post-, and Follow-up Surveys. I did this in order to identify relevant responses that I might have missed during the original process of iterative coding. This also proved useful for checking the consistency of my coding. Finally, I summarized each row (and/or column) of each worksheet, then collapsed the summaries into short headers at the top of each column (or sometimes at the bottom of each spreadsheet).

Analysis Across Similar Survey Questions

Once I had completed an iterative analysis of each individual data source, I compared participants' responses to similar questions across the surveys (see Figure 3.10 for a representative example). Both the Pre-institute and Post-institute Surveys contained a question asking participants to explain what the phrase "*compelling experience*" meant to them. Consequently, I copied individual participants' Pre-institute Survey responses from the raw data spreadsheets into a new Excel spreadsheet, using red font to highlight key descriptors (see Column B of Figure 3.10). I summarized these descriptors in a separate column (see Column C of Figure 3.10). I repeated this process with the same participants' Post-institute Survey responses (see Columns D & E of Figure 3.10). I then compared the responses by bolding elements of participants' Pre-institute Survey responses that were similar or identical to their Post-institute Survey responses so that I could determine the core of their definitions and identify which elements had changed (see Columns C & E of Figure 3.10).

	Pre-Institute Survey Response	Pre-Key Words	Post-Institute Survey Response	Post-Key Words	Pre-Post-Bltn Pre-Word Word Count Count & Post-
2	a 'sticky' one, one that attracts itself to almost everything that I experience after it.	enduring	strong emotional reaction, and is 'sticky' (tipping point by m. gladwell)	emotion, enduring	15 11 -4
3	Something significant that happens that changes you (the way you think and do things)	changes thought/action	Something that you experience that you remember, keep thinking about, and that changes the way you think about things	memory, enduring, changes thought	14 18 4
4			A compelling experience is a transformative one. One that makes me see, understand, and interact with the world differently as a result of having engaged with that experience. However, like many things in life, it is not ONE experience that fosters transformation but rather a series of experiences that both work to use and build the muscles needed to engage with the experiences in ways that allow the transformation to happen.	changes perspective, understanding, series	13 70 47
5	an experience that pushes me to think in new ways and transforms me	changes thought/self	A "compelling experience" is one which moves or inspires me. It can be something that touches me emotionally or it can be an experience that drives me to do more because it triggers memories, provides an "aha" moment, or is particularly interesting or motivating.	motivation, emotion, memory, insight	28 44 16
6	One that not only makes me think about taking action on a topic or idea, but stays with me on an internalized level long enough for that to actually happen	Learning, motivation, utility	One that guides, forces, or coaxes the viewer/student/listener to create meaning from or by it. It cannot simply lay out things in the way that one who already knows or understands sees it.	meaning	30 33 3
7		thought, internalization			

Figure 3.10. Screenshot of coding worksheet comparing participants' pre-/post-institute survey definitions of "compelling experiences."

Analysis of Similar Codes Across Pre-, During, and Post-institute Survey Responses

I used similar kinds of analytic processes to compare responses across codes. For example, “*layers*” was one code that emerged from various analyses. In order to gain more information about what participants meant when they mentioned this word, I analyzed individual responses from across different Post-institute and Follow-up Institute Survey questions, looking for clues regarding the nature of the layers to which participants were referring. In order to facilitate analysis, I color-coded each of these responses as described in the previous section. I also attempted to identify the primary focus of each response and the purposes involved in the layering they mentioned (see Figure 3.11). I then looked for commonalities across these responses, and recoded each response based on the common codes that emerged. Finally, I collapsed these codes by clustering together those related to similar issues. I inserted a summary of these findings at the top of the worksheet.

Response #	Participant Response	Type of Layers	Focus	Purpose of Layering
1				
19 Responses	Layering the media scaffolded it for participants = balance of challenge and skill better? Searched for development, layer, progression. Excluded "professional development" and "develop" (as in create or organize unless it referred specifically to a sequence or progression)	Types of Layers - Concepts-4 Instruction-8, media-3 understanding-4	Focus of Layers - Affect-5 disconnect-1 layers-7 progression-2 repetition-1 students-1, tech-1 1 (or 2 if recategorize upset response)	Purpose of Layering Cognitive effects - 5, empower - 2, enhance learning - 11, facilitate connections - 4
2				
Post3 18	I would like to incorporate the use of "podcasts" as another tool to add to my 9-12 Methods of Foreign Language Education course. I would also like to use some of the websites that were modeled during the institute (i.e. Ice Age Website). I enjoyed the approach during the institute of "layering" technologies (visual, audio, video, text).	tech (media)	enjoyed approach	x
3				
Post5 6	Okay, now I'll know this is me (in case you don't already). The watching and thinking about the "Green Day" music video. Cindy and I talked about it for two days until she had the bright idea to research some of the thinking behind it. This happened in the classroom. It was compelling because initially, the disconnect between the images and lyrics didn't make sense to me and it forced me to think carefully about the relationship between the layers of media in communicating a message.	media	disconnect between images and lyrics	relationship between layers in communicating a message
4				
Post6 4	Right now, I don't have a specific one, but the idea is definitely to work in layers. To take participants from one perspective to multiple perspectives, the simple to the complex, and from the concrete to the abstract in order to enhance personal connections to the material and to the broader intellectual contexts in which the material exists.	perspectives	Progression as a way of developing understanding - simple to complex, concrete to abstract	enhance personal connections to the material and to the broader intellectual contexts in which the material exists
5				

3.11. Screenshot of coding worksheet used to analyze participants' interpretation of the word "layers."

“Motivation” was another code that emerged during my analyses. In order to **investigate** this topic more deeply, I revisited the literature on motivation, **extracting** key components and using those as coding categories. These **categories** included *“autonomy,” “challenge,” “relatedness,” “support (scaffolding, ZPD),” and “value-expectancy.”* Next, I sorted through participants’ post-institute survey **responses**, looking for comments that confirmed and disconfirmed each code. **I** **p**asted relevant excerpts from these responses into each column, noting which **s**urvey, question number, and participant made each comment. I **bolded** or **italicized** the portions of these comments relevant to each code, then tallied the **instances** in each column (see Figure 3.12). These kinds of techniques **provided** me with a sense of the utility of applying particular theories to the **interpretation** of my analyses.

1	Autonomy	Disconfirm - 7	Challenge	Disconfirm - 5	Relatedness	Disconfirm - 9
2	Confirm - 15 Post3.5 I will be more aware of what the students want to do, and incorporate that into my lesson plans	Disconfirm - 7 Post3.8 I would like my students to create an iMovie as a final project for the language festival	Confirm - 8 Post3.11 Of course, my students will let me know what else they can do on their home and on their own.	Disconfirm - 5 Post9.2 (Least valuable) Reviewing concepts of leadership and mentoring with which I was familiar.	Confirm - 4 Post10.4 Time to play with the new ideas and collaboration time with our peers	Disconfirm - 9 Post9.2 (Least valuable) Working on one computer with other participants on a project.
3	Post3.6 I think my focus will shift more from ME using the technology to my STUDENTS using it	Post3.11 If the filters will allow I will offer more website play for stations learning	Post3.14 I hope to make better use of audio and video materials, now that I begin to see how I can customize and publish them.	Post9.4 While the nine days were intense and filled with valuable information, (to me) would almost be better to spread this information over a	Post10.9 I also liked how you mixed the groups up so we were not always working with the same people. I was able to work with most of the participants	Post9.5 I felt that we might have drawn more parallels with foreign language instruction, mentoring, and leadership and had in-depth conversations.
4	Post3.11 If the filters will allow I will offer more website play for stations learning.	Post3.7 I will investigate podcasting and blogs more thoroughly for their use as instructional tools.	Post3.15 I played with Windows Movie Maker and it seems to be about as easy as Garage Band 3 to use so I'll work with that.	Post9.17 The "projects" which were supposedly building upon one another (instructions did not highlight that fact) and which felt like we were	Post10.9 You two were incredibly responsive to our learning and that was apparent and that made a big difference in that we were all in it for the ride and made me feel	Post9.7 My group did not work well together and so the projects just left me frustrated.
5	Post3.11 I will download more streaming audio and video and encourage student groups to do that also.	Post3.13 The new technology tips and programs that were introduced during the institute I will use in my classroom, working	Post3.19 I will attempt to use all the different technologies highlighted during the institute. I want to put this new knowledge right		Post10.19 Having an opportunity to create products in our focus group, to share those and discuss those products together.	Post9.9 Working in the Teacher Preparation group because of the group dynamics. There were three main difficulties for me. First,

Figure 3.12. Screenshot of coding worksheet containing confirming and disconfirming evidence from across survey questions of codes pertaining to motivation.

Synthesis of Data

In order to obtain a clearer picture of where to focus my attention during the writing of the findings chapters, I collapsed (or synthesized) all of the summaries from the Pre-, Post-, and Follow-up Institute Surveys. In doing so, I attempted to keep the summaries extremely brief so that I would have an overview of preliminary data analyses from the entire study to which I could quickly refer during the deeper analysis that occurred during the writing process. (See Figure 3.13 for a representative example of this). Column A of Figure 3.13 contains a combined list of the codes from my earlier analysis of the Pre-, Post-, and Follow-up Institute Surveys. Column B shows the total number of responses related to a particular category. Column C contains a brief summary of the various types of items I aggregated in order to arrive at the code, along with numbers of responses for each item so I would have a better idea of the relative strength of each individual item's contribution to the overall category. At times, I also noted questions or hypotheses about the category in the Summary column. I then combined these collapsed survey summaries with summaries of my field notes so that a single, master sheet of information resulted. (See Figure 3.14). In Column B, I recorded the total number of responses. I followed this with numbers representing the total number of survey responses plus the total number of interview (ivw) responses plus the total number of responses from comments I made. These comments were taken from an informal conversation with one of the other institute leaders which we recorded and I later transcribed.

Code	# of Responses	Summary
Layers	19 Responses	Layering the media scaffolded it for participants = balance of challenge and skill better?; Searched for development, layer, progression; Excluded "professional development" and "develop" (as in to create or organize unless it referred specifically to a sequence or progression); Types of Layers - Concepts-4, instruction-8, media-3, understanding-4; Focus of Layers - Affect-5, disconnect-1, layers-7, progression-2, repetition-1, students-1, tech-1 (or 2 if recategorize upset response); Purpose of Layering - Cognitive effects 5, empower - 2, enhance learning - 11, facilitate connections - 4; Layers - 4 (iterative, multiple passes for multiple purposes, facilitates transfer b/c practice in multiple contexts? Weintraub?)
Learned-Understand	38 Responses	38 responses - Don't need to look past 1st column - see spreadsheets for rest (except Relevance. Students maybe Tech and Concepts)
Learners	9 Responses	Learners - 9 responses - 7 of them revolve around keeping up with change in the world
Metaphors	3 Responses	Métaphors (3 uses + 1 creation)
Modeling Motivation (See Autonomy/Choice, Can't Force Engagement)	26 Responses	Modeling - 18 (+11 implied) - Multimedia examples - 11; not enough - 3; relevance & possibilities - 4; roles - 1; student work - 4; teaching strategies - 1; websites/will - 5; Modeling - 13 + 2 negative (+12 implied - 3 negative) - Access, affect, awareness (must feel relevant to be picked up), can be hypothetical, can be of process (strategies) or product, cognition not mediated-not enough just to show and assume they'll make connections: multimedia/multisensory powerful; shows possibilities, time required
Novelty		Novelty - 17 - Too new means need to constantly activate prior knowledge so doesn't feel too foreign - culture shock Need processing and absorption time if too new. Need overview to reduce anxiety, increase relevance, help see purpose/transfer. Need TIME for new things (design, tech, application/transfer). Must be relevant/functional. Novelty can be engaging, help participants see, broaden perspective, iteration, conceptual connections help participants "get a handle on material"
Play	6 Responses	Play - 6 - Connects to experimentation/exploration which influences thinking, requires time, choice of centers allows both, play no good w/o eventual relevance/transfer

Figure 3.13. Screenshot of excerpt from "collapsed" summary of pre-, post-, and follow-up institute survey data.

Code	# of Responses	Summary
Abroad/"Foreign"/Outside FL	12 = 8 + 4lvw + CM Responses	Outside FL - 8: 3 Interviews; 17 - Abroad/"Foreign" - Engaged them, expanded their perspective (by putting pressure on it or breaking it), let them build community, must have more parallels to FL for it to seem relevant, stick; Must act like a community member; must take participant outside what they THINK they know to change mind; Expertise in external frames needed to facilitate successfully depends on depth to which participants will explore the frames, purpose, how well you know principles of frames, ability to connect to what you DO know; new helps you engage, see, reflect, change practice; forces cycle of present, practice, apply, reflect; "it put us in a place where we were taking our craft of teaching and turning it upside down and looking at it from different angles and trying to under in this new frame of reference. (Participant M, 130-137)"; getting teachers outside field can happen via culture, discipline, geographical location, grade level, representations, role, tools (with another colleague, country, discipline, materials, tech); helps differentiate and tap individual interests; Participant R, has good student examples
Action (Moves One To)	15 = 10 + 5lvw Responses	Moves one to act - 10 (shift from moves to action to shifts thinking): "Frankly, I'm trying to impact the whole state." (Participant L, 18); "I am planting seeds and they do grow - I've had a long career to know that" (Participant L, 44-45); advocacy - compelling "sticky" assigns, for students, give admin. assigns, partnerships w/ colleagues/community/countries (Participant M, Participant R); write statements of support or opposition; policy - content standards, impact - terminology & tech are spreading through dept., district; confidence to do it (Participant D, Participant T, Participant R)
Active Learning	21 = 17 Responses + 4 lvw	Active Learning - 17 - (Choice, discovery/exploratory/open-ended, iterative, making meaning, practical, progressive, real, relevant, scaffolded, share thinking); Choice: Cycle - present, practice, apply, reflect (Participant J, Participant M); prior knowledge important (Participant M, architecture, 178-187 & 189-193); will do PD on a topic not an expert in, elem. teach admin.(Participant J 34-38); murder mysteries - good for some, but activity didn't necessarily result in uptake by teachers (Participant P, 67-68, 70-74); brochures for city - authentic audience and purposes (Participant R, 59-75); supports differentiation; learning centers and affinity diagrams support interaction and thinking (Participant R) and develop confidence which supports dissemination (Participant R, 136-147) [Interaction, play as a way of knowing ... an epistemological pathway - tied to motivation]

Figure 3.14. Screenshot of summary of data "condensed" from field notes and pre-, post-and follow-up institute survey data

Re-analysis of Data Sources to Revise Interpretations

During the writing of this dissertation, I found myself returning frequently to the data to corroborate information, to determine whether an interpretation remained trustworthy when viewed within the context of multiple data sources, and to answer additional questions that occurred to me during the writing process.

One way in which I accomplished this was to examine individual participants' responses across survey questions, as well as to look for patterns in the way that focus topic group members responded to particular questions. By doing so, I was able to identify clusters of participants with similar response patterns. In some cases, these patterns were correlated with participants' self-assessments of their knowledge and understanding of institute topics in Pre-institute Survey data.

I also found myself looking for new ways to represent the data which might allow me to identify patterns in it more easily. One technique I used to verify patterns (and discover new ones) was to paste open-ended responses into a tag cloud generator. Many bloggers and other web enthusiasts regularly "tag" online content with key words that make it easy for themselves and others to locate, organize, and navigate that content later. Many blogging sites (and other web 2.0 applications) make it possible for users to generate "clouds" from these tags that they can display on their blogs or websites. A tag cloud generator uses mathematical algorithms to determine the frequency with which words occur in a text. It then uses these frequencies to create visual representations of key ideas

in the text, typically in the form of “clouds” of words. Generally, the largest words in a tag cloud are those which were mentioned most frequently in the text, while those of smaller sizes represent concepts that were present but less evident throughout the text¹³. This offers readers a quick and convenient way to identify the primary and secondary content of websites at a glance.

There are also tag cloud generators that allow the user to produce tag clouds based on content that has been copied and pasted from other documents. I compiled the content from participants’ open-ended responses to various, individual survey questions, then pasted it into two different tag cloud generators (*TagCrowd* <http://tagcrowd.com/> and *Wordle* <http://www.wordle.net/>). I then copied and pasted the resulting tag clouds into a new document. I compared the tag clouds I generated using *Wordle* (see Figure 3.15) with those generated from the same data using *TagCrowd* (see Figure 3.16).

The tag cloud in Figure 3.15 on the next page highlights the important roles that “*time*,” “*concepts*,” and “*design*” played in participants’ learning. It is also clear that participants used the words “*different*,” “*enjoyed*,” “*examples*,” “*new*,” and “*visual*” often in their comments. Other important words included “*groups*,” “*needs*,” and “*process*.” What the tag cloud in Figure 3.15 does not do is explain whether participants’ remarks about these topics were positive or negative.

¹³ Tag cloud generators generally omit common words like “and,” “the,” and so forth.



Figure 3.15. Screenshot of *Wordle* tag cloud representing the instructional strategies participants felt contributed most to their learning, generated from the top 150 words of 191 words.

I found that the non-linear presentations generated by Wordle allowed me to identify critical concepts and to notice relationships among these concepts more readily than the more linearly presented *TagCrowd* images. However, the frequency counts in *TagCrowd* enabled me to verify that concepts I felt recurred frequently in the data actually did so. This helped me to ensure that I did not make claims that extended beyond the bounds of my data. It is also important to note that each tag cloud generator yielded slightly different results from the same data, perhaps because each is using a slightly different algorithm. Consequently, although such a tool is useful in verifying prior analyses and identifying potentially fruitful directions for future analysis, it should not be relied on too heavily as a primary strategy for data analysis.

I also aggregated content from parallel pre-institute, post-institute, and follow-up institute survey questions and generated additional tag clouds from that data. The tag clouds in Figures 3.17 and 3.18 illustrate another important consideration when conducting this kind of analysis. Several of the words that were most prominent in these figures also happened to be words that were part of the survey question. A re-examination of participants' responses indicated that several participants framed their answers to the survey question using key words taken from the prompt. Without such revisitation of the raw data, it would be easy to misinterpret or overinterpret the tag cloud for this question.

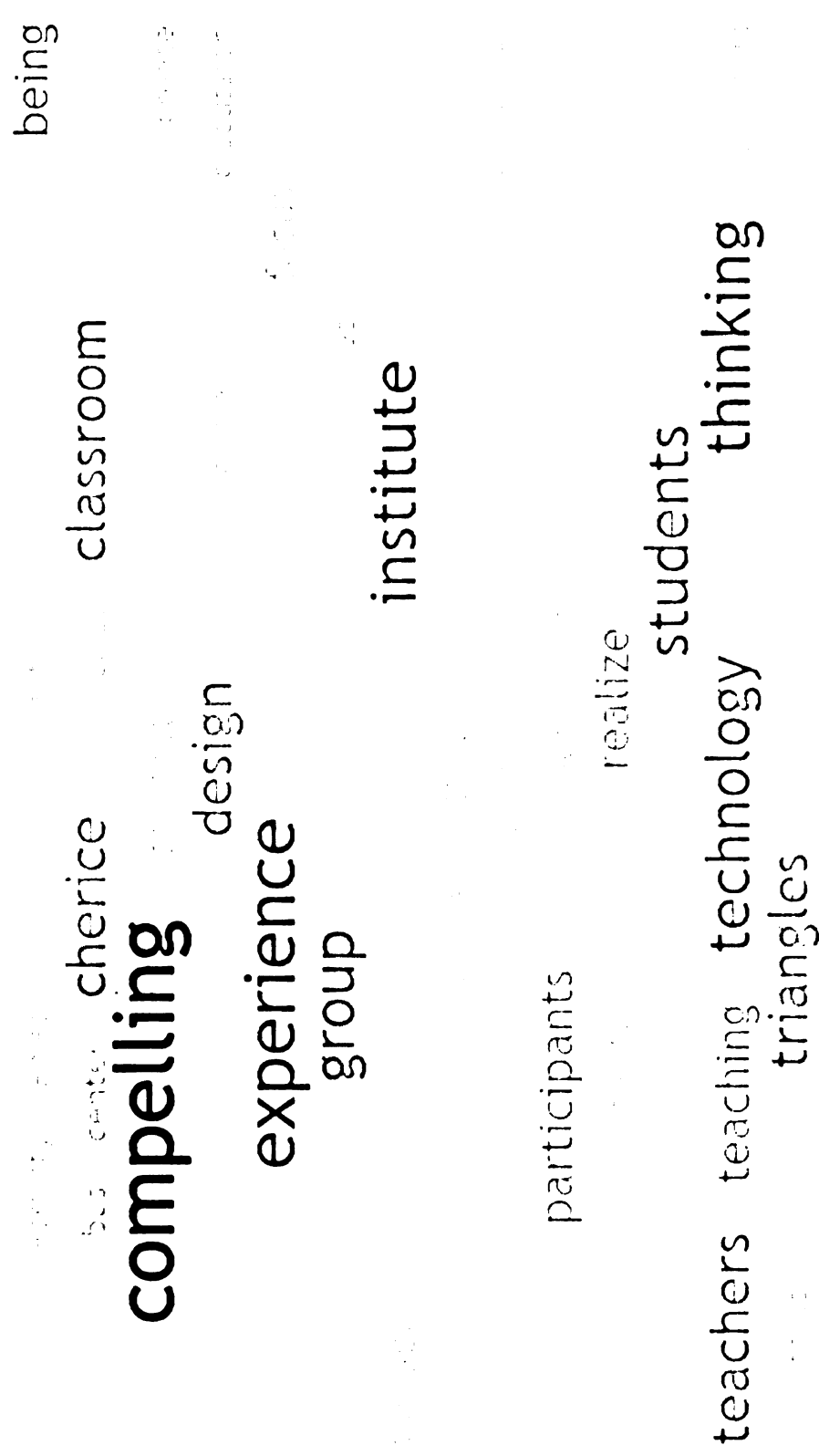


Figure 3.18. Screenshot of TagCrowd tag cloud of most compelling and most valuable institute experiences, generated from top 150 words of relevant post- and follow-up survey questions

In addition to insights gleaned from these tag clouds, I considered information participants had posted on the wiki that was used to facilitate some pre-, during, and post-institute activities. (More information will be provided about the institute wiki in Chapter 4). I consulted the wiki in order to obtain additional background regarding some of patterns I was noticing in the interactions of some of the focus groups. I also contacted several participants to request more information regarding the content or interpretation of some of their responses. Additionally, I consulted with members of the research team (institute leaders as well as several IRB-approved researchers who were not part of the institutes). These leaders reminded me of important details about the content, structure, and context of the institute. They also suggested ways to broaden and deepen my analysis, offered alternative interpretations of some of my findings, and helped me to see important connections among my findings and the research literature. I revised my interpretations of existing findings based on insights gained from these conversations¹⁴.

Analysis of Research and Scholarship

Coding Based on Literature & Scholarship

In the final cycle of analysis, I drew on research and scholarship to strengthen my interpretation of the findings from the various stages of analysis. I generated a collection of codes drawn from the stated goals and objectives of the institute, characteristics of effective professional development outlined in the literature, and key concepts outlined in scholarship on language teaching and

¹⁴ Additionally, study participants will have the opportunity to review ("member check") and comment on the research prior to the publication of any findings as journal articles.

learning. Codes from the stated goals and objectives of the institute included *“change,” “compelling experiences,” “cross-fertilization,” “leadership,” “networks,”* and *“technology.”* Codes from the characteristics of effective professional development outlined in the literature included *“affect,” “activate prior knowledge,” “adjusted & responsive,” “atmosphere,” “coherence,” “collaboration,” “differentiated,” “interactive,” “modeling,” “reflection,” “relevance,” “student-focused,”* and *“technology.”* Codes from scholarship on language teaching and learning included *“activate prior knowledge,” “affective filter,” “authentic,” “contextualized,” “communities,” “connections,” “comparisons,” “comprehensible input,” “cultures,” “feedback,” “immersion,” “interactive,” “interdisciplinary,” “meaningful communication,” “performance-based,”* and *“personalized.”* I used this collection of codes to illuminate findings from participants’ survey responses. The goal of this portion of the analysis was to verify and strengthen my interpretations of these findings by considering the degree to which the design and implementation of the institute was aligned with the literature on effective professional development and world language pedagogy (Research Question 1). I also hoped that the analysis would help me to help identify likely places to look for the sources of breakdowns in participants’ learning (Research Question 3). I looked for both confirming and disconfirming evidence during this analysis.

Multiple Theoretical Lenses

The next phase of analysis took place as I began to construct the findings chapters of this study. As I wrote, a myriad of new questions emerged from my work on the findings, and I turned to scholarship in pursuit of possible answers to

my questions. As I revisited the data in light of this scholarship, several key concepts emerged that seemed particularly useful in helping me to interpret the data. I generated a list of these concepts and used them as a set of analytic lenses to frame each chapter and subsequently, also organized my findings around the most salient ones.

For example, while working on Chapter 5, I noticed that the concept of attention factored prominently in participants' definitions of compelling experiences. This raised questions about the role of attention in teacher learning and expertise, prompting me to explore relevant scholarship in those areas. As I revised my interpretations of the findings based on what I learned, I realized that while attention appeared to play an important role in participants' learning, data about the specific nature of participants' engagement offered information that yielded even more useful insights.

Similarly, as I considered what participants said they had learned from professional development and the strategies to which they attributed that learning in light of the literature on expertise, I began to see that much of the literature on expertise is framed in terms of transfer. As I began exploring the literature on transfer, I noticed strong connections to the literature on knowledge representations and problem-framing. Revisiting those literatures in an attempt to better understand my findings in Chapters 5 and 6 caused me to completely rethink the writing I had done about participants' experiences with technology in terms of multiple representations.

Viewing the technology-related findings from Chapter 7 through the lens of multiple representations led me to reframe my analysis of that data in terms of transliteracy. While re-writing Chapter 7, a number of new questions emerged, including whether asking participants to create their own representations might affect them differently than when they were simply presented with multiple representations of concepts. This led me to apply the lenses of play and flow to the work. As I moved back and forth between data from different chapters, my original coding worksheets, and the literature, I began to see strong parallels between the literature on flow and motivation. In turn, the lens of motivation was very useful in helping me to write a preliminary draft of Chapter 9 which explores breakdowns in participants' learning. However, I began to see patterns in the data related to interpersonal interactions and contextual features of participants' experiences that were not fully explained by the lens. As a result, I drew on the lenses of professionalism, teachers as "knowers," and professional isolation to help me more fully understand and interpret my findings from that chapter. In this way, one body of literature led to another, and the various lenses that emerged from each body of literature sometimes called for others in ways that offered me a picture of what might have occurred during the institute that was connected across literatures.

Challenges of Design-based Research

I used the methods described above to address many of the challenges associated with design-based research. In the sections below, I draw on

literature regarding design-based research perspectives to present these challenges and the ways in which they are addressed in this study.

Reliability

According to Shavelson, Phillips, Towne, & Feuer (2003), one of the most important ways to ensure the reliability of a design experiment is to ascertain that the research questions the study seeks to explore are an appropriate match for design-based research methods and that they create "a context for verification" (p. 28). Hence, design experiments are particularly appropriate for studies that seek to understand what is happening in a given context, or to pursue specific theories that might account for effects that have been observed or outlined in the literature (Shavelson, Phillips, Towne, & Feuer, 2003). Research Question 1 of this study sought to understand what happened during the institute and how well its enactment was aligned with the research-based ideas from which it was conceptualized.

Careful attention to the consideration of multiple perspectives is another important strategy for improving the reliability of design-based research. This can be accomplished by generating different kinds of data, by drawing on varied data sources, by triangulating multiple data sets, and by performing multiple analyses (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003; The Design-based Research Collective, 2003). Such measures help to ensure that interpretations of the data are "rigorous" and "empirically grounded" (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003, p. 12). This study relied on seven different data sources. These ranged from static evaluation documents and participant survey

responses to interactive conversations with participants. They also included media such as photographs and videotapes. The analytic techniques used in this study iteratively examined these data sources in multiple layers of analyses which were progressively refined with each iteration. Care was taken to examine each individual data source in isolation as well as in conjunction with other data sources. Consequently, data from each survey was considered question-by-question, then aggregated from within a single survey, and then compared with responses from across the other 2 surveys. Similarly, participants' responses were considered in isolation, across individual participants, and in relation to the responses of other participants. Finally, I used multiple theoretical lenses as analytic tools for interpreting the findings. These lenses are discussed at the beginning of each findings chapter, and also help to improve the objectivity of my interpretation of findings from this study.

Objectivity

Concerns about objectivity may stem from the close collaboration of researchers with practitioners and their ongoing engagement in the research context over time. Detailed descriptions of the research context, design phases, and enactment processes (in addition to the techniques outlined above) may alleviate some of these concerns. Such descriptions should indicate the theoretical intent of the study, elucidate researchers' conceptions of the domain under study, outline relevant disciplinary concepts and principles drawn from scholarship, and articulate the researchers' premises and assumptions about the products, practices, and perspectives of the participants (Cobb, Confrey,

diSessa, Lehrer, & Schauble, 2003). Such descriptions are provided in the first findings chapter of this study (Chapter 4).

Descriptions of the research context must be faithful and detailed enough to engender credibility, while remaining generic enough to reveal developing patterns in the data. The level of specificity is an important factor in determining their effectiveness in that adequate descriptions enable consumers of the research to make more informed judgments about how well researchers have interrogated their presuppositions and avoided bias (Zaritsky, Kelly, Flowers, Rogers, & O'Neill, 2003). Consequently, I have devoted the entire first findings chapter (Chapter 4) to this task. I employed a wide variety of data sources drawn from different design cycles to ensure that my descriptions were sufficiently accurate and detailed. I also drew on data from institute artifacts (such as materials from institute notebooks and the institute wiki), photographs, and videos to improve the level of specificity of my descriptions.

Detailed descriptions also make it possible for readers to determine the degree to which the theoretical constructs of the study provide a framework for the practice that is sufficiently explanatory and predictive. This is particularly true when such descriptions are conjoined with systematic, iterative layers of analysis (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003; The Design-based Research Collective, 2003). I attempted to be very specific regarding my descriptions of both the institute AND the theoretical constructs that guided its design, enactment, and evaluation. I then attempted to connect these descriptions to relevant facets of the layered analyses I conducted within the

findings chapters, as well as in the reflective deliberations at the conclusion of each findings chapter. I also sought alternative perspectives from other institute leaders and research colleagues to further strengthen the objectivity and credibility of my claims about the data.

Validity

One of the goals of design-based research is to generate "rigorous, empirically-grounded claims and assertions" (Shavelson, Phillips, Towne, & Feuer, 2003, pp. 26-27). This goal invokes issues of validity. The cyclical nature of design experiments provides a useful venue for addressing issues of validity. Each iteration in the development of a design experiment that has been properly constructed includes a development phase, an enactment phase, and a systematic analysis phase. Together, these phases result in feedback loops (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003) that can be used to inform successive analyses. Articulating how alternative explanatory hypotheses were generated and systematically discarded helps to strengthen professional consensus around the researchers' interpretations of the data (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003), which further corroborates validity.

Chapter 4 of this study provides a detailed description of the iterations of design involved in the development and enactment phases of the institute, while Chapter 3 details the steps involved in the systematic analysis phase. Figures 3.2, 3.3, and 3.4, along with their accompanying descriptions, depict the feedback loops involved in the design and in the systematic evaluation and analysis of the institute. Each of the findings chapters entertain a variety of

alternative explanatory hypotheses, and when possible, draw on additional data sources to justify discarding the hypotheses that are least helpful in understanding what occurred during the institute. In addition, the use of multiple theoretical lenses during the final stages of analysis provides a way to make more informed decisions about which hypotheses to pursue and which to discard.

When conditions such as those outlined above are met, an increasing alignment of theory, design, practice, and measurement should emerge over time (The Design-based Research Collective, 2003) as analyses are repeated across cycles of enactment. Such alignment improves the strength of the conclusions and may also increase the likelihood that others will find the findings relevant and applicable to other contexts.

Generalizability

The small scale of most design experiments creates a number of concerns regarding generalizability (Zaritsky, Kelly, Flowers, Rogers, & O'Neill, 2003). The primary intent of this study was not that the findings be generalized to larger populations, but rather, that the findings might reveal innovative ways to improve the future design of similar institutes. It is hoped that such design improvements might then diffuse to other contexts and populations. Thus, this study approaches the idea of generalizability from the perspective that establishing clear criteria for why certain data were foregrounded for analysis and providing detailed descriptions of development, enactment, and analytic processes will

assist readers in evaluating the applicability of the study's findings to their own contexts.

Generalizability is further enabled when the targets of analysis are situated in more expansive, theoretical frameworks. These frameworks must result in principles that "do work" (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003, p. 13) with respect to the subsequent design of learning environments, experiences, and materials. Rather than relying on a single theoretical framework, this study applied a variety of theoretical frameworks to the findings from this study in order to evaluate the degree to which each "did work." There are a number of other usability factors that also determine the degree to which the findings of a study "do work." These include usability factors such as *compatibility, complexity, visibility, and triability*.

Compatibility. Compatibility refers to the degree of "fit" between the design and the cultural standards, needs, and values of its users. Information gleaned from previous research and detailed description of the context and participants is essential to evaluating compatibility. For these reasons, I refer to findings from a pilot study conducted on a similar institute held in 2003, and devote a separate chapter to the description of the research context (i.e., Chapter 4). Chapter 9 addresses the lack of "fit" that many participants experienced between the design of the institute and the standards, needs, and values of their professional communities of practice.

Complexity. Complexity addresses the issue of perception--how difficult the intervention is to understand and use (Sloane & Gorard, 2003). This is

determined, to some the extent, by the balance between the design's affordances and constraints. Assessing complexity requires the collection and analysis of participants' perceptions of the innovation. In this study, I have attempted to foreground participants' voices by quoting their responses extensively. The degree of balance between the affordances and constraints of this institute is addressed extensively in Chapters 5 through 9. Findings from these chapters suggest that complexity may be influenced not only by usability, but also by the degree to which participants perceive the intervention as being personally relevant.

Visibility. Visibility alludes to how transparent the affordances and constraints of the design are to potential users (Norman, 1988; Sloane & Gorard, 2003; Zaritsky, Kelly, Flowers, Rogers, & O'Neill, 2003) and also has important implications for how the results of a study are disseminated. This issue is also explored in detail in Chapter 9, which suggests that the goals and potential affordances of the institute's design were not transparent enough for many participants, thus producing barriers to their learning.

Triability. Triability refers to the degree to which it is possible to try the innovation in limited ways and thus, is likely to influence the content of the Discussion/Implications section of the study. Because these factors have the potential to inform the subsequent design of theory, improve practice, and spur future innovations (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003; Zaritsky, Kelly, Flowers, Rogers, & O'Neill, 2003), they are critical to ultimately ensuring the trustworthiness, generalizability, and utility of a design experiment study.

In spite of its potential limitations, the design experiment is particularly well-suited to the complex, contextual, dynamic nature of enacted curriculum (Graves, 2008; Kelly, 2003; The Design-based Research Collective, 2003). A design-based approach is especially appropriate to the context of this study because it is so congruent with the content, pedagogy, and perspectives employed during the institute that this study seeks to understand. As will be discussed in greater detail later, conceptual content from a series of design-related disciplines (such as architecture, filmmaking, graphic arts, marketing, and music) was used to involve participants in exploring central contexts in world language education from new perspectives. The pedagogy of the institute also engaged participants in numerous design tasks. In keeping with the research methodology of design experiments, the iterative, layered, nature of those design tasks encouraged participants to retrospectively analyze artifacts of practice created earlier during the institute. This analysis enabled them to produce situated narratives regarding their own learning (in open-ended surveys and in response to interview questions). The researcher was able, in turn, to analyze these narratives as data in order to achieve even deeper understandings about the nature of participants' experiences during the professional development institute. That analysis can then be used as feedback or data for selecting theories that generate additional insight regarding the findings with the goal of informing design cycles associated with future professional development (Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003; Lobato, 2003; Shavelson, Phillips,

Towne, & Feuer, 2003; The Design-based Research Collective, 2003).

Nonetheless, this study is limited by a number of different factors.

Ethical Considerations

The context for this study was a summer institute that I co-designed and co-facilitated. This raised a number of ethical concerns, particularly with respect to issues of objectivity. In order to ensure that I allowed the data to speak for itself, I first coded individual participant responses without knowing the identity of the respondents. I also considered a wide variety of data sources and triangulated the data across these sources. In order to challenge my interpretations, I conversed with other institute leaders, as well as with IRB-approved members of the research team who had not participated in the institute. This helped me to consider interpretations of the data alternative to my own. In order to ascertain that I did not take isolated participants' responses out of context, I compared individual participants' responses to one question with those they gave in response to other questions. This increased the fidelity of my interpretations to participants' overarching perspectives regarding their institute experiences. These techniques gave me a much broader perspective on what happened during the institute and served as checks and balances to my interpretations of those events.

Since information about the institute, its participants, and their professional activities is publicly available online, preserving participants' anonymity while still providing a sufficient level of detail in the findings was also an issue. In both survey responses and informal telephone conversations, many participants

mentioned the names of colleagues and supervisors, professional organizations, states, and so forth. All of these details would make it relatively easy to identify individual participants. Although all of the participants gave written permission for me to use their names in the published results of this study, when possible, I still replaced personally identifying details with generic phrases or pseudonyms. My analysis also considers participants' responses based on the small groups to which they were assigned during the institute. I applied pseudonyms to these groups for similar reasons. When I encountered other ethical issues about which I was uncertain, I consulted with the IRB, my advisor and other researchers.

Preview of the Organization & Content of Findings Chapters

In the following chapters, I explore findings from the analyses described in the Data Analysis section of this chapter. A brief description of the content of each of these findings chapters and the concluding chapter appears below.

Chapter 4 addresses *Research Question 1: What actually happened during the institute?* It contains a detailed description of the planning, structure, implementation, and evaluation processes used during the institute. The purpose of this chapter is to examine and articulate what actually occurred during the institute (as opposed to solely what was intended). Additionally, much literature on professional development focuses on the products or outcomes of professional development sessions, but fails to provide enough detail to allow colleagues to experiment with similar structures, content, or pedagogical processes. Hence, in addition to providing an important context for the other findings that follow it, this detailed description of institute processes and

pedagogy (in conjunction with the pedagogical materials included in the Appendices) may help to address a gap in the literature.

Chapter 5 considers *Research Question 2: What did institute participants say they learned?* I use the chapter to present baseline data regarding participants' prior knowledge and experience with the topic of compelling learning environments and experiences. This data serves as a background against which I examine and interpret participants' "*compelling experiences*" prior to and during the institute. Specifically, I use the lenses of attention, expertise, and flow to explore how participants defined the phrase "*compelling experience*," to identify common components of participants' compelling experiences, and to analyze patterns across these commonalities. I then apply these patterns to interpret the compelling institute experiences participants described.

Chapter 6 also addresses *Research Question 2: What did institute participants say they learned?* The chapter examines what participants said they learned in general from the institute using the lenses of transfer, cognitive flexibility, multiple representations, and visual cognition. The chapter is organized around seven major topics that were abstracted from participants' comments. Each topic focuses on a different aspect of the institute that appears to have influenced participants' thinking. I explore the role that metaphors, visual thinking, cognitive flexibility, and design frames played in participants' learning. I also consider what participants said they learned about mentoring, leadership, and change. I conclude the chapter with an overview of participants' comments about 21st Century learners, literacies, and technologies.

Chapter 7 is the last in the series of chapters that address Research Question 2. In this chapter, I explore in depth what participants said they learned about technology. I report on participants' access to and uses of technology at home and at work. I also provide information regarding the frequency with which participants use various technologies and their familiarity with current technologies. I then use the lens of transliteracy to consider at length the influence that technology (and related topics) appears to have had on participants' thinking, future plans, and classroom practice.

Chapter 8 responds to the first part of *Research Question 3: How did participants explain their learning with regard to this professional development experience?* In it, I examine the pedagogical processes used during the institute that participants mentioned most frequently as having contributed to their learning. I also synthesize participants' responses into eight categories, offer representative examples of responses from each category, and provide analysis and interpretation of the data presented using the lenses of play, motivation, and creativity.

By contrast, in **Chapter 9** I explore the second part of *Research Question 3: How did participants explain breakdowns in their learning with regard to this professional development experience.* I examine factors that participants felt had constrained or impeded their learning during the institute, such as issues of clarity, closure, time, relevance, and participant interactions. I explore and analyze the topic of participant interactions in greater depth than the others because it was the factor listed most frequently by participants as both

contributing to and constraining their learning. Consequently, I consider the manner in which group dynamics impeded participants' access to learning, as well as some potential factors to which this might be attributed. I conclude the chapter with a discussion of the ways in which the professionalization of teaching, traditional images of teachers, professional comparisons, and professional isolation may contribute to these issues.

Chapter 10 explores the significance of findings from Chapter 4 through 9. Specifically, I discuss what I learned as a professional developer from using multiple theoretical lenses to interrogate the design of the summer institute that serves as the context for this study. I then consider the limitations of this approach from the perspective of a researcher. I follow this deliberation with a discussion of both the potential theoretical and practical contributions of findings from this study. I conclude the chapter with suggestions for future design cycles of professional development in world language education that are drawn from these implications.

CHAPTER 4

INSTITUTE CONTENT, STRUCTURE, & PROCESSES

Planning the Institute

The summer professional development institute on which this study is based addressed a broad range of content through a variety of structures and processes. This chapter attempts to provide a faithful description of the institute in order to address Research Question 1: *“What actually happened during the institute?”* The first section of this chapter describes how the institute was conceived and the processes that led to its subsequent enactment. Later sections of the chapter will describe the content that was presented and the pedagogical processes used to accomplish this. The final portion of the chapter outlines the systematic analyses that were undertaken in order to assess the institute’s impact. Subsequent chapters will discuss how participants perceived the enactment.

The goals for the *Mentoring, Leadership, & Change: Designing Compelling Experiences for 21st Century Learners (MLC 2006)* institute were derived from conversations with leaders in the field during the 1999 New Visions in Foreign Language Education Planning Meeting, the 2000 New Visions Priorities Conference¹⁵, and the 2005 National K-12 Foreign Language Resource Center (NFLRC) Advisory Board Meeting. The conversations held during these meetings raised questions about a number of challenges facing the profession (see Appendix A). These included curricular and instructional issues such as

¹⁵ See the New Visions in Action website <http://nflrc.iastate.edu/nva/> for more information.

assessment, elementary language learning, improving the dissemination of effective models of world language education, languages across the curriculum, preparing teachers to teach in the target language, aligning professional development with best practices in the profession, and the use of technology to expand the influence of world language education across the United States. Other topics included administrative, policy, and program development issues such as program advocacy and articulation, the impact of less commonly taught languages on the profession, teacher recruitment and retention, and the development of a strategic research agenda. These concerns were all rooted in the larger, more overarching issue of how languages are viewed and valued by community members and the nation as a whole.

In addition to holding substantive conversations about these issues, the institute leaders collected information about national trends and research initiatives in economics, politics, and policy and considered scholarship from the field of world language education. We used all of this information to brainstorm potential goals for the institute.

Determining the Content: Institute Goals

Based on the information described in the previous section, institute leaders determined that the primary focus of the 2006 institute should be to equip and empower world language teachers (who had already been tapped as mentors and leaders in their institutions) to assume some of the roles and responsibilities of a retiring cadre of national leaders in a rapidly changing professional context. Hence, one of the institute's central goals was to assist

participants in building and expanding their professional networks through collaboration. We determined that the second major purpose of the institute should parallel the first one—to help language educators to prepare their learners (whether K-12 students, colleagues, or community members) to better meet the demands of the changing political, social, and cultural contexts at that time. In keeping with these 2 primary purposes, we determined the goals of the 2006 institute:

- Promote "cross fertilization" in experience and expertise through mentoring;
- Explore the nature of compelling experiences, extract key concepts and principles of design from them, and apply them to educational contexts;
- Experiment with the use of new technologies and their applications as pedagogical tools (including blogs, cyberportfolios, digital storytelling, machinima, podcasting, RSS feeds, social bookmarking, and wikis);
- Acquire research-based techniques for initiating, implementing, and sustaining change through leadership in a wide variety of contexts.

These goals were designed to broaden and deepen participants' professional knowledge and skills. They also sought to equip and empower foreign language educators to catalyze change in the professional contexts within which they work.

Establishing the Context: Institute Groups

In keeping with the literature on adult learning (Butler, 1992; Hase & Keyon, 2000; Illeris, 2003; Murphy, 2005; Terehoff, 2002), we selected five focus topics from the overarching contexts within which language educators typically

work: community outreach, differentiated instruction, professional development, program development, and teacher preparation. These topics anchored the institute, forming its structural foundation, and are described in more detail below.

Community Outreach (Interactions with community members). The focus of this topic area was on expanding foreign language education beyond the classroom through innovative partnerships between schools and the community. These partnerships were to enable schools to better meet the growing demand for proficiency in a second language, to strengthen students' commitment to learning languages, and to ensure program continuity. It was hoped that participants would mentor colleagues in raising community awareness of the importance of language learning, in engaging students in community-based and service learning, and in generating community support for and involvement in language programs.

Differentiated Instruction (Interactions with students). The focus of this topic area was on better meeting the needs of increasingly diverse, changing populations of learners. These populations included students in mixed level and mixed ability classes, as well as those with a wide range of special needs (such as giftedness, learning disabilities, and physical impairments). Members of this topic area were asked to explore principles and strategies for differentiating instruction. It was hoped that participants would mentor colleagues in individualizing instruction in ways that would better meet their students' needs, interests and learning styles.

Professional Development (Interactions with teachers). The focus of

this topic area was on re-envisioning and reconceptualizing professional development (including its goals, purposes, content, structure, and materials) to better meet the changing needs and contexts of the people and school systems it serves. Major strands of this topic area included providing needs-based, ongoing and sustained professional development, actively engaging participants in making sense and meaning of content through hands-on activities, and providing follow-up support. It was hoped that participants would use these (and other relevant principles) to mentor colleagues to become leaders capable of initiating, implementing, and sustaining change within the world language profession.

Program Development (Interactions with parents, students, colleagues, and policymakers). The focus of this topic area was on exploring issues related to the development of articulated programs across levels, with a special emphasis on Less Commonly Taught Languages (LCTLs). Key elements of this topic area included ways to overcome cultural barriers to program development, techniques for recruiting quality teachers and locating materials, considerations regarding the integration of LCTL programs and personnel into existing language departments, and issues in providing professional development for teachers from other countries. It was hoped that participants would use these concepts to mentor colleagues in obtaining the community support needed to ensure the success of new instructional programs in less commonly taught languages.

Teacher Preparation (Interactions with preservice teachers, university colleagues, and universities). The focus of this topic area was on

the role of teacher preparation in language education. Considerations included the needs of preservice teachers and components of effective teacher preparation experiences in world language education. (Ideas from Dr. Tom Bird's instructor's group seminars heavily influenced the content of this part of the institute.) This group also considered the development of collaborative relationships between university supervisors and cooperating teachers in K-12 schools. It was hoped that investigating these issues would help participants to mentor beginning teachers, colleagues and cooperating teachers in becoming active professionals who collaborate with one another to serve diverse learners through articulated, K-16 programs.

After determining these contexts, institute leaders sought professionally engaged leaders (Becker & Riel, 2000) with expertise in these areas to participate in the institute. We intended to craft a professional learning community during the institute that could later serve as the core of a nationwide network of world language educators who could be tapped to mentor emerging leaders in the profession.

Identifying the Learners: Institute Participants

The institute leaders selected twenty world language educators from around the United States to participate in the institute. They were chosen from a pool of applicants that had been nominated by state and regional professional language organizations, as well as applicants who learned of the institute through announcements on the NFLRC website, flyers distributed at professional

conferences, and postings on professional listservs (such as FLTEACH <http://www.cortland.edu/flteach>).

We selected applicants based on the information they provided on an institute application form, a professional resume/CV, and a personal statement explaining why they wished to participate in the institute. Selection criteria included intensive, ongoing professional involvement with one or more of the targeted topics of the institute; strong evidence of active engagement in professional conferences, organizations, and activities; and willingness to provide continued leadership and mentoring to colleagues. Preference was given to applicants with at least 5 years of experience who were likely to continue contributing to world language education following the institute. We attempted to ensure that a wide variety of geographical locations, professional roles and contexts, levels of instruction, and target languages were represented. We also sought a broad range of professional experience and expertise among participants. Consequently, a number of highly qualified applicants were excluded from participation in the institute, including applicants whose professional responsibilities at the time were not well-aligned with the goals of the institute.

The world language educators we selected to participate in the institute were very professionally active, and their responsibilities varied widely. Most participants were serving as department chairs, district curriculum supervisors, or coordinators of special programs. Several had secured substantial grants to implement elementary and after school programs. Many were also serving as

President or Vice President of their state world language associations, providing professional development for other school districts, peer coaching other teachers in their district, or were coordinating extracurricular community programs, student exchange programs, and/or study abroad programs. Most were involved in these activities in addition to full time teaching responsibilities in K-12 or university contexts. In addition to this, some had become National Board Certified or had received national Teacher of the Year awards. Several participants attended more than one professional development institute during the same summer in which they attended the *Mentoring, Leadership, & Change 2006* institute.

The lodging, meals, and materials of participants who attended the MLC 2006 summer institute were paid for by the NFLRC, and participants received stipends for their participation that could be used to defray the cost of their transportation expenses (\$500 for participants and \$1,000 for group facilitators).

Implementing the Institute

Constructing the Community: The Institute Wiki

Prior to the institute, institute leaders assigned each participant to one of the five focus area groups: Community Outreach, Differentiated Instruction, Professional Development, Program Development, or Teacher Preparation. We made these assignments based on the expertise reflected in participants' resumes, as well as the areas of interest expressed in the personal statements they submitted with their institute applications. Each group consisted of four members, one of whom was invited by the institute leaders to serve as the group's facilitator.

Next, we introduced participants to a wiki¹⁶. They used the wiki to get to know one another, to collaboratively synthesize their prior knowledge regarding their assigned focus topic areas, and to share information, resources, and materials before the institute began. Each group of participants was asked to post photos and short biographies of themselves on the institute wiki and to complete a series of open-ended statements about themselves. (See Appendix E for a complete list.) The open-ended sentences asked participants to comment on:

- a) their philosophies of teaching and learning,
- b) changes that had occurred in their thinking during the course of their careers,
- c) their motivations for attending the institute,
- d) their preferences regarding collaborative work, and
- e) their feelings about technology.

We modeled each of these activities for participants on the wiki before asking participants to engage with them. These pre-institute activities were designed to foster the development of working relationships within each group of participants (most of whom did not know one another prior to the institute) by encouraging them to share values, beliefs, and concerns that would have direct bearing on their work together during the actual institute. These wiki-based activities also gave us insight into participants' beliefs, knowledge, skills, understandings, and

¹⁶ A wiki is a type of social software. It is similar to a web site, but it allows multiple people to easily and collaboratively create, edit, discuss, and share multimedia content online using a web browser.

personalities. Such insights enabled us to refine and customize institute plans to better address participants' strengths, needs, and concerns. These pre-institute activities also created a shared set of experiences that we were able to tap to illustrate key issues during the opening days of the institute.

In conjunction with the activities described above, we asked participants to collaborate from a distance to collect information, resources, and materials regarding their focus topics. We provided them with a template to guide this task (see Appendix F) that was designed to enable the synthesis of participants' prior knowledge regarding the focus area to which they had each been assigned. The wiki thus became a repository for materials that served as a resource library following the institute.

In addition to knowledge and community building, the wiki provided participants, (most of whom had never heard of a wiki) with hands-on experience in using one. This provided us with insights into the degree of technological skill and understanding that participants would bring with them to the institute, which informed the subsequent design of the technology-related activities we planned.

At the conclusion of these pre-institute activities, we sought feedback through a pre-institute survey that asked participants about the nature of their pre-institute experiences, their definitions of and experiences with "compelling experiences," and their degree of familiarity with the content with which we were planning to engage them during the institute (see Appendix I). The results of these surveys were aggregated and used to inform the subsequent implementation of the institute. The structure and content of the institute were

also informed by feedback that participants in the *Mentoring, Leadership, & Change 2003 (MLC 2003)*¹⁷ institute provided on post-institute and follow-up surveys, as well as the brief reflections institute leaders had written at the end of each of the first few days of *MLC 2003*.

Creating Collaboration: Institute Processes

In general, the structure of each day of the 2006 institute consisted of 7 basic components: conceptual framing, a mini-task, debriefing, lunch, an extended task, group presentations, and a closure activity. (Refer to Appendix G for a copy of the daily schedule from the 2006 institute.)

We began each day with an interactive introduction to the key concepts and principles of a new conceptual frame. These frames fell into two categories: design frames grounded in various disciplines (such as graphic arts, architecture, music, news and filmmaking, and marketing) and implementation frames (mentoring, leadership, change, and creating compelling classroom experiences). (See Appendix H for an overview of the 2006 institute agenda¹⁸.)

¹⁷ Refer to Appendix B for a copy of the daily schedule from the MLC 2003 institute, to Appendix C for an overview of the two-week MLC 2003 agenda, and to Appendix D for a list of key concepts and principles that guided the mentoring, leadership, and change portion of MLC 2003.

¹⁸ Doctoral seminars offered by Dr. Punya Mishra and Dr. David Wong at Michigan State University heavily influenced the design of the institute agenda. Dr. Mishra's *Knowledge, Media, Design* course guided students in exploring the cultural, historical, social, and technical relationships among cognition, design, and technology. He used a wide variety of pedagogical approaches to engage us in considering how creativity, design, and the diffusion of innovations have influenced the cultural products, practices, and perspectives of individuals, schools, and society. See his website for more information: <http://punya.educ.msu.edu/> In *That Which Moves Us—The Nature & Design of Compelling Experiences*, Dr. Wong orchestrated a series of hands-on activities and experiences to stimulate ongoing analysis of the principles that actors, interior designers, musicians, newscasters, and experts from other domains use to define, design, and deliver “compelling experiences” to their audiences. He then encouraged us to inquire into applications of these principles in our own contexts. See the course website <http://www.msu.edu/~dwong/CEP991/syllabus.html> for more information.

We sequenced the introduction of the design frames throughout the two weeks so that as participants worked with each new frame, they could experience an increasing dimensionalization of conceptual understanding. Participants worked with layered texts¹⁹, then considered the ways in which progressively adding images (Graphic Design), audio elements (Music), and motion (Filmmaking) produced deeper layers of meaning²⁰. A field trip into the community gave participants first-hand exposure to the effects of form, function, and flow (Architecture & Interior Design)—allowing them to experience how consideration of these elements added new dimensions to their understanding in ways similar to those that are so eloquently described in Peter Elbow's (2006) article, *The Music of Form*. Institute leaders then added the layer of movement through time, space, and place (Newscasting & Filmmaking). Finally, participants explored how layering these frames might enable them to create more compelling language learning experiences for the students in their classrooms (Wong & Henricksen, 2008). During the last few days of the institute, participants explored how they might combine the design and implementation frames with principles of viral marketing in order to create, package, and disseminate compelling conceptual content for students, colleagues, and community members.

Following the introduction of each new design frame, we engaged participants in a 45-minute mini-task that required them to collaborate with people who were not members of their focus area groups. The tasks were intended to help them acquire basic skills in the use of the new frame, and to

¹⁹ Such as the dialogue poem Two Women (In Tedick, 2006).

²⁰ An excellent example of this is Washing Machine Poetry (In Daroush, 2006).

guide them to new insights through cognitive and emotional engagement with the discipline. Participants then discussed the conceptual and technical insights and issues that arose out of the experience during a 30-minute debriefing session. The institute leaders deliberately positioned this discussion session prior to lunch so that participants could continue to process the experience with their colleagues over lunch if they wished to do so. The hour and a half lunch period was also planned to give participants who needed a mental break time to eat, exercise, shop, or simply socialize. It also provided institute leaders with time to adjust the afternoon's activities to better accommodate the needs of participants that emerged during the morning's work.

After lunch, participants spent 90 minutes on a more extended task that required them to combine key principles from the frame with technology to create a product. The purpose of each product was to communicate key concepts and principles from their focus topic area to the other participants.

After a short break, the remainder of each afternoon was set aside for each focus topic group to present the products they had developed during the previous day to the rest of the participants in the institute. The goal was to engage the members of the other four groups in discussions of implications for educational practice, and to explore together as a community of leaders and learners how to effectively mentor other world language educators regarding the subject. We concluded each day with a short closure activity to help participants reflect on how the design frame related to the National Standards for Foreign Language Learning (1999/2006) and to the implementation frames of mentoring,

leadership, and change. The remainder of the institute was dedicated to helping participants learn to use technology to layer concepts from other disciplines as a means of designing learning experiences that could influence the thinking of the stakeholders they serve.

At the close of the institute, participants developed a plan to initiate, implement, and/or sustain change in their local context(s) using the principles they had learned. Each participant received a binder containing materials selected by the institute leaders that were related to the various focus topic areas, as well as materials prepared by focus topic area groups that were distributed during the institute. Following the institute, each focus area group was supposed to collaborate from a distance to produce an issue of the Alumni Connection (the NFLRC's electronic newsletter) that would inform others regarding their group's focus topic area. Several groups used the wiki as a tool for managing this collaboration. These newsletters were subsequently published on the NFLRC's website: <http://nflrc.iastate.edu/news>. The next section of this chapter contains a more detailed description of the institute activities from each day.

Crafting the Content: Institute Activities

Day 1: 21st Century Technologies, Literacies, & Learners

Getting to know you. During the first day of MLC 2006, institute leaders provided participants with a brief overview of the activities for the week (see Appendices G & H). We then engaged participants in several additional activities designed to help them get to know one another better. These included Inside/Outside Circles (see Appendix L) Story Squares (see Appendix M). The purpose of these activities was to elicit participants' beliefs, emotions, and values in non-threatening ways. The activity was also intended to give them ideas for how they might provide their own students with scaffolded opportunities to move and talk that target particular vocabulary topics, grammatical concepts, and language skills.

Building technology skills. After orienting participants to the Macbook computers, the university network drives, and the file naming conventions we wanted them to use when saving materials, we asked them to create a PowerPoint™ slide that illustrated a concept that was important to them (see Figure 4.1). We asked participants to include at least one image and one quotation. In preparation for the task, we provided participants with a model (see Figure 4.2) of the finished product.



Figure 4.1. Screenshot of PowerPoint™ slide used to explain the PowerPoint™ Slide Task.



Figure 4.2. Screenshot of model of a completed PowerPoint™ Slide Task.

We also did a quick check of participants search skills by surveying them orally about their search habits. Questions included things like, *“Do you put your search terms in quotation marks?”* *“Can you make the search engine return only files of a particular type such as PDFs or PowerPoints™?”* *“Do you know how to search for audio files or video clips?”* and *“Can you make the computer search only a particular website?”* Participants responded using a thumbs up to indicate an affirmative response to the question, a thumbs down to indicate a negative response, and a thumb tilted sideways to indicate uncertainty or inconsistency in their response. We offered a quick tutorial regarding this kind of searching, and then gave participants time to work on their projects. At the conclusion of the activity, we discussed how a similar activity could be used to build the classroom community during the first weeks of school. We talked about how teachers could use such an activity as the foundation for interpretive, interpersonal, and presentational communication activities in the target language. We also encouraged participants to consider how they might capitalize on the information students would provide during such an activity as a means of personalizing future communicative tasks. Finally, we discussed the ways in which such an activity could be used to systematically equip students with technology skills for future class projects.

‘Introducing 21st Century literacies. Next, we drew on the literature regarding 21st Century literacies in order to build a rationale for change in the practices of world language educators. We began by introducing participants to a variety of emerging technologies through a multimedia presentation.

Technologies included the Blackberry, Bluetooth, the Fly Pentop Computer, electronic paper, video stamps, virtual keyboards, virtual medicine, and organ printing (among others). Participants were asked to look at each technology and tell aloud what (if anything) they knew about the technology. After discussing these technologies, we asked participants to define "literacy." Following a short conversation about participants' definitions, we engaged them in reading excerpts from Jeff Wilhelm's (2000) *Literacy by Design* using Table Tents, an interactive reading strategy. Institute leaders selected important quotations from the Wilhelm article and printed them on cardstock which was folded in half in order to make table tents. After completing a short pre-reading quiz and an advanced organizer, participants were put into small groups. A table tent was placed on each group's table. Group members were invited to choose someone to read the quotation aloud, and then asked to discuss the quotation. A change in the background music was used as a signal to participants that they should move to a new table and repeat the process. These activities were intended to support participants in expanding their definitions of "texts" and "literacy" while modeling interactive reading strategies they could use with their students. After a whole group debriefing of this activity, we took a break.

Institute leaders conferred during the break. We realized we were not going to be able to complete everything we had planned for this section in the time remaining and still introduce participants to the other institute topics that were foundational to the remainder of our plans for them. Consequently, we decided to move on to the other topics and introduce the remaining content later

in the week. This repositioning of content created the need for continual revisions of the institute agenda throughout the week. It is likely that this contributed to many of the breakdowns in participants' learning that are addressed extensively in Chapter 9.

Considering 21st Century learners. When participants returned from the break, we gave them links to five websites that are popular among teenagers and had them explore these sites on the wireless Macbooks that were available to them in the classroom during the institute. These sites included Gamics.com (Ciprick, 2004), MySpace (<http://www.myspace.com>), and several others. We then asked them to hypothesize about why teens find these sites so compelling. In the group discussion that followed, we asked participants to contrast how these sites were different from those they usually explored and to consider what teens are doing that they are not. We concluded this activity with 5 PowerPoint™ slides that summarized key concepts related to 21st Century learners: communication, information, connectivity, interactivity, and creativity. These activities were intended to help participants begin to see schooling from the perspective of students. We sensed that some participants were feeling overloaded with information, so we decided that participants needed to return to content that was more familiar to them. As a result, we gave them time to work together in their focus topic areas to polish the thinking templates they were supposed to have completed prior to attending the institute (see Appendix F), after which they left for lunch.

Exploring compelling experiences. When participants returned from lunch, we asked them to write down what they knew about the topics we would be covering during the week on a concept map (see Appendix N). We used this as an opportunity to activate their prior knowledge about the topics we would be engaging with during the institute. Next, we showed participants Shaun White's HP Hands commercial (Goodby, 2006), Nike's Freestyle Basketball commercial (nosx20, 2005), and other online materials that some teens find compelling such as The Official Bluesfear Worm (Bluesfear, 2004). After discussing the features that make these clips compelling, along with the creative choices involved in accomplishing that goal, participants formed pairs to discuss their impressions of these materials and their classroom implications. The entire group then considered some of the characteristics and concerns of 21st Century learners. Following this discussion, we introduced participants to Second Life and demonstrated several examples of the creative things teens are doing with it, such as machinima. We showed several examples of machinima²¹ movies from Atlas Productionz (Hoffman, n.d). These included Let's Get It Started (Hoffman, n.d.b) and a short clip from The Awakening (Hoffman, n.d.). We encouraged participants to consider the classroom implications of such films, and showed them Silver Bells and Golden Spurs (Linden Lab, 2006) as an example of classroom applications of such media. This particular piece of machinima served

²¹ Machinima, or machine cinema, is an inexpensive way of making animated movies. In the most sophisticated examples, filmmakers recruit "actors" from multiplayer videogames or virtual worlds like Second Life. These serve as the setting for the film. Actors move characters through the virtual worlds or game settings in real time according to a pre-determined script. The director uses a computer to capture their movements and then edits this "video" with software to produce the final film. The Sundance Film Festival now has an official category for machinima. [See Lowood (2008) for a more extensive treatment of this phenomenon.]

as a good example of how teachers might use similar creative projects to engage students with the conceptual content of an existing literary text.

Exploring principles of graphic design. We drew participants' attention to the visual nature of the multimedia examples we had been exploring together. To guide their attention to the underlying principles of graphic design responsible for some of the impact of visual media, we asked participants to form small groups and distributed a stack of magazine covers to each group. We organized the stacks so that each one contained multiple examples that foregrounded a particular principle of graphic design (such as alignment, contrast, focal point, proximity, and so forth). We instructed the small groups to examine the covers, to come to a consensus regarding which covers were most effective, and to explain to the whole group what elements of the covers might account for this success. We then provided the whole group with a list of graphic design principles and involved participants in a discussion of how such principles work together to produce an effect on the viewer. Our intent was to sensitize participants to how the manner in which they format materials can influence the ways in which students, parents, and community members engage with the materials.

We then gave each table a stack of print ads from various magazines in Spanish. Each set of ads was related to a similar topic (food, health & hygiene, media and entertainment, and so forth). We asked participants to examine the ads at their tables, to determine how they were related, to come to a consensus on which ads were most effective, and to discuss the graphic design principles

that would help to explain that success. At the conclusion of the activity, each table reported their findings to the larger group.

Reading about graphic design. In order to give participants the opportunity to delve deeper into these concepts, we made several reading assignments for the evening—Chapter 7 of Scott McCloud's (1998) *Understanding Comics* and a short chapter graphic design text about principles of graphic design.

Creating brochures. Participants were then given an opportunity to apply these concepts and principles to the task of creating a brochure in their focus topic groups. The brochure was supposed to provide the other participants with an overview of the key concepts of each focus topic area (see Appendix O for a copy of the assignment sheet). We underestimated the amount of time participants needed in order to successfully complete this task. We assumed that their pre-institute work had provided them with adequate opportunities to acquire, consider, and synthesize the key components of their focus topic areas. However, because several groups did not finish their thinking templates prior to the institute, they spent the bulk of the time we gave them trying to figure out what to say, rather than focusing on how they might use principles of graphic design to communicate it effectively. Consequently, the task was frustrating for several groups.

Reflecting. We concluded this day by giving participants an opportunity to reflect on the day's experiences by completing an acrostic made from the word

“*compelling*” with words that summarized the concepts we had discussed during the day (see Appendix P).

Day 2: Architecture

Revisiting literacy. On the second day of the institute, we returned to the concept of literacy. We used the cultural triangle from the National Standards (National Standards in Foreign Language Education Project, 1999/2006) (see Figure 3.1) to involve participants in thinking more deeply about the products, practices, and perspectives of a literate individual—particularly in light of their experiences from the previous day. We asked them to think about the things a literate person does that someone who is illiterate cannot or does not do. Following this whole group discussion, we asked participants to read Marc Prensky’s (2001) *Digital Natives, Digital Immigrants* using a combination of reading strategies designed to encourage active engagement with the text. First, we asked participants to read the text silently, noting their reactions to various ideas in the text by writing the following symbols in the margins: ! = Aha or Wow! ? = Huh? √ = Duh \$ = Valuable Information. Next, we instructed the participants to use the interactive reading strategy Say Something (The Texas Center for Reading and Language Arts, 2002). This is a strategy in which students, who are seated in pairs, read aloud to a specified point in the text, at which point they are supposed to turn to their partner and “say something” about what they have just read. (Prior to photocopying the readings for the institute, we inserted a picture of a mouth at each point in the text that seemed like a fruitful place for participants to converse. When participants reached one of the mouth symbols,

they were asked to turn to their partners and make a connection, comment, question, or prediction about what they had just read.)

The concepts these readings introduced became the foundation for a discussion regarding the ways in which emerging technologies are illuminating and changing what it means to be literate. We returned to the cultural triangle to map these new ideas onto what participants had said about literacy prior to reading the article. We also used the triangle to consider how Vygotsky's (1978) Zone of Proximal Development illuminates the development of understanding. Additionally, we discussed how teachers might "dimensionalize" their students' understanding.

Assessing the understanding of 21st Century learners. In an attempt to help participants connect these ideas to students in the classroom, we gave the whole group more examples of different kinds of products created by teenagers using emerging technologies. As a group, we considered what each one revealed about students' understanding (or lack thereof). This conversation about the ways in which assessment activities can serve as windows into understanding served as a springboard to the presentation and debriefing of the brochures the participants had created the previous day.

Debriefing brochures. As each focus topic group presented their brochures (see Appendix O), we asked the remaining participants to discuss what they noticed, what worked about the design, and what didn't work (in terms of concept, content, and graphic design). (See Figure 4.3, Figure 4.4, and

<http://mlc2006.wikispaces.com/Community+Outreach+-+Interactive> for representative examples.)

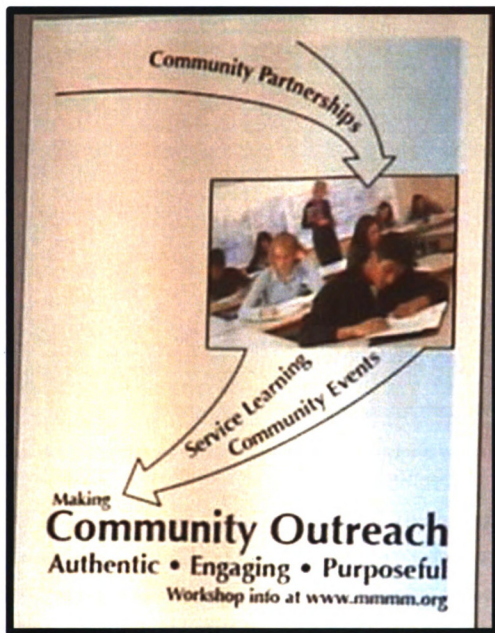


Figure 4.3. Screenshot of Community Outreach focus topic brochure.

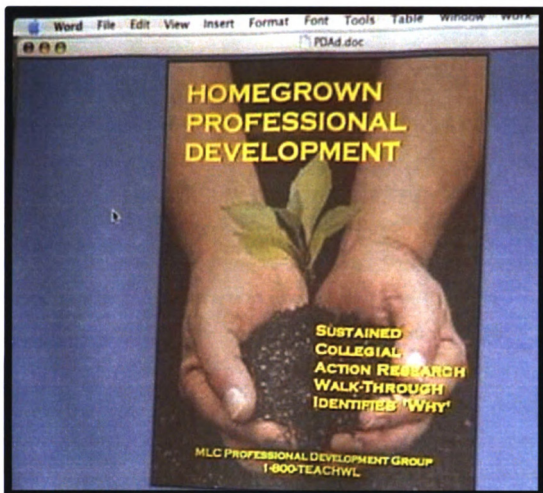


Figure 4.4. Screenshot of Professional Development focus topic brochure.

We also encouraged participants to comment on what they had been thinking as they constructed the brochure. In an attempt to further mediate participants' understanding, we tried to connect participants' brochure creation experience with research on the processes involved in visual cognition. We showed participants the [Eyetrack III](#) heatmap research project ([Outing & Ruel](#),

2004) and asked participants to brainstorm its implications for classroom practice.

Experiencing architecture. Next, we discussed participants' thoughts on Feynman's (1999) *The Pleasure of Finding Things Out*. We used this as an introduction to the roles that movement through space, place, and experience play in learning. We then introduced participants to several key concepts from the field of architecture. These included context, form/function/flow, the evocation of emotion, perspective, scale, and sustainability. We used information and materials which institute leaders had obtained prior to the institute from senior architects in the architectural design firm DMJM H&N / AECOM in Los Angeles to give participants a brief overview of these ideas.

We provided participants with a list containing pairs of malls, stores, restaurants, and other establishments devoted to entertainment within the local community. Participants were asked to choose one of the pairs of places they would like to visit. Participants were then organized into small groups based on the preferences they had expressed. We provided each group with walking directions, a bus schedule, or arranged for an institute leader to drive them to their chosen destination. Participants were given a worksheet adapted from a similar assignment created by Laura Saltsman and David Wong (<http://www.educ.msu.edu/DWongLibrary/CEP991/RetailDesign-Observation.doc>). The worksheet contained questions designed to guide participants' attention to important architectural and design features of the places they visited. We asked participants to share responsibility for reading a

qualitative research article by Thomas & Knowles (2002) called *Through the Camera Lens* in order to stimulate their thinking about the ways students are affected by the spaces in which they spend their time in schools while en route to their chosen destinations. We asked them to consider the diagrams *What Makes a Great Place?* and *The Benefits of Place* from the Project for Public Spaces (2003) in light of this article. We also encouraged them to “have fun.” We asked them to document their experiences by taking digital photos of things that were interesting to them while they were out and about. We suggested that they take turns, and that those who already knew how to use the cameras mentor others in learning to do so.

We had numerous pedagogical goals for this assignment. We wanted to give participants an “authentic” opportunity to learn to use a digital camera. We also wanted to sensitize participants to the manner in which the physical features of a place change the kind of experience it is possible to have in that place. We hoped to model for participants that it is not always necessary for students to “learn” before they can “do”—that well-structured activities can help students learn in the process of doing. We also wanted to give participants a learning experience that took place outside of the classroom to help them consider how immersing students in the local community might contribute to their learning. Additionally, we hoped that participants would benefit from the nature of the conversations that would likely take place in these more informal, social settings. Institute leaders used the time that participants were gone to discuss participants’ needs and to adjust institute plans and activities accordingly.

Debriefing the architecture “field trip.” When participants returned from lunch, we gave each group an opportunity to talk about where they went, what they did, and what they learned. We used the PowerPoint™ slide in Figure 4.5 to guide their reports.

Framing the Experience

- What did you notice?
- What kind of “conversation” did the *place* have with the surrounding *space*? With you?
- Were the relationships between the place and its space complementary, contrastive, consistent?
- How did you feel in the place?
- What implications might this experience have for YOUR work?



Johanson, Krista. (2006, June 4). Flatiron building. *StockXchng*. Retrieved August 3, 2008, from <http://www.sxc.hu/browse.phtml?f=view&id=540732>

Figure 4.5. Screenshot of PowerPoint™ slide used to guide participants’ conversations about their architecture “field trip” experiences.

We attempted to provide conceptual closure to this activity by drawing connections between participants’ experiences and the implications of those experiences for their classroom environment. We used a PowerPoint™ presentation inspired by ideas from David Wong, Danah Henriksen, & Laura Saltsman to accomplish this (see Figure 4.6a & 4.6b for selected PowerPoint™ slides).



Figure 4.6a. Screenshots of selected slides²² from PowerPoint™ used to debrief “field trip.”

²² Some photos in the PowerPoint presentation in Figures 4.4a and 4.4b were taken by the author and used with the permission of those who appear in them (Montgomery, 2005, 2005-2006, 2006a, 2006c, 2007a, 2007b). The others were taken by the following photographers, retrieved



Figure 4.6b. Continuation of screenshots of selected slides from PowerPoint™ used to debrief "field trip."

through Stock Xcng, and used under the standard restrictions outlined on that site (Anabolen, 2006; Cepolina, Emanuela, Sara, Alberto, Francesco, 2004-2007; Chris246, 2004; Greg 1971, 2005; Lucretious, 2005; Ninci, 2007; Orry, 2004).

The presentation was designed to move participants to ponder what might happen if they were willing to participate in “frame-switching”—the consideration of their present circumstances through a perspective commonly employed by another discipline, a person with another role, or another culture. We then discussed these ideas in conjunction with the cultural triangle, after which participants took a short break. When participants returned, we had a slide show playing of the photos they had taken during the architecture field trip and discussed the articles they had read in light of their field trip experiences.

Developing compelling experiences. We provided participants with time to develop a short experience intended to move the other participants from the key concepts they outlined in their brochure presentations to an exploration of key principles (See Appendix S). Participants were encouraged to think about how they might address multiple intelligences and learning styles as they prepared their experiences.

Reading about creativity and design. We concluded the day by explaining the reading assignments for the evening. These readings were intended to prepare participants to consider issues of design and creativity during the following day. Participants were asked to choose from among four options: Adams (1995), Chapter 4 of Csikszentmihalyi (1996), Chapter 12 of Hofstadter (1985), and Tognazzini (1998). We attempted to scaffold participants' engagement with the readings by inserting key words at the top of each page, marking key passages, providing instructions for each article, and drawing diagrams at the conclusion of each article.

Day 3: Music, Mentoring, & Leadership

Thinking about creativity and design. We began this day with a debriefing of the articles participants had read for homework. We designated one corner for each article and asked participants to move to the corner that represented their favorite article from the readings. No one read Adams (1995), so the groups were organized around Csikszentmihalyi (1996), Hofstadter (1985), and Tognazzini (1998). Participants were given time to discuss their favorite article with the other people in their corner. We provided participants in each group with different graphic organizers to help them synthesize key concepts from these articles during the discussion (see Appendix Q for several representative examples). Following this discussion, we asked each person to state the most valuable idea they took away from their group's discussion. In order to give everyone a chance to benefit from the content of the articles they had not read (and to allow everyone to speak), we asked participants not to make comments or engage in discussion during this reporting.

Next, we had a conversation about how these ideas might apply to the world language classroom. We considered examples of variations on a theme from famous artists like Diego Velázquez's series of paintings of *La Infanta Margarita*. We also explored works by a number of different Spanish-speaking artists regarding the theme of war such as Diego Velázquez's *The Surrender of Breda*, Francisco de Goya's *Colossus*, *The 2nd of May*, and *The 3rd of May*, Pablo Picasso's *Guernica*, Joan Miró's *Still Life with Old Shoe*, and Salvador Dalí's *The Enigma of Hitler*. We discussed the ways in which such explorations help to

establish context and schema for students in language classes. Near the end of this discussion, we digressed briefly into a conversation about trends in textbook publishing and their affordances and constraints. We explored a digital edition of *Appliance Design Magazine*²³ as part of this discussion.

Considering leadership. After a short break, we introduced participants to key concepts in leadership. We asked participants to use a graphic organizer to record differences between leaders, facilitators, and mentors. After discussing their thoughts on these roles, we asked a participant to read aloud to the group a quote from Bolman & Deal's (1991) *Reframing Organizations* (see Figure 4.7).

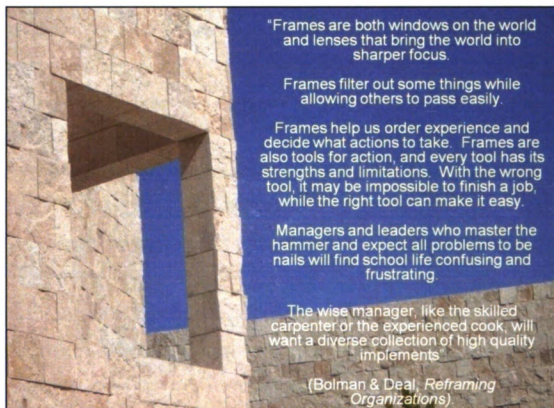


Figure 4.7. Screenshot of a PowerPoint™ slide of a quotation from Bolman & Deal (1991) about frames.

²³ Digital editions of *Appliance Design Magazine* can be found at:
<http://www.appliancedesign.com/HTML/27ff6613f0e48010VqnVCM100000f932a8c0>

After a brief discussion of the quote, we asked participants to complete the Leadership Orientations Instrument (Bolman & Deal, 1988) based on Bolman & Deal's Four Frames (http://www.leebolman.com/four_frame_research.htm). After participants calculated their scores, we asked all those who scored highest in the Structural Frame to move to one corner of the room. Those who scored highest in the Human Resource, Political, and Symbolic Frames were asked to move to the other three corners of the room. We discussed the beliefs, typical practices, and strengths of each orientation to leadership. We then asked participants who scored somewhere in between two frames to move between those frames so that the resulting configuration of people in the room created a physical map of the leadership skills in the room. We pointed out how few participants fell into the Political Frame and discussed the implications that had for the profession as a whole.

Mentoring. We transitioned from this discussion of leadership into the topic of mentoring by discussing the ways in which mentoring functions as a form of leadership. We emphasized that one of the most important functions of a mentor is to provide perspective on a mentee's attempts to balance their responsibilities as teachers with students' needs. We used the cultural triangle to record the issues with which that beginning teachers frequently struggle as participants called them out. We explained that in order to progress, mentees need to have their existing thinking challenged, their vision of what is possible for themselves and for their students expanded, and adequate support (in terms of emotional, intellectual, physical, and social resources) (Lipton, 2001). We

discussed ways in which mentors can use “learning-focused conversations” (Lipton, 2001) to mediate a mentee’s thinking about the relationships among the products, practices, and perspectives of teaching. We discussed the 3 stances that mentors might use to accomplish this (coaching, collaborating, and consulting), and the importance of selecting a stance based on the mentee’s perspective and skill level. We drew participants’ attention to nonverbal cues that they could monitor in order to adjust their stance when necessary during the course of the interaction. We also considered specific strategies that mentors might use to facilitate such conversations. These included listening for the story behind the words (i.e., the events, feelings, and needs being expressed), pausing before responding, paraphrasing, and probing with follow-up questions (Lipton, 2001). We asked participants to generate scenarios from their professional contexts where mentoring might be required. We then asked them to role play these scenarios in order to provide them with opportunities to practice facilitating a mentoring conversation using these strategies. As we debriefed each set of role plays with participants, we encouraged them to consider providing non-judgmental feedback that would invite continued thinking on the part of their mentees. We demonstrated the invalidating effect that words such as “but” have on any praise offered prior to them and asked participants to generate a list of one-liners that they could use to invite continued conversation when they couldn’t think of anything non-judgmental to say. We concluded this segment of the day by asking participants to reflect on and evaluate their own leadership skills by completing the Rubric of Emerging Teacher Leadership (Lambert, 1998).

Exploring music. In the next segment of the day, institute leaders activated prior knowledge by asking participants to collaborate to answer a series of questions about music, each of which were posted on chart paper in the hallway outside the room where the institute was held. When signaled, each group of participants moved to a new question. Following this activity, participants discussed key principles of music that composers use to create a compelling musical experience. Participants were then given the small group task of using a familiar tune to communicate something they had learned during the institute. They only had a short amount of time to do this, after which they performed their musical creations for the whole group.

Next, institute leaders took participants on a tour of the development of music by playing musical snippets which spanned a range of genres (classical, country, pop, rap, Gregorian chant), time frames (renaissance, romantic, contemporary), and modes of delivery (audio and video). Institute leaders placed strips of paper containing musical concepts in the middle of each group's table. These included dynamics (loud/soft), harmony, pitch (high/low), and rhythm (long/short). As participants listened to the music, they had to race to grab the words from the center of their table that best described what component of a compelling musical experience the musical snippet illustrated. The "tour" continued with an emphasis on how technology has changed the substance, sound, and dissemination of music over time. Participants then had the opportunity to discuss their personal connections to music.

Institute leaders guided participants in an exploration of a number of interesting music-related websites. *Liveplasma* (<http://www.liveplasma.com/>) is a site available in four languages that generates a concept map of musicians from Canada, France, Germany, Spain, the U.K., and the U.S. who are musically related to the artist for whom the user searches. *MTV & Billboard Music Charts* (<http://www.mtv.com/music/charts/>) is a site that lists the top 20 singles in a given week, and links the user to music videos and other related information. *Musicoverly* (<http://musicoverly.com/>) allows the user to select a musical mood, decade, and genre. It then generates a concept map of relevant artists which will play when clicked. *Music Map* (<http://www.music-map.com/>) generates a text-based representation of related artists based on the names for which a user searches. *Pandora* (<http://pandora.com/>) is a social networking music site that allows users to create personalized “channels” of streaming music similar to that of the original artist for whom the user searched. It allows users to create personal profiles and to bookmark favorite songs and artists.

In an attempt to help participants make connections between their musical experiences and the concept of 21st Century literacies, institute leaders then exposed participants to several mashups, including a mashup of George Bush speeches, one related to the Cat in the Hat, and Green Day’s *Wake Me Up When September Ends* video (Green Day, 2005). We used these videos to help participants think about the ways that different aspects of media work together (or against one another) to convey their message to viewers.

Podcasting. Following these explorations, participants were given a mini-task called Music and Moods (see Appendix R). In this task, participants were asked to think about a series of scenes they might use for a promotional video about their institutions and the music that they would pair with these scenes.

Participants then had the chance to try their hands at creating their own videos. They learned to use Garage Band with still photos and then explored podcasting. The remainder of the day was devoted to focus topic group presentations. After each presentation, participants were given several minutes to complete a “fast write” in which they quickly noted the thoughts and impressions that occurred to them during and following each group’s presentations. These fast writes then became the foundation for a large group debriefing of the presentations.

Digging into the content of the focus topic groups. We then provided participants with time to engage the larger group in the compelling mini-experiences they had prepared the previous day. The Differentiated Instruction Group involved participants in several different activities designed to illustrate the importance of readiness, interest, and learning profile as precursors to differentiation. They emphasized the importance of assigning respectful tasks. They were followed by the Teacher Preparation Group, which used a PowerPoint™ to outline important issues in teacher preparation. They emphasized the importance of building bridges of strong communication between preservice teachers, cooperating teachers, and university supervisors. The Program Development Group engaged participants in a contest to see how

quickly designated people could wrap their colleagues like a mummy with toilet paper. They debriefed this activity, noting the different ways in which each pair approached the exercise and the fact that although learners were all given the exact same task and materials, the implementation varied. They used this as a springboard to a discussion of key issues in the assessment of proficiency in less commonly taught language programs. They extended these ideas by drawing analogies to the contrast between a beginning violin student and a concert violinist. The Professional Development Group engaged their colleagues in their topic by asking them to respond to questions organized in quadrants on chart paper, after which each group reported out what they had learned.

Conceptualizing public service announcements. We concluded the day by asking the focus topic groups to create a public service announcement (PSA) that would advocate for the importance of their focus topic, educate their audience regarding its key principles, and motivate audiences to act on those principles. They were encouraged to incorporate music into these public service announcements.

Day 4: Individual Work Time

We did not hold any formal classes on Sunday. Participants were given this day to catch up on reading, to experiment with some of the new technologies to which they'd been exposed, or simply to rest and relax. Many participants remarked on the need for and value of a day to think and process after such an intense series of opening days filled with new content.

Day 5: Change, News, & Filmmaking

Thinking metaphorically about mentoring, leadership, and change.

We began this day by showing participants a number of photographs taken from a nature calendar and asking them to write sentences comparing those photos with abstract concepts like *change* and *mentoring*. (In other words, change is like a caterpillar because Mentoring is like a ladybug because . . .). Our goal was to help participants begin to consider these concepts through new lenses by making forced associations with seemingly unrelated objects. Participants found some of these easy (such as comparing change with a caterpillar), and others more difficult.

Connecting conceptual statements. In order to help participants consider the relationships between mentoring, leadership, and change more carefully, we divided them into two groups by asking which participants were verbal learners and which participants were visual learners. We gave the verbal learners a list of linked, conceptual statements about mentoring, leadership, and change (see Appendix D). That is, the end of each sentence was intimately connected to the beginning of the following sentence so that the sentences formed a tightly linked chain of reasoning. We asked this group to create a drawing that illustrated the relationships outlined in these statements. The “text” for the visual learners was a picture that depicted these relationships. We asked this group to try to create sentences that explained the various elements of this image. After participants had completed these tasks, we held a debriefing discussion during which we showed participants that they had essentially been

working on the same task, but through different modalities. We asked participants to comment on the experience. Participants' comments focused heavily on learning styles, the ways in which these tasks worked against their strengths (or played to them), the kinds of thinking that each task required them to do, and how those tasks had influenced their mental models.

Extending understanding of focus topic groups. Participants from the Differentiated Instruction and Teacher Preparation groups involved other participants in activities designed to deepen their understanding of their focus topic areas. For example, the differentiated instruction group involved participants in an activity that required participants to move to music. Each group also presented the public service announcements they had created. After a brief digression during which we explored *Wired* magazine, the remaining groups presented their public service announcements.

Layering as a tool for dimensionalizing understanding. We wanted participants to think more deeply about the effects of bringing different texts into relation with one another. Consequently, we seated participants in small circles and gave each circle a series of quotes about institute topics from different sources. Participants were instructed to read each quote, keep it if they liked it, or pass it to the next participant if they did not. This activity was intended to demonstrate for participants another interactive strategy for "reading" articles or other texts. We also wanted participants to recognize the richness of meaning making that can occur when texts from different sources are juxtaposed with one another.

In order to further underscore the effects of layering, we asked participants to read the poem entitled *Transmission* by Rhoda Feldman (in press; 2004). It is a data poem from a qualitative research article which compares the effects of a teacher's words to a pile of dead ladybugs. After reading solely the text of this poem from Page 12 of the research article, participants were asked to consider how superimposing it onto a picture of dead ladybugs altered its impact (see Figure 4.8). This led to a more general discussion of the effects of juxtaposing images and text.

In keeping with this theme of layers, we then illustrated what happens when one layers text with music by playing Simon & Garfunkel's (1966) *7 O'Clock News/Silent Night*. We extended this idea to movement by playing the *Amazing Juggling Finale* video (Bliss, 2006). First, we showed the video without sound. Participants were impressed by the skill of the juggler, but quickly lost interest in the performance. We then replayed the video, but this time with sound. We discussed the new dimension that sound added to the experience. Participants commented on how their realization that the juggling was perfectly timed to every beat of the music and the fact that the juggler threw the balls higher or lower to match the dynamics of the music changed the impact of the experience.

Making connections. We followed these activities with a discussion of the ways in which the brain processes information that were based on a diagram from David Sousa's (1995) Book *How the Brain Learns* (see Murray, 2001 for excerpts from the full diagram). We used a quote from Wurman (2000) to get participants thinking about the connections between key principles of graphic design, architecture, and music and their relationships with students (see Figure 4.9).

"Conversation is the most natural, effective, yet most complex mode of human connection. The goal of conversation is understanding between the participants.

Successful visual communication design can be defined as frozen conversation much as wonderful architecture is referred to as frozen music.

Understanding information is power."

- Richard Saul Wurman in *Understanding USA*
<http://www.understandingusa.com/intro.html>

Figure 4.9. Screenshot of a PowerPoint™ slide of a quotation from Richard Saul Wurman's (2000) *Understanding USA*.

We then reviewed these principles with participants, attempting to connect them to the concepts presented in Sousa's (1995) diagram by generating a comparative chart on the whiteboard. Participants discussed these ideas in small groups. Next, we quickly explored visual puns from Worth1000.com (2005), which allowed participants to experience the conceptual layering that arises as images are juxtaposed with other images to spark allusivity to idioms (yet another kind of layering). We then provided participants with examples of how they might use similar activities to engage students in exploring idioms in the target language. These examples included the book *Mi primer libro de dichos/My first book of proverbs* by Gonzalez & Ruiz (1995).

Synthesizing layers through filmmaking. We concluded this segment of the day by discussing the ways in which layers of text, images, sound, and

movement “add up” in filmmaking—working together across time and space to impact the viewer. We showed participants a number of student-created films that might give them ideas for similar projects they could do with students in their classes. For example, *Hans* (Krinal, 2003), a one-minute video that describes the daily routine of a woodlouse, provides an excellent example of a project that would give students the opportunity to use reflexive verbs in a contextualized way. We showed participants several other videos that could be used as the foundation for a language assignment like Capture a Concept (Montgomery, 2008). These included *One Minute* (Ohman, 2005) and *Just Change Point of View* (Tari, 2006). We pointed out that TheoneminutesJr. (<http://www.theoneminutesjr.org/>), the site on which these videos appear, is searchable by both country and topic (and hence, is a source of culturally authentic, student-created videos). We also cautioned participants that not all content on the site is appropriate for classroom use.

We demonstrated several other projects that might give teachers ideas for how to involve students in communicating about topics that are personally meaningful and relevant to them. These included videos from the *My Hero Short Film Festival* (My Hero Project, 2005a)—a selection of documentary shorts created by students and their teachers that highlight the heroic actions of children from around the world. In conjunction with these films, we showed participants *The Teacher’s Room - Lesson Plans* page (My Hero Project, 2005b) which contained links to assignment sheets and online resources they could use to help

students explore film genres for telling hero stories such as animated shorts, documentary shorts, experimental shorts, and narrative shorts.

Centering learning in collaboration. At the end of this day, participants were given nearly two hours to explore several learning centers with a partner from among at least 10 different choices. These choices included blogging, exploring student work, leadership, literacy and design, mentoring, midpoint institute evaluation (required for everyone), newscasting, packaging knowledge for students, and public service announcements (see Appendices T, U, V, W, X, Y, Z, and AA for representative examples). These activities were intended to provide participants with opportunities to collaboratively explore more extensively some of the technology tools we had introduced earlier in the institute, and to allow them to delve more deeply into some of the topics we had only addressed superficially up to that point. We also hoped to show participants how learning centers, a strategy frequently used in elementary schools, might be used in a secondary or adult learning environment to differentiate and individualize learning. We concluded this segment of the day by asking participants to discuss the things that “move” them. We also looked at the video *Quid Pro Quo* (Smithson, 2008) to consider the role of associative connections in thinking.

Day 6: Viral Marketing

Structuring participation with “talking chips.” Institute leaders began this day by responding to participants’ questions about students, Facebook, MySpace, and managing e-mail with filters. We used their questions to segue into a debriefing of how participants felt about the learning centers in which they

had participated the previous day. In order to address the issue of participants who tended to dominate whole group discussions, we introduced "talking chips." Each participant was given four colored bingo/poker chips. We explained that each time a participant wished to make a comment or ask a question, they must surrender one of their chips. When they were out of chips, they could not have another turn speaking until everyone else was also out of chips. At several points during the discussion, several participants vocalized their internal debates about whether or not what they wanted to say was worth surrendering a chip. This led to a discussion about participation, grading, and motivation.

Considering students' perspectives. Following this discussion, we played the song *I Wanna Talk About Me* by Toby Keith (2001). We asked participants to consider connections between the lyrics of the song, their experiences with the learning centers, and students' perspectives about teaching and learning. We explored the ways in which teachers could use students' interests as a starting point for productive learning activities that built to increasingly higher levels of abstraction. We also discussed the role that distributed cognition plays in student learning and the infrequency with which teachers purposefully engineer opportunities for students to learn from their peers. We asked participants to reflect on these ideas by journaling as they listened to the song *For Good* from the *Wicked* soundtrack (Schwartz, 2003). Volunteers were given time to share key ideas from their journals with the whole group. These activities were intended to get participants thinking about the importance of the individual when planning whole group activities.

Meddling in metacognition. Participants' comments during the discussion led to an unplanned conversation about metacognitive meddling. In this discussion, one of the institute leaders drew a series of diagrams on the whiteboard to illustrate the role that connection plays in the progressive development of expertise (see Figure 5.3). She began with a number of dots and explained that isolated facts such as grammatical structures and vocabulary words only really become useful information when they are connected. During this explanation, she began drawing connective lines between various dots. She went on to explain that as these individual bits of information are brought into relation with one another (such as when they are grouped around topics such as family, food, or school), learners begin to see patterns which coalesce into recognizable chunks of knowledge. At this point, the institute leader drew several more lines that connected the random lines together so that they formed recognizable triangles. The institute leader elaborated, noting that when these isolated chunks of knowledge are contextualized in experiences (such as those provided by a thematic unit, story, or simulation), it becomes possible for more dimensionalized understanding to arise. At this point, the institute leader drew a three-dimensional triangle on the board that was constructed from three individual triangles. She continued, explaining that it is only when learners have opportunities to act on these dimensionalized understandings that the understanding is transformed into expertise (as in when learners are given opportunities to create products in personal response to these contextualized

learning experiences). She then drew a larger triangle that was constructed from a series of these smaller, three-dimensional triangles.

The institute leader pointed out how these distinctions manifest themselves in curricular materials (grammar-based textbooks, topically organized textbooks, thematic units, and service learning curricula), in instructional practices (translation; communicative paired work; cooperative learning; and creative, hands-on, project-based assignments), and in the professional perspectives of the nested contexts in which world language education takes place (in classrooms, in school and district language programs, in the community, in professional development sessions, in teacher preparation, and in state and national language policies).

The institute leader used this explanation to help participants understand how the individual arts-based design frames could be used as tools and as lenses to dimensionalize learners' understanding in world language education and in the professional contexts in which participants' worked. As part of this explanation, the institute leader grabbed a small, green, paper triangle frame and used it to represent a student's perspective. She explained that when teachers are trying to expand students' perspectives, they generally begin with content that falls completely outside the students' frame of reference. The group discussed the implications of this in terms of what students would be able to "see," identify with, or understand. This led to a discussion of the importance of starting inside students' "triangles" by finding out what is already inside them. The institute leader then put two pens inside the small triangle and explained that

the goal is to literally help students to think outside “the box”—i.e., their existing frames of reference (see Figure 5.2). She cautioned that when attempting to work from within the perspective of a novice, the existing “content” and “space” inside the triangle is limited, making it difficult for the teacher and the student to “move around” easily within it. She described the ways in which additional information and experience expands the size of the frames. She illustrated how aligning and personalizing the curriculum makes it more likely that the ideas will impact their intended target—that very small space—with precision. She then explained the difference between handing students information or “tools” for questions they have not yet asked, versus handing them tools “in the tool position” (Bird, 2007) which would motivate them to widen their own frames.

Teaching as viral marketing. After a break, participants returned to discuss how principles of viral marketing might support them in helping students to internalize content. We situated this exploration in the context of fashion—a topic that is typically very popular with teenagers. We engaged participants in a variety of fashion-related classroom activities that they could use with students in their language classes. The first of these was from a website called *Bling my Sid*, a viral marketing site for the movie *Ice Age* available in a variety of languages. Working with the website in their target language, participants were asked to dress their own Sid according to what they wear to teach class and again according to what they wear on the weekends. They were instructed to save their Sids for future use. We then had participants line up across the room by birth date. We asked them a series of questions designed to get them to

consider the style of their clothing and what it communicated about them. We then drew parallels between this and their teaching styles. We discussed Parker Palmer's (1998) idea that ". . . we teach who we are" (p. 2) and the fact that who we are, what we value, and what we think are all reflected to some degree in how we dress. We then asked participants to divide the line in half and face one another until everyone had a partner. Participants were placed back to back and one participant described their clothing to another, who had to draw what was described. We discussed the language and the thinking that each of these activities required and how participants might use them in their own classes.

Following this discussion, we asked participants to think about what the clothing their students wear tells us about what they think is fashionable, what they notice, what they value, and what they reject. We then discussed the idea that fashions are a way for students to "try on" new identities before permanently adopting them. We talked about the fact that they help establish boundaries regarding thoughts, actions, and behaviors; they provide ready-made patterns for action; and they communicate with the rest of the world—signaling values, interests, associations, status, and opportunities. We raised Wong & Henriksen's (2008) idea that "The primary rule for learning about fashion here is that 'you've got to try it on' in order to fully experience the possibilities of a concept" (p. 15).

Next, we drew parallels between these ideas and the classroom. We discussed the fact that teachers assume that students will "buy" curricular content because of its importance to the teacher, the inherent value or utility of the content, or its potential future applications. Yet, when we look at the way

students buy clothing, we see that the fact that their parents like it (shirts with big flowers on them and jeans with gathered waists), that it is inexpensive (\$2.99 on the clearance rack at Wal-Mart!), that it is practical (doesn't everyone need a pair of garden gloves?), or that it is durable (it will last forever) is no guarantee of an eventual purchase at all. We extended this analogy, explaining that frequently, both students *and* adults buy clothing (and ideas) for reasons that have very little to do with pragmatism and *everything* to do with aesthetics and emotion. In other words, they like the way an item or idea looks, how it makes them feel, or because they associate it with a whole constellation of other ideas that influence how they think about themselves and interact with the world.

We then encouraged participants to consider how they might get their students to "try on" important ideas and content. We asked them what they do to get students to notice content, to imagine themselves as part of it, to get students to "want" it, make them feel that they can "afford" it, and to make them believe it is "worth it." Finally, we invited participants to consider these ideas in the larger context of school policy using questions such as: *Would certain ideas signal levels of education, economic class, social status, or membership in certain groups (goths, hicks, jocks, nerds, preppies, etc.)? Would we employ a "dress code" to keep out ideas that detract from learning? Would we insist that students in some schools wear "uniform" ideas? Would "shopping" for ideas become stereotypically associated with a particular gender? Would we take advantage of new technologies to ideas easier for consumers to access? If we*

were to market ideas more like fashion, would teenagers take more notice of them?

Pondering professional issues. We then asked participants to think about how these concepts might apply to the various roles they play as leaders in world language education. We gave each participant a stack of Post-it™ Notes and asked them to list major challenges or issues they felt they were currently confronting in their professional contexts. Next, we asked participants to lay out their Post-it™ Notes on a series of long tables that had been placed end-to-end. Participants were then given time to create an affinity diagram (group together Post-its™ that addressed similar topics). We gave participants blank sheets of paper and asked them to put all the Post-it™ related to a single topic on a sheet of paper and label the paper. Participants were then asked to select the issue that was most pressing to them and stand by that sheet of paper. Once participants had done so, we instructed each of these “groups” to take their sheet of paper, go for a walk somewhere, and discuss their topic for 25 minutes. This activity was intended as an opportunity for participants to have a change of scenery, to get some physical exercise, to explore how conversations change as the environment changes, and to have time to dig into some of their professional questions and concerns that had not yet been addressed during the institute. Institute leaders used this time to discuss participants’ responses to the day’s activities and to adjust plans for the remainder of the day. When participants returned, we gave them time to briefly report on the key components of their conversations.

Exploring viral marketing. We followed this up with a discussion of some of the specific strategies that businesses use to get consumers to “try on” their products (see Figure 4.10).

How do get businesses get us to “try it on?”

- **Advertising** – We have to know it exists
- **Packaging** – We have to notice it
- **Visual Merchandising** – We have to be able to imagine ourselves, our friends, and our families in conjunction with it (Cars - Test drive it; Clothing – Try it on; Food – Taste it; Furniture – Sit on it; Houses – Tour it)
- **Marketing** – We have to want it (or to want what comes with it) enough to buy it
- **Pricing** – We have to be able to afford it (or to think it is worth sacrificing, saving, or working for)
- **Value** - We have to feel that comparatively, we are getting our money's worth (Cheaper than usual or than other stores, better brand, higher quality, more aesthetically pleasing, more features, etc.)



Cinacchio, Luca. (2003, Jun. 7). Store's windows. *StockXchng*.

Figure 4.10. Screenshot of PowerPoint™ slide of strategies businesses use to get consumers to “try on” things.

We distributed a worksheet (see Appendix BB) to encourage participants to think more deeply about what they know from other disciplines about how organisms “spread.” We asked participants to complete it for homework.

Day 7: Creating Compelling Classroom Experiences

Exploring viral marketing. We began this day by giving participants substantive time to explore a page on the institute wiki

(<http://mlc2006.wikispaces.com/Marketing>). It contained several concise summaries of principles of viral marketing, examples of viral videos, and links to examples of alternative approaches to marketing—many of which were from foreign countries. Participants discussed these explorations in small groups. We then discussed the fact that one of the things that makes these sites so effective is that instead of “pushing” content, they motivate users to “pull” and share it. We connected this idea back to the idea of concepts that are “sticky” (Gladwell, 2000) using Seth Godin’s (2005) simply stated principles of viral marketing. The principles he outlines address the interaction between understanding, packaging, and investment. He emphasizes that initial exposure must motivate further exploration and that people must have sufficient prior knowledge and trust in the sender in order to do so. He notes that people spread what they understand, explains that visual elements can improve the transparency of a concept, and highlights the key role that relationships play in what gets disseminated. We illustrated many of these principles using the Woot.com website (Woot, 2004a). We played several Wootcasts (Woot, 2004b) for participants, including “B-A-G of C-R-A-P” (Woot, 2006). We then discussed how participants might use online material like this as inspiration for classroom projects and activities. We showed participants the student competitions on the Studica Skills website (Studica, 2008) and talked about some ways these competitions might spark ideas for projects that students could do in world language classes (Montgomery, 2006b). We discussed Eisner’s (2002) thoughts on the ways in which recontextualization slows perception and the ways in which projects that engage students in this kind

of recontextualization are also likely to initiate changes in the traditional roles to which teachers and students are accustomed.

Checking in, asking questions. We used the next segment of the day to check in with participants about whether there were any “big questions” they still had that had not been addressed by the institute.

Designing a newsletter. We formally presented the details of the post-institute assignment participants had been told would be part of their institute responsibilities when they agreed to participate (Appendix CC). We reiterated that everything has a design and that graphic design is really the art of communication. We asked participants to think about their target audience (in much the same way that architects plan differently depending on whether they are designing a youth facility or a financial institution. We reminded them to consider their purposes for communicating with that audience (the meaning), to select their medium accordingly, and then to craft their message based on what they wanted their audience to remember. We referred back to the principles of viral marketing and provided four additional examples: The Lexus IS Campaign ([Creative Mac, 2005](#)), Apple’s Get a Mac Campaign ([Harmon, 2006](#)), several iPod commercials, and several Sprint commercials. We asked participants to identify the target audience for each commercial and to describe how the message had been packaged and tailored so that it would be memorable to that audience.

Mapping understanding. We concluded this day by asking participants to draw concept maps that depicted the content of the institute so far. We

displayed these concept maps on the Elmo, drawing participants' attention to similarities and differences between each representation and the content it contained.

Day 8: Taking the Institute Home

Promoting continued personal and professional development. We began this day with an overarching discussion regarding the concepts of cognitive flexibility, recontextualization, multiple representations, and multiple perspectives. We talked about these concepts in relation to the topic of personal and organizational change. We played the song *Frantic* (O'Neal, 2000) and asked participants to consider the importance of professional balance in their roles as mentors, leaders, and change agents. We then spoke about some of participants' strengths. We gave them copies of the poem *Judging*, which describes the development of a rose from the time it is a seed until the time it dies, and emphasizes that we do not criticize a rose when it is a seed or a bud because we recognize that it contains its full potential within it at every stage of its process of development. We reminded them that similarly, developing leadership capacity is also process and encouraged them not to judge themselves (or their mentees) too harshly during that development. We concluded with the book *I Hope You Dance* (Sanders & Sillers, 2000). The book/CD uses a combination of text and images to illustrate the meaning and message of the song by Lee Ann Womack. We provided last-minute information about web management and sent participants off with some Sudoku puzzles and

smoosh books (Blackwell, 2008) to entertain them on the bus ride back to the airport.

Assessing the Institute's Impact

Before participants departed to return home, they completed a post-institute survey (as described in Chapter 3; also see Appendix J) that contained questions that were parallel to those asked on the pre-institute survey (see Appendix I). The Research Institute for Studies in Education (RISE) analyzed this data to produce a report that evaluated the institute.

Unlike many professional development endeavors which conclude their evaluation efforts with a form that participants complete on the last day of the institute, the NFLRC also engages participants in long-term follow-up evaluations. One year following the conclusion of the institute, participants were invited to complete a follow-up survey that asked participants about their institute experiences (see Appendix K). This survey provided the NFLRC with additional information regarding the content, structure, implementation, and longer-term impact of the institute. The attempt to evaluate the long-term impact of this institute concluded with this study, in which a retrospective analysis of all of the surveys administered to participants during each of the design cycles was conducted. The analysis of this data was guided by the research questions listed in Chapter 3. The findings from this analysis are detailed in Chapter 5 through 9.

Issues Raised by These Findings

The process of generating the descriptions in this chapter raised four important issues: difficulties with reconstruction, the absence of participants' perspectives, discrepancies between planning and enactment, and scarcity of connections to world languages.

Difficulties with Reconstruction

Reconstructing what actually happened during the institute was quite difficult in spite of the fact that we had extensive artifacts and materials from the institute to which we could refer when doing so. During the first few days of the institute, we kept a running list of activities as we did them. This, in conjunction with the analysis of the videotapes described in Chapter 3, made it possible to provide an extensive description of the early days of the institute. However, as the institute progressed, we stopped doing this, making it more difficult to accurately reconstruct the details of everything that happened. This was particularly true of small group work since we did not videotape participant work time during the institute. Consequently, although we gave participants substantive time to work in groups each day, if preliminary instructions or follow-up debriefings of this group work time were not captured on the videotape, the activity is not reflected in this chapter. We did not collect all of the work participants produced as a result of these activities either (such as their brochures, PowerPoint™ presentations, etc.), but did have some saved as a result of some participants who presented from our computers. Thus, the

description of presentations given by each group is extremely limited, with some being more detailed than others.

Since most of the content pages on the wiki were constructed during the institute, it was possible to determine which online resources we had used by examining the history of each page of the wiki for the last day of the institute. However, it was still difficult to determine the order in which they were introduced since we often added them to the wiki in chunks at the end of the day. There were also some instances during the institute where we quickly searched for examples or images in response to something participants said or did. We did not always add these to the wiki, so not all of the specific examples we used were recorded.

Absence of Participants' Perspectives

The fact that we did not collect all of participants' work, and that we failed to record small group development time and some whole group discussions means that participants' perspectives are especially absent from this reconstruction of institute activities. This issue is exacerbated by the fact that this description was written after the IRB had been renewed. Because researchers had reported that data collection from participants was no longer needed at renewal, it was not possible to obtain additional clarification from participants regarding these activities.

Discrepancies Between Planning and Enactment

The process of reconciling institute materials with the analysis of the videotapes revealed substantive disparities between the planned schedule of

activities and the order in which they actually occurred. What actually happened during the institute was not nearly as linear or well-structured as our original plans might suggest. This was due, in part, to the fact that we made a number of erroneous assumptions about how much time things would take. We discovered that we had planned way too much content, that we had overestimated participants' skills in some areas, that we had underestimated how much time they would need to complete some of the collaborative tasks, and that we had not fully anticipated all of participants' needs and concerns. This required substantive adjustments to the schedule, content, and pacing of the institute.

Scarcity of Connections to Foreign Language

Although we had planned to draw direct connections between each segment of the institute and world languages, and although those connections were present from time to time throughout the institute, this reconstruction highlights their relative scarcity when compared with other institute activities. While this may be, in part, because most of those connections were made verbally through discussion rather than through specific materials, this chapter highlights that a lack of foreign language-specific examples was one of this institute's weaknesses.

Chapter Summary

Institute leaders sought information from a variety of sources in preparation for the institute. We determined the content, context, and institute participants based on this information. Prior to the institute, we used a wiki to engage participants in a number of pre-institute activities intended to help build

community among them and to provide us with additional information that would allow us to customize the content of the institute for participants. We designed the institute around a series of conceptual frames. These included graphic design, architecture, music, news/filmmaking, viral marketing. We involved participants in a series of activities designed to help them progressively connect and layer conceptual content from these domains. We hoped that participants would then use these conceptual tools to create compelling experiences for their students and colleagues. Following the institute, we considered additional information through post-institute surveys, follow-up surveys, and this research in order to determine the degree to which this actually occurred. The process of constructing this description raised several issues, including difficulties with reconstruction, the absence of participants' perspectives, discrepancies between planning and enactment, and scarcity of connections to world languages. In the chapters that follow, I explore what participants said they learned from these experiences, elements they felt contributed to their learning, and the factors they believed impeded their learning. I begin each chapter with a brief consideration of the theoretical lenses I used to examine and interpret the findings in that chapter. Following an explanation of the findings, I deliberate on the ways in which the data contribute to our understanding of these theoretical lenses, as well as on the affordances and limitations of each set of lenses.

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AN ECLECTIC DELIBERATION ON ONE PROFESSIONAL DEVELOPMENT
INSTITUTE: A DESIGNER REFLECTS

VOLUME II

By

Cherice Michelle Montgomery

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Curriculum, Teaching, & Educational Policy

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CHAPTER 5

COMPELLING EXPERIENCES

Schools commonly employ professional development as a primary means of supporting teacher learning. This practice is grounded in the belief that professional development helps teachers learn, as well as the assumption that this learning will transfer into their work in classrooms. However, this perspective does not make adequate provision for the role of motivation in teacher learning. Teachers are unlikely to make lasting changes to their practice unless they have a compelling reason for doing so, along with the intrinsic desire needed to fuel their efforts. Even teachers who want to change may have difficulty doing so unless they can clearly identify what to change and how to change it. Teachers also need opportunities to develop and apply the creativity and cognitive flexibility that makes such change possible.

Yet historically, professional development has been delivered in ways that violate key conditions of intrinsic motivation²⁴. Ironically, many of the methods commonly used to foster professional learning actually undermine the development of pedagogical reasoning and professional decision-making skills (Kennedy, 1998; Shulman, 1987) and are incompatible with the creative processes that underlie innovation²⁵. These delivery methods also tend to be incongruent with research on adult and teacher learning (Butler, 1992; Hase &

²⁴ Some of the conditions that appear to foster intrinsic motivation are outlined in Ryan & Deci, 2000 & Malone, 1980.

²⁵ Creative processes that seem to be foundational to innovation are discussed at length in Csikszentmihalyi, 1996; Eisner, 2002; & Florida, 2005, among others.

Keyon, 2000; Henschke & Cooper, 2006; Illeris, 2003; Kennedy, 1998; Murphy, 2005; Newmann, King, & Youngs, 2000; Terehoff, 2000; & Thompson & Zeuli, 1999). This helps to explain, at least in part, why teachers often view professional development with skepticism and distrust (Hawley & Valli, 1999). Until professional development is delivered in more compelling ways that fully take these issues into consideration, it is also unlikely to influence classroom practice in substantive ways.

The remainder of this chapter explores potential components of this alternative view of professional development. Specifically, I describe how I used concepts drawn from the literature of various domains to guide the design of the institute and to subsequently examine the data as analytic tools. I then employ these lenses to consider the role of attention in compelling experiences, to examine participants' definitions of "*compelling experiences*," and to identify and interpret patterns common to their descriptions of compelling experiences.

How the Lenses Guided the Design of the Institute

My co-facilitators and I designed the summer institute that serves as the context for this study based on the belief that many professional development sessions for world language teachers do not change classrooms in substantial ways because they focus on theory at the expense of practice. As I explored the literature on professional development, I discovered that although many models focus on what teachers need to know in order to change their practice, they do not frame teachers as learners. Instead, they focus on teachers as recipients of information. I felt that these studies failed to consider the role that opportunities

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to actively participate in learning may play in fostering professional change (Hawley & Valli, 1999). I assumed that as we purposefully involved institute participants in a series of practical, hands-on activities, they would be more likely to internalize the content of the institute in ways that would then productively transform their work with their own students. Consequently, I was particularly committed to an experiential learning approach as I co-designed this institute.

Rationale for the Selection of the Lenses as Analytic Tools

These beliefs also guided the lens I selected from the literature to help me make sense of the data I considered within this chapter. Specifically, I assumed that if one of the major goals of professional development was to improve teachers' classroom expertise, then research that investigated the differences between experts and non-experts was likely to illuminate how teachers use information and experience to improve their practice. Studies regarding this topic highlighted the fact that although both information and experience play important roles in the development of expertise, perhaps the most critical feature that distinguishes experts from non-experts is the focus of their attention. That is, it appears that experts possess well-developed schema that shape the contextual features they attend to when framing problems, identifying potential solutions, and prioritizing professional actions. Consequently, experts seem to perceive and interpret situational subtleties that are essentially invisible to non-experts. It appears experts' ability to notice and incorporate these factors into their decision-making improves their professional practice. Meanwhile, literature from the field of language education indicated that these concepts were also influential in an

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educational context. Both attention-dependent knowledge and prior experience appeared to play central roles in teachers' pedagogical decision-making. Since professional development generally attempts to foster transformative change, which usually involves doing things in a new way, literature on flow experiences also seemed relevant because of the manner in which it connects attention with creativity. The following sections of this chapter explore theoretical perspectives related to each of these issues more fully.

Compelling Learning Environments & Experiences

The ability to create motivating learning environments and experiences and use them strategically is central to the success of people working in fields such as business, education, marketing, psychology, and technology. In research emerging from these fields, a strong degree of congruence is evident among the core concepts, processes, and principles, in spite of the diversity of phenomena under investigation. According to this growing body of literature, compelling experiences appear to involve three key components: attention, motivation, and thinking. This chapter draws on work that investigates these three issues to define a “*compelling experience*” (Wong & Henricksen, 2008, p. 17) as one that: “hooks” attention in personally relevant, emotionally meaningful ways; scaffolds engagement and intrinsic motivation; invites continued reflection over time; and changes perception in transformative ways that foster action. The following sections explore the role that attention plays in this process, while subsequent chapters further elaborate other facets of this definition.

The Role of Attention

Attention plays a central role in the interactions with the environment. The constantly expanding demands on teachers to manage a large number of stimuli to which they are limited (Csikszentmihalyi, 1997) require a constant stream of stimuli to maintain their attention. The opportunities to access information are important for both key elements of teachers' classroom practice: the degree to which a teacher is able to capture and maintain the attention of students and the degree to which a teacher is able to capture and maintain the attention of students.

The Role of Access to Information

Some scholars have argued that determining the stimuli to which teachers are exposed is related to that sensory information may be considered available, the pervasive information is framed. For example, the information is framed. For example, the information is framed. For example, the information is framed.

The Role of Attention in Pedagogical Reasoning & Professional Decision-making Skills

Attention plays an important role in how people experience and process interactions with their environments (Anderson & Woodill, 2004). However, a constantly expanding stream of information and choices produces continuous demands on teachers' attention— both in and out of the classroom. Because the number of stimuli to which a person can attend at any given time is physically limited (Csikszentmihalyi & Rochberg-Halton, 1981), each decision to attend to one stream of stimuli is simultaneously a choice NOT to invest energy in another. The opportunity costs associated with attending to and acting on information are important for professional developers to understand because access to information and the social consequences of acting on information are both key elements of the decision-making processes that ultimately determine teachers' classroom practice. Since the influence of an experience is limited by the degree to which a person attends to the stimuli that comprise it, strategically capturing and maintaining teachers' attention may be a first step in orchestrating more compelling professional development experiences for them.

The Role of Access to Information in Capturing Attention

Some scholarship suggests that access to information is a key factor in determining the stimuli to which people attend and how they make decisions related to that sensory input. Some research has found that access to information may be constrained by the quantity and quality of information available, the pervasiveness of information, and the ways in which the information is framed. For example, while conventional wisdom suggests that

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The Role of Schema

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access to increased amounts of information leads to better decisions, in some studies, presenting consumers with extensive information and a wide variety of choices actually decreased their ability to make sound purchasing decisions (Schwartz, 2004). The additional information made it difficult for consumers to isolate which data really mattered in helping them to distinguish among the advantages of the available products (particularly when combined with a broader range of product choices).

When applied to education, this logic suggests that too much information may actually impede teachers' ability to use it to make professional decisions or further their professional learning. Consequently, it may be important to bound the quantity of information presented in professional development sessions. Additionally, providing high *quality* information not readily available from other sources may fuel and maintain participants' interest. Framing information in ways that highlight its relevance to participants' current needs may also sustain their attention and position them to act more immediately on the new ideas to which they have been exposed. Consequently, research on processes that structure attention and influence the way teachers process information has much to contribute to our understanding of pedagogical reasoning—especially when brought into relation with work that explores how these concepts function differently in the professional decision-making processes of novices and experts.

The Role of Schema in Structuring Experts' Attention

A number of empirical studies on the differences between experts and novices support these hypotheses (Boland, et. al, 2001; Bransford, Brown, &

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available to them.

Cocking, 1999; Klein, 2003; Meskill, Mossop, DiAngelo, & Pasquale, 2002).

These studies highlight important differences in how novices and experts approach the tasks of accessing, interpreting, and acting on information. They conclude that the knowledge and experience bases of experts provide them with schema that focus and organize their attention and memory processes. These schema improve experts' access to information by helping them to filter out what is irrelevant, thus decreasing the quantity of information they must interpret, while simultaneously increasing the quality of information available to them. In other words, these schema reduce cognitive load and assist experts in retrieving information with fluency. Schema also facilitate experts' ability to recognize and correctly interpret relevant patterns embedded in information (Boland, et. al, 2001; Bransford, Brown, & Cocking, 1999; Klein, 2003). These factors work together to strengthen experts' logical decision-making skills as well as their professional intuition—both critical features of expertise (Klein, 2003).

By contrast, when novices are confronted with a problem, they may have difficulty identifying and prioritizing the variables to which they should attend. As a result, they may be overwhelmed by the information available to them, may fail to notice important facets of the problem, may misinterpret information, or may overlook critical patterns that provide clues to potentially effective solutions. In each of these scenarios, the inability of novices to focus and prioritize their attention limits their ability to access, interpret, and act on the information available to them.

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The Role of Attention-Dependent Knowledge & Perception in Expertise

Studies specific to education further corroborate this line of thinking, indicating that attention may play a key role in teachers' ability to perceive and act on certain kinds of information. According to research by Ainley & Luntley (2007), many of the actions of expert teachers rely on "attention-dependent knowledge" (Ainley & Luntley, 2007, p. 4)— highly context-specific information which only becomes visible or accessible as teachers focus their attention on it. It appears that much of the information that contributes to expert teachers' pedagogical reasoning may fall into this category (Bransford, Brown, & Cocking, 1999; Krull, 2007). However, teaching and learning are complex and dynamic endeavors which continuously generate an overwhelming amount of information. This places a tremendous load on the cognitive faculties of the brain, thus limiting the quantity of attention available to invest in processing contextual information that is attention-dependent. Some studies note that the classroom routines and procedures expert teachers commonly employ may play a key role in reducing the amount of information that teachers' brains must process (Krull, 2007; Meskill, Mossop, DiAngelo, & Pasquale, 2002). By reducing the amount of unpredictable information, such routines may free teachers' attention to perceive, process (and therefore, to access) attention-dependent knowledge (Bransford, Brown, & Cocking, 1999). Each of these hypotheses ultimately rests on the premise that when teachers' attention is sustained over time, their access to information is improved.

The Role of Prior Experience in Directing Attention & Shaping Interpretation

Additional factors that play a key role in directing attention and shaping consciousness include past experience and present need (Eisner, 2002). In foreign language education, for example, prior language teaching and learning experiences have a strong influence on the meaning that language teachers make from their classroom experiences (Ariogul, 2007; Borg, 2003). When language teachers encounter discrepancies between the theoretical constructs of language learning and the realities of classroom practice, they tend to rely heavily on their own experiences as language learners, as well as their own classroom teaching experience, to make sense of the dissonance (Ariogul, 2007).

Previous experiences also impact the instructional decisions teachers make in response to what happens in their classrooms (Borg, 2003; Kennedy, 2002; Krull, 2007). When the contextual features of a new situation are similar to elements of a prior experience, particular contextual cues catalyze the schema and accompanying behaviors learned in conjunction with the previous experience as default responses. That is, the features of classroom dynamics to which teachers attend, their interpretations of classroom events, and the solutions they generate and apply in response to those events, are determined in large part by their prior experiences as language learners and teachers. This also helps to explain why numerous studies of professional development have found that following professional development, teachers often revert to their former

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The Role of Flow Experiences on Attention & Motivation

Perhaps the most oft-quoted authority on compelling experiences that lead to personal and social transformation is Mihaly Csikszentmihalyi (1990). He draws these ideas regarding attention into a single, actionable frame—the *flow experience*. He uses this phrase to refer to an enjoyable experience of the highest quality. For him, attention structures not only cognition and perception, but also the content and quality of daily experience with the world. His extensive research identifies nine characteristics of “flow” experiences: 1) a balance between challenges and skills, 2) focused attention—a merging of action and awareness, 3) clear goals, 4) immediate feedback, 5) deep concentration, 6) a sense of control over difficult situations, 7) a loss of self-consciousness, 8) a distorted sense of time, and 9) an autotelic quality—engagement in the activity for its own sake. Together, concepts related to motivation and flow experiences make important contributions to our understanding of factors that may govern and sustain attention. A closer look at the characteristics of both flow experiences and motivation reveals that each is an antidote to many of the breakdowns, distractions, frustrations, and pressures that tend to disrupt sustained attention.

In other words, professional developers interested in moving teachers to intellectual action would be wise to ponder more deeply how they might attract, focus, guide, and maintain attention in ways that foster intrinsic motivation to

learn. As teachers attempt to change their practice, they must think about it in different ways, incorporate new data into their instructional decision-making, and find creative strategies to circumvent elements of the status quo that impede their efforts to change. In order to better attend to the personal experiences and perspectives that may influence how world language educators implement instructional innovations, those who provide professional development need information about what cognitively and emotionally engages language teachers and the processes that support their learning. They also need insight into the kinds of experiences that move world language educators to change and the factors that support the creative processes necessary for doing so. Additionally, information about the ways in which these teachers seek to create transformative experiences for others may help professional developers shape professional development in ways that have a wider impact.

The remainder of this chapter reports on analysis of data from pre-, post-, and follow-up institute surveys and informal telephone conversations to investigate Research Question 3a: What did institute participants say they learned about designing and enacting compelling learning environments and experiences? Specifically, the chapter explores how participants defined and described “*compelling experiences*,” identifies patterns common to participants’ compelling experiences, and examines elements of the institute they labeled as contributing to their learning in important ways.

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Components of “Compelling Experience”

In general, participants' pre-institute explanations emphasized that compelling experiences produce changes in both thought and action. Twelve participants commented explicitly on this, using very similar language, as in these representative responses:

*Something significant that happens that **changes you (the way you think and do things)** [Emphasis added by the researcher²⁶] (Pre-institute Survey, Question 6, Thyme)*

*When I consider this phrase, I think of an experience that **changes the way I think and act as an individual.** (Pre-institute Survey, Question 6, Tarragon)*

*A “compelling experience” means an experience that somehow **alters the way one thinks or acts as a result of that experience.** (Pre-institute Survey, Question 6, Caraway)*

*Some kind of experince [sic] that makes you to pay attention to it, or to remember it, or something **influences you to change your thinking of something.** (Pre-institute Survey, Question 6, Saffron)*

*an experience that **pushes me to think in new ways and transforms me.** (Pre-institute Survey, Question 6, Nutmeg)*

Although these participants did not offer detailed information regarding the mechanisms involved in these changes, patterns in the responses of other participants indicated that both attention and engagement may play important roles.

Attention

In the pre-institute survey, four participants commented that a compelling experience affects attention, using phrases such as, “hits you in the face . . .

²⁶ Unless otherwise indicated, it may be assumed that the emphasis that appears in participants' comments from this point forward was added by the researcher.

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something you cannot ignore” (Fennel), “*makes you to pay attention to it or to remember it*” (Saffron), and “*grab attention and force one’s senses, emotions, and thoughts to become more acute*” (Rosemary). The language that these participants employed highlights that, from their perspective, the effects of a compelling experience on attention are rather involuntary.

A similar pattern emerged in participants’ responses to an identical post-institute survey question. When explaining the meaning of the phrase *compelling experience*, 10 different participants used words such as, “*sticky*” (Cayenne), “*hooks*” (Caraway), “*grabs*” and “*engages*” (Marjoram), “*strikes*” (Turmeric), “*hit*” (Rosemary), and “*captures*” (Tarragon and Ginger). Participants attributed this “*impact*” to a variety of different factors, including emotional and intellectual engagement, personal relevance, and sensory involvement.

*A compelling experience is one that **captures the imagination** of an individual and **leads that person to a more thorough understanding** of a concept. In order to design a compelling experience for others, it is **critical to understand the personal, social, and cultural aspects of those individuals**. It may be necessary for the designer to adjust his/her mode of delivery to parallel the milieu of the audience. (Post-institute Survey, Question 4, Tarragon)*

It may be inferred from Tarragon’s remarks that in order for an experience to be compelling, it must do more than just grab attention—it must engage it. Her use of the word “*imagination*” connotes a more interactive, long-term involvement of a person’s attention and intentions. Her definition also indicates that once an experience has captured the imagination, it draws a person along a path that leads to greater depths of understanding. She implies that the personal, social, and cultural circumstances of those involved in the experience may influence this

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journey. Vygotsky (1978) explains that “imagination . . . is play without action” (p. 63). Play allows participants to bring intentions, objects, thoughts, and actions into new (and sometimes counterfactual) relations. This enables participants to notice new things and restructures their perception. It also engages them in deeply personal meaning making. Consequently, “. . . creating an imaginary situation can be regarded as a means of developing abstract thought” (Vygotsky, 1978, p. 103). It may also enable participants to integrate new ideas and information into their existing schemas.

Another participant’s comments also referred to some of these same components.

*Compelling experience [sic] hit **the senses, the imagination, and intellect** in ways that change or have a lasting impact -- transform one somehow. (Post-institute Survey, Question 4, Rosemary)*

Rosemary uses the word “hit” instead of “capture” to describe the influence of a compelling experience. She, too, notes that such experiences engage the imagination. Her use of the word “*intellect*” implies that they may also have cognitive effects. Her definition also includes an additional component that was not present in Tarragon’s definition—“*the senses.*” It is interesting to speculate about the potential relationship between these three elements. It is possible that imagination provides an important link between the sensory components of a compelling experience that initially capture attention and their subsequent influence on the intellect. When engaged, imagination may help participants attend longer to specific features of the experience. By doing so, it may facilitate their ability to see connections to relevant aspects of their lives, making the

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experience feel more personally meaningful. It may also be that imagination serves as a bridge between the concrete, sensory particulars of an experience and the possibilities that may be abstracted from it. Ongoing analysis and reflection may be part of what is required for participants to traverse this bridge. Another participant's remarks suggest that emotion may also play a role in the degree to which an experience commands attention.

*A "compelling experience" is one which **moves or inspires me**. It can be something that **touches me emotionally** or it can be an experience that **drives me to do more because it triggers memories, provides an "aha" moment, or is particularly interesting or motivating**. (Post-institute Survey, Question 4, Coriander)*

It appears that part of what captures Coriander's attention during a compelling experience are the thoughts and emotions it evokes. She elaborates, describing the cognitive effects of a compelling experience with phrases like *"inspires," "triggers memories," "provides an 'aha' moment,"* and *"is particularly interesting,"* while relying on words like *"moves . . . me," "touches me emotionally,"* and *"motivating"* to describe its emotional effects. These representative responses implicate several different elements in the ultimate impact of a compelling experience on participants' attention. The fact that two participants used the word *imagination* and distinguished between it and *intellect* or *understanding* seems important—perhaps implying that there is a degree of playful engagement involved in sustaining participants' attention during a compelling experience that is different from, and not adequately captured by the more cognitive connotations of the terms *intellect* or *understanding*. Coriander makes a similar move in her response, including phrases that connote emotional as well as intellectual

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involvement with the experience. Additionally, phrases such as *"leads the person," "moves or inspires,"* and *"drives me to do more"* hint that one reason compelling experiences may hold participants' attention is because they draw them beyond their current circumstances, making alternative possibilities visible for consideration. This interpretation is corroborated by a phrase used by a fourth participant: *"shows me the possibilities out there" (Cinnamon)*. In a study of ESL teachers, Freeman (1989) explains that attention requires engagement, while "Awareness is the capacity to recognize and monitor the attention one is giving or has given to something" (p. 33). He argues that changes or shifts in awareness position participants to iteratively unify their knowledge, skills, and attitudes. Freeman goes on to explain that one of the functions of professional development is to generate such shifts: "Development is a strategy of influence and indirect intervention that works on complex, integrated aspects of teaching.... The purpose of development is for the teacher to generate change through increasing or shifting awareness" (p. 40). The fact that participants discriminated between the intellect, senses, and emotions suggests that part of what makes an experience compelling may be the degree to which it engages multiple facets of a person, and not just intellectual ones. It may be that as an experience engages more facets of individual participants, they recognize and monitor their participation in the activity more fully. This may position them to participate in the experience more metacognitively. Personal relevance is another factor which may help to account for the influence of a compelling experience on attention.

Personal Relevance

A cluster of additional responses from both pre- and post-institute surveys indicates that the degree to which an experience seems personally relevant or useful may be responsible for the influence that many participants seem to agree a compelling experience characteristically has on attention and engagement.

An experience that is so highly engaging that one cannot help but remain attuned to it. Usually, it is engaging because of its personal relevance. (Post-institute Survey, Question 4, Sage)

Sage's response highlights the somewhat involuntary and ongoing effect of a compelling experience on attention. Her use of the phrase "highly engaging" suggests that the experience motivates a high level of attention (and perhaps personal involvement) which she attributes to the personal relevance of the experience. Coriander affirms this analysis and then goes on to provide a more expansive explanation of what she would consider to be personally relevant.

A "compelling experience" would be an experience that taught me something that I consider intriguing and useful which I am then motivated to turn around and use myself. (Pre-institute Survey, Question 6, Coriander)

For Coriander, what makes an experience compelling has less to do with the experience itself and more to do with the information she is able to take away from it. It appears that she uses three criteria to measure the quality of the information. First, the experience must teach her something. Second, what she learns must not only be "useful" in a practical way, but also "intriguing." Third, the combination of intrigue and utility must be sufficient to motivate her to apply what she has learned. This is congruent with Schwartz's (2004) thoughts about the role that information plays in capturing attention. Ariogul's (2007) comments

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about the influence that teachers' prior knowledge and experiences have on the meaning they make from their classroom experiences suggest that what participants view as "*useful*" is probably deeply connected to what they have already experienced. Other participants' responses indicated that compelling experiences stimulate high levels of personal involvement through emotional engagement and intellectual interest. This is consistent with Eisner's (2002) comments about the ways in which arts-based experiences "slow perception" by helping people become aware of connections between context, their emotional responses, and the quality of the work. In other words, it may be that arts-based experiences sensitize people to the degree of "fit" between a work of art, an external place, and their own internal landscapes. This would account for the improved clinical judgment Eisner notes and the ability of experts to see patterns in their professional environments that open up new possibilities for action. The "*imagination*" to which several participants referred may well be a reference to the ability to recognize new possibilities for action that result from the synergistic combination of intellectual interest and emotional engagement. Cinnamon's definition contained the exact same elements as Coriander's.

*An experience that **motivates me to learn more and incorporate the object of the experience into my teaching.** It shows me the **possibilities out there for the "item"** and leaves me wanting more. (Pre-institute Survey, Question 6, Cinnamon)*

Cinnamon also expects to learn from compelling experiences. Like Coriander, what she learns must intrigue her by showing her "*the possibilities out there for the 'item'*" and must be useful enough to motivate her to incorporate what she has learned into her teaching. Cinnamon's response contains two

additional nuggets. The first is the idea that a compelling experience leaves her “*wanting more.*” In other words, it does not completely satisfy her curiosity, address her concerns, or fulfill her needs. The second, (which follows from the first), is that the experience motivates her to pursue additional learning, a remark that is consistent with Eisner’s (2002) comments about the fact that arts-based approaches to education often stimulate the desire to pursue additional learning. The issue of motivation appeared in a third participant’s response as well.

*An experience is compelling if it **motivates, which, for me, means that it educates, challenges and sparks growth.** (Pre-institute Survey, Question 6, Mint)*

Mint links several ideas here. She states that a compelling experience “*motivates.*” She then defines “*motivates*” as something that “*educates, challenges and sparks growth.*” The use of phrases such as “*something that I consider intriguing,*” “*challenges,*” “*shows me the possibilities,*” and “*leaves me wanting more*” in conjunction with the concept of motivation may indicate that for these particular participants, the idea of motivation is closely connected with intellectual stimulation. Their comments suggest that when such stimulation is emotionally engaging and feels personally relevant or useful, it motivates professional learning. For at least two participants, it appears that such learning may transfer directly to classroom practice.

Ongoing Reflection and Internalization

Sustained reflection. Although participants’ definitions of compelling experiences did not elaborate on factors that facilitated transfer to classroom practice, at least 11 of them were very explicit about the fact that compelling

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experiences stimulate thinking which results in learning or other transformations.

The responses from 6 participants on both pre- and post-institute surveys indicated that, in their opinion, compelling experiences promote sustained reflection on deep, internalized levels that have an enduring impact.

*Something that you experience that **you remember, keep thinking about, and that changes the way you think about things...***

(Post-institute Survey, Question 4, Thyme)

*One that not only **makes me think about taking action** on a topic or idea, but **stays with me on an internalized level long enough for that to actually happen.*** (Pre-institute Survey, Question 6, Basil)

*The impact of a compelling experience **lasts longer than the experience itself.** After being hooked and drawn in, we **continue to think about the experience for quite a while.** Learning has to be compelling enough that students leave the classroom with something in which to "**marinate.**"* (Post-institute Survey, Question 4, Mint)

The phrases "remember," "stays with me," and "continue to think about the experience for quite a while" suggest that one important characteristic of compelling experiences is that they persist in memory over time. However, according to these participants, the impact of compelling experiences is not simply because they are memorable. Each one notes that such experiences provoke an ongoing continuity of thought in which participants "marinate" over time.

A related set of comments made by 6 other participants in the post-institute survey suggests that this marination (or reflection) is a very active process, as in these representative comments.

*A compelling [sic] experience is one that **allows you to "muck about" in a topic,** work with ideas and principles [sic] shared by*

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*others and **think about how it all applies to you and your own situation.** It is not full of "right or wrong answers" nor does it constrict your ideas. **It connects to you on an emotional level and helps you to find new answers on your own.** (Post-institute Survey, Question 4, Cinnamon)*

Cinnamon raises several important issues here. Her phrase “*muck about’ in a topic*” is reminiscent of Mint’s use of the word “*marinade*.” Both of these participants state (or imply) that it is in “*ideas and principles*” that participants are doing this marinading. Cinnamon’s phrases, “*think about how it all applies to you and your own situation*” and “*connects to you on an emotional level*” both highlight the role that personal relevance and emotional connections play in catalyzing this reflective processing.

Conceptual connections. Another participant articulates the result of this processing.

*Compelling experiences capture the spirit and spins it likes a swirling dervish in meditation. **From the positive full refelctive [sic] spinning [sic] comes a deeper and more connected understanding.** (Post-institute Survey, Question 4, Ginger)*

Ginger’s remarks emphasize the somewhat involuntary, but highly interactive and meditative nature of this process. Her comments also imply that such reflection enables her to make connections between concepts which result in “*a deeper and more connected understanding*.” In other words, an increasingly dense network of connections may be responsible for new insights or epiphanies described by other participants that lead to understanding.

This interpretation is in harmony with neuroscientific research and scholarship on creativity, which links divergent thinking with the sudden breakthroughs for which creative individuals are known. Douglas Hofstadter

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(1985) explains divergent thinking as the ability to perceive intimate relationships between seemingly unrelated concepts, ideas, or things. In order to accomplish this, the brain must make insightful connections between items that, at first glance, appear to have very little in common. Neurologically, this means that the brain must expand its conceptual networks, traversing new neural pathways in order to arrive at a creative epiphany. Such pathways are crafted from new conceptual connections that have not already been well-established (Kraft, 2005). Hofstadter notes that this process involves four primary elements: emotion, perception, and multiple representations (especially analogies), and experience. For him, “the crux of creativity” has less to do with creating and more to do with “spotting” possible “variations on a theme.” He notes that perception (seeing variables where others see constants) is tightly linked to invention.

Perception. Hofstadter (1985) goes on to explain that creativity is an issue of framing new experiences in terms of “familiar concepts,” of perceiving variations on those concepts, and of pursuing the possibilities suggested by those variations to new conceptual associations. These ideas are consistent with scholarship on expertise, which indicates that experts perceive facets of their professional contexts that novices simply do not notice (Bransford, Brown, & Cocking, 1999; Goodwin, 1994). Experts are able to use their knowledge of other similar situations and “familiar concepts” to recognize patterns that suggest particular courses of future action. It appears that the more time participants spent pondering their experiences, the more connections they were able to

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notice. As these connections multiplied, it is likely that their conceptual networks expanded, changing what they were able to perceive. It is probable that their understanding deepened as a result of this increased perception. An increased number of connections would also help to account for the new realizations and insights this cluster of participants reported experiencing.

Well-informed creativity. According to Csikszentmihalyi (1996), access to information is another important factor in the creative process. This may be because novel, “*interesting*,” “*intriguing*,” or “*motivating*” information may stimulate the brain to make these connections. According to one participant, compelling experiences may increase the likelihood that participants seek out such stimulation, “*A compelling experience is one that makes you want to know more. It “compels” you to find more information to satisfy your curiosity*” (Post-institute Survey, Question 4, Fennel). It is possible that part of this quest for additional information is motivated by an attempt to make sense and meaning of the experience. As one participant summarized it, a compelling experience “*guides, forces, or coaxes the viewer/student/listener to create meaning from or by it*” (Post-institute Survey, Question 4, Basil). The active engagement in reflective processing that such inquiry and meaning-making provokes “. . . enables people to make connections [to a topic] in a meaningful way” (Post-institute Survey, Question 4, Caraway) that “*leads that person to a more thorough understanding of a concept*” (Post-institute Survey, Question 4, Tarragon). According to another participant, the effects of such an experience

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In other words, it seems that participants, neuroscientists, and scholars agree on many of the features characteristic of compelling experiences. Such experiences appear to capture attention in ways that stimulate curiosity, emotional engagement, and personal involvement. This combination of factors seems to engage participants in making new connections, seeking out additional information, and pondering what they are experiencing for extended periods of time. This marination may prepare participants' minds to make new connections and to engage in active meaning-making that ultimately leads to new insights. The learning that results from these insights may play an important role in the changes in perspective that some participants attributed to compelling experiences.

Changes in Perspective

In 22 separate instances across pre- and post-institute surveys, participants made comments linking compelling experiences to enduring changes or transformations. Five participants specifically connected those changes to shifts in perspective, using phrases like *“profoundly affects how one sees things” (Pre-institute Survey, Question 6, Ginger)*, *“an epiphany . . . that changes one’s world view or personal philosophy” (Pre-institute Survey, Question 6, Marjoram)*, *“may change their view of themselves or how they look at the world” (Post-institute Survey, Question 4, Caraway)*, *“makes me see, understand, and interact with the world differently as a result of having engaged with that experience”*

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(Post-institute Survey, Question 4, Nutmeg). Csikszentmihalyi & Rochberg-Halton's (1981) comments highlight the link between attention and perception. They indicate that the amount of attention available to any one person is limited. Consequently, attention literally structures perception. It is also a pre-requisite to action. Put another way, the things to which people devote the supply of attention available to them determine how they perceive themselves and the social contexts in which they participate. Such attention also determines the degree to which they are able to perceive possibilities for future action. It may be that compelling experiences have the effect of restructuring participants' attention in a way that allows them to perceive these new options for thought and action. In other words, compelling experiences may physically or conceptually reposition participants in ways that assist them in perceiving new connections. These connections may create epistemological pathways that lead participants to experience new possibilities in themselves and their circumstances.

One participant stated that these changes in world view and self-perception are eventually internalized in ways that influence future learning experiences.

*A "compelling experience" is one that actually **transforms the teacher/learner and changes them in a significant way**. In other words, a compelling learning experience **becomes part of the teacher/learner's "frame of reference" for future learning experiences** in rich, meaningful contexts. For many foreign language teachers/students, an example of a "compelling experience" is a study abroad experience in the target culture.*
(Post-institute Survey, Question 4, Oregano)

For this participant, compelling experiences have a direct influence on a person's perspective. Other participants corroborated the connection that this participant

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made between “rich, meaningful contexts” and “a study abroad experience in the target culture” in their descriptions of compelling experiences they had prior to attending the institute.

Participants’ Compelling Life Experiences

The contexts of the compelling life experiences that participants described varied widely. They ranged from childbirth to professional development sessions and from teaching to travel. Despite this variation, several common patterns emerged from the data. Half of the experiences participants described occurred in a country outside of the United States, and for 8 participants, they took place over an extended period of time (from 8 months to a year). Other people were directly involved in the experiences of all but three participants, and over half of the participants used emotion-laden words such as “joys,” “amazing,” “awesome,” “frustrating,” “cathartic,” “rip-me-out-of-my-life-as-I-knew-it,” “great,” “fear,” “intimidated,” “enriching, exciting, fulfilling,” to describe the experiences. Twelve participants noted that the experiences had influenced their thinking in some way, as the following responses illustrate.

*Coming and begin kiving [sic] in the US **has made me think different about people's and life values.** It is hard to extract one episode of my life here. (Pre-institute Survey, Question 8, Pseudonym omitted to protect participant)*

*The most compelling experiences I had as an undergraduate were in honors classes that challenged the way my beliefs. **I was forced to look at why I believed what I did. The experience changed my beliefs and also my thinking.** (Pre-institute Survey, Question 8, Mint)*

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Changes in Beliefs and Values

In both of these comments, participants indicate that the experience affected their beliefs and values. The second participant's comment highlights that the "challenge" inherent in the experience "forced" her to pay attention to the rationale underlying her beliefs and values. As a result of this restructuring of her attention, she also experienced changes in herself. This was true for other participants as well, for whom the thinking produced a realization that yielded a life lesson of some sort, as these selected responses indicate:

*On May 23, 1989 at 8:30 in the morning my son, Evan was born 16 weeks prematurely. I couldn't go look at home [sic] until about 4:30 that afternoon. The doctors said he had only a 1 or 2% chance of surviving. If he did survive, he would certainly be severely handicapped. I couldn't face the thought of seeing my baby, loving him, and then losing him. It took me much of Evan's first day of life, and much soul-searching, to be able to go see him. **I thought about** a high school student who had died a few years earlier at 17. Would his parents have withheld their love for him if they had known they would only have him for 17 years? **That was when I realized** that I would have to love Evan and be his Mom, even if I only had him a few days or weeks. **One can't live life avoiding connection out of fear for losses we might suffer.** (Pre-institute Survey, Question 8, Caraway)*

Realizations and Insights that Motivate Action

For this participant, the act of thinking and questioning produced a realization that motivated her to act. In the concluding sentence of her response, she states the life lesson that she abstracted from this experience. This pattern appeared in the responses of other participants as well.

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*I was in Hungary for a summer, and in my interactions with the locals, I found myself being referred to as the 'American'. **I had never thought of myself as that** per se; I identified myself more regionally, like a Wyomingite or a country girl. **It was frustrating** to have to justify/defend/explain actions that my country had taken, looked like it was going to take, or might take. **I then realized that what we do might seem 'small' to us, but we have no way to predict the repercussions.** (Pre-institute Survey, Question 8, Cayenne)*

Cayenne comments on the ways in which this experience in a “foreign” country positioned her to understand herself and her country differently. She explains that this was not a particularly comfortable experience, but that the manner in which it challenged her thinking produced an important realization for her. The final sentence of her response abstracts from this encounter what she learned from the experience. Eight other participants’ responses concluded with similar encapsulations of lessons they had learned. These lessons were directly connected to their teaching in some way, and in several cases, motivated changes in their teaching practice.

*I was teaching Spanish 2 and one day I assigned what I thought was a great idea. I wanted my students to write a book describing how Americans celebrate Halloween. I had a list of “stuff” to do. I finished my spiel and one of my students raised her hand and asked if she could write a poem. I would have never in a million years asked my students to write a poem since it was something I would have never liked to do. **I thought for a minute** and said well.. o.k. Then the next student raised his hand and said, I would prefer to write a song. The next wanted to work as a group and do a puppet show. Finally, I said, everyone rip up the sheet I just gave you. Then said to them, in any form manner or way, communicate how we celebrate Halloween. I got the best projects I had ever seen in my life. **I learned that I didn’t know everything, and that students like to learn and show their strengths in many different ways.** (Pre-institute Survey, Question 8, Fennel)*

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Fennel explains how her students' questions challenged her presuppositions about the assignment she had given. She indicates that this caused her to think for a moment, and then describes how this reconsideration of her original plan motivated her to act. She relates the lessons she learned from this experience to herself (i.e., "*I learned that I didn't know everything*") and to her teaching ("*... that students like to learn and show their strengths in many different ways*"). Another participant recounts a similar experience:

*I was attending a LOTE 2 day summer workshop. Back then we were required to attend a specific number of professional development sessions. The team of presenters were from Long Island NY, and were sharing thier [sic] communicative teaching model. What made the experience compelling for me is that I **suddenly realized that I could facilitate speaking practice in a more realistic way in the classroom.** I had always known that my students were not speaking German as much as they should; I just couldn't figure out how to make it a natural part of my lesson cycle. **It was an "aha" moment for me. It changed my teaching totally.** (Pre-institute Survey, Question 8, Marjoram)*

This professional development session appears to have been compelling for Marjoram because the context positioned her to recognize a solution to a problem she had been considering for some time. She gained sudden insight from the experience that empowered her to take action in a way that ultimately affected her teaching.

Patterns in Participants' Compelling Experiences

Each of these instances followed a similar pattern. After describing the setting of the experience, participants highlighted some aspect of it that was personally relevant and meaningful, such as, "*I had never thought of myself as that per se; I identified myself more regionally, like a Wyomingite or a country*

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girl;" *"I would have never in a million years asked my students to write a poem since it was something I would have never liked to do;"* and *"I had always known that my students were not speaking German as much as they should; I just couldn't figure out how to make it a natural part of my lesson cycle."* Next, several participants articulated the emotional consequences of this personal connection: *"I couldn't face the thought of seeing my baby, loving him, and then losing him."* *"It was frustrating to have to justify/defend/explain actions that my country had taken, looked like it was going to take, or might take."* Participants explained that the situation had challenged them to think: *"I was forced to look at why I believed what I did,"* *"I had never thought of myself as that."* These thoughts led to a realization of some sort that often motivated participants to take action: *"I would have to love Evan and be his Mom, even if I only had him a few days or weeks,"* *"I said, everyone rip up the sheet I just gave you."* Finally, participants noted that these realizations ultimately yielded enduring insights they seemed to value: *"That was when I realized that I would have to love Evan and be his Mom, even if I only had him a few days or weeks. One can't live life avoiding connection out of fear for losses we might suffer,"* *"I then realized that what we do might seem 'small' to us, but we have no way to predict the repercussions,"* *"I learned that I didn't know everything, and that students like to learn and show their strengths in many different ways,"* *"I suddenly realized that I could facilitate speaking practice in a more realistic way in the classroom."*

Although each facet of this pattern was not evident in every response, it was reflected in many participants' responses. There were also some

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participants who described several different compelling experiences within a single response, each of which evidenced a different aspect of the pattern, as in the following example.

*It is difficult to think of one compelling [sic] experience. Several occasions come to mind - **child birth (I was never the same person)**; **child rearing-the joys and difficulties**; **art-the first time I saw the French Impressionists' paintings at the Jeu de Paume (the overwhelming beauty and the awe I felt for the artists)**; **my first experience living in Paris, which was also my first experience living in a large city (the sense of independence and self-confidence that emerged)**; **my second year teaching when I realized that I could help students learn and make an impact on their lives.***
(Pre-institute Survey, Question 8, Tarragon)

Although this participant lists multiple experiences, the elements of the pattern are still evident. She describes personal experiences that, for various reasons, commanded her attention and were personally meaningful and relevant. She comments on the emotions some of those experiences evoked and notes the realizations she experienced. She also outlines the insights she extracted from some of these experiences and implies that they resulted in subsequent changes (“*I was never the same person,*” “*the sense of independence and self-confidence that emerged*”). This pattern is also congruent with the characteristics of compelling experiences that participants outlined in response to both Pre-institute Survey Question 6 and Post-institute Survey Question 4, as well as with Csikszentmihalyi & Rochberg-Halton's (1981) thoughts on the relationships between attention, perception, and the self.

In other words, according to participants, compelling experiences share a number of characteristics. They command attention, evoke emotions, challenge thinking, and foster ongoing reflection. These features seem to promote deeply

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Triangles as Tools

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meaningful personal engagement. This frequently motivates action and yields insights that permanently affect perspective. In the post-institute survey and comments made during informal telephone conversations, many participants also reported participating in institute experiences that included these characteristics.

Institute-Related Compelling Experiences

When asked in the follow-up survey to describe a compelling institute experience, participants' responses varied, both in length and content.

Response length ranged from 32 words to 601 words, with an average of 117.71 words. In these responses more than two participants referenced: triangles (3 participants), the "field trip" (3 participants), multimedia examples such as audio clips, commercials, images, and video clips (5 participants), professional networking and conversations with other participants (7 participants), and technology (7 participants). It is to these topics that we now turn.

Triangles as Tools for Thinking

The cultural triangle. As previously mentioned in Chapter 4, on the first day of the institute, institute leaders used the cultural triangle from the National Standards for Foreign Language Learning (National Standards in Foreign Language Education Project, 1999/2006) as the basis for a discussion of participants' understanding of the National Standards in general, and the concept of culture in particular. We emphasized that a careful examination of cultural products, practices, or perspectives in isolation is insufficient if the goal is a thorough and complete understanding of a culture. We then extended this conversation, explaining that because all practice is culturally situated, the

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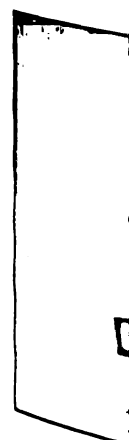


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cultural triangle can be used as a paradigm for understanding practices of all kinds—including those of 21st Century teenagers and the educational practices of the classrooms in which they learn. We focused the remainder of the conversation on the products, cultural practices, and perspectives associated with literacy and the ways in which conceptions of literacy are a cultural product that emerge from both time and place. We revisited these ideas throughout the remainder of the institute, but in other contexts. These contexts included the three modes of communication from the National Standards; levels of abstraction in lesson planning; mentoring; information processing and student cognition; lesson planning; and principles of design. These conversations typically involved interaction with a diagram of a triangle on a large whiteboard (see Figure 5.1) as well as three, fluorescent, paper triangle “frames” which were used to illustrate various ideas (see Figure 5.2).

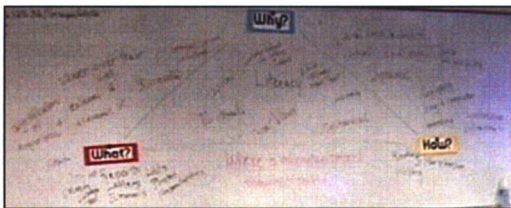


Figure 5.1. Whiteboard triangle diagrams (handwritten).

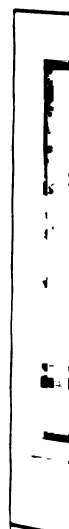
It appears that for some participants, these triangles facilitated whole group discussions and the development of their personal understanding. When asked to describe a compelling institute experience in the post-institute survey,

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three participants referred to triangles. The figures that follow below (Figure 5.2, Figure 5.3, and Figure 5.4) contain excerpts from these comments, photos of the institute activities to which they refer in their comments, and a brief description of each of these activities.

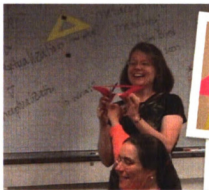
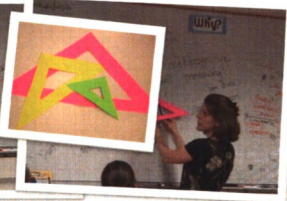
	
Participant Comments	Activity Description
<i>when cherice [sic] had her paper triangle frames - I didn't know it was compelling at the time, but I kept thinking about it and looking at what I was doing/seeing/saying to explore which frame I was operating in. I think she is right in that some of us only look through one frame and may not realize that there are more than one - also the concept of cognitive meddling...I want to do that! (Post-institute Survey, Question 5, Cayenne)</i>	The paper triangle frames formed the foundation of two different discussions with participants. In the first, participants were asked to consider the ways in which prior knowledge and experience influence what a learner is able to "see," and to consider how learning experiences can expand perspective and thus, influence problem framing. In the second discussion, the paper triangle frames were used in conjunction with several pens to physically represent the interactions between teachers and students during the process of "metacognitive meddling" and to illustrate the importance of building on prior knowledge (Bird, 2004).

Figure 5.2. Paper triangle frames used to help participants consider the role of perspective in teaching and learning.

Facts	Information	Knowledge	Understanding	Expertise
				
Participant Comments <i>There was a class discussion with the triangles as the base - each connection added a dimension. There were all these triangles all over the board, each representing a different level - MLC Institute, design elements, student/community standards. All the little multi-dimensional triangles connect to make a bigger triangle. How will we take all those little triangles and create our own big triangles that we will take back to our own institutions? WOW! These were big concepts, but it all came together here for me (AHA moment). (Post-Institute Survey, Question 5, Caraway)</i>		Activity Description In this discussion, one of the institute leaders drew a series of diagrams on the whiteboard to illustrate the role that connection plays in the progressive development of expertise. She wrote various world language concepts next to these triangles and then encouraged participants to consider the nested contexts in which world language education takes place.		

Figure 5.3. Triangle diagrams used to illustrate connections among various components of world language education.

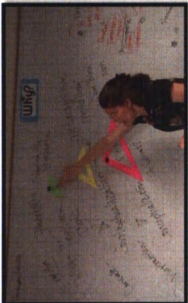
	Participant Comments <i>The day when we had coins to talk, Cherice put a dot in the center of the triangle, that was the perspective that opened my understanding. It changed my perception. . . . (Post-Institute Survey, Question 5, Ginger)</i>		Activity Description In the discussion to which this participant is referring, each participant had been given four bingo chips. Each time a participant wished to make a comment, they had to surrender a bingo chip. This technique was used to demonstrate to participants one strategy for ensuring that everyone in the room had equal opportunities to talk during a class discussion. Near the end of the discussion to which Ginger refers, one of the institute leaders used the triangle to represent a student. She put "dots" in the center of one of the triangles with a whiteboard marker to highlight the relationships between what is already occurring inside students' heads, isolated facts, and shifts in their thinking.
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Figure 5.4. Talking chips and triangles with dots.

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Mediation of cognition. Implicit in each of these comments is the idea that the triangles mediated participants' cognitive processes in some way. The first participant did not elaborate regarding how the dot in the center of the triangle was related to the resulting shift she reported in her perception. However, for the other two participants, it appears that the triangles engaged them intellectually in ways that encouraged sustained thinking about both the triangles and the concepts they were being used to explain. This thinking also seemed connected to their personal and professional circumstances.

Although other participants did not mention triangles as being foundational to a compelling experience they had while at the institute, when asked to list the instructional processes or strategies that were most useful in facilitating their understanding of institute concepts, several additional participants spoke of triangles.

*Loved the **triangle graphic**--it's amazing how many **concepts could be mapped within that frame!** (Post-institute Survey, Question 10, Marjoram)*

*The triangles, of course. The **triangle within a triangle** is a **powerful, visual model** that I'll use with others. (Post-institute Survey, Question 10, Rosemary)*

*This week I am presenting a seminar on differentiation in California. I have already synthesized several points to my instructional pieces to layer them deeper. The **triangle** will become **a big place to play.** (Post-institute Survey, Question 6, Ginger)*

The adjectives these participants used in commenting on the triangles (such as *loved, amazing, big, and powerful*) are indicative that the triangle may have had an important impact. Participants ascribed this importance to a variety of different factors—the triangle supported the development of conceptual

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understanding, it was a useful visual representation, and it functioned as a space that supported the playful consideration of concepts. The fact that each participant offered a different rationale to explain the value of the triangle suggests that if influential, it may not affect each participant in the same ways or for the same reasons. However, in response to a follow-up survey administered one year following the institute, other participants offered similar rationales when asked, "What does the triangle above mean to you?"

The triangle as a conceptual tool. Some participants noted the utility of the triangle as a conceptual lens, frame, or tool.

It is reminder to look at things from a new lens from time to time. (Follow-up Survey, Question 11, Mint)

A frame through which and around which we view our work and the results of our work with students and in the larger community. (Follow-up Survey, Question 11, Sage)

I think it is more of an ability to articulate connections (triangle sides) between concepts and ideas that I didn't know how to before. I have been dreaming about this, if that clarifies anything! (Post-institute Survey, Question 8, Cayenne)

These comments imply that the triangle can function as a reminder to consider multiple perspectives, as an organizing paradigm for instructional design and evaluation, and as a tool for facilitating and explaining conceptual connections.

Many other participants also emphasized the dynamic nature of the relationships illustrated by the triangle, while acknowledging its genesis in the National Standards (National Standards in Foreign Language Education Project, 1999/2006).

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It shows the **interaction and interdependancy** [sic] of three critical approaches to teaching, **language and culture**. (Follow-up Survey, Question 11, Turmeric)

It immediate [sic] evokes the **national standards** but it also is one way to remind me as an educator that **all three components are important** when designing educative experiecnas [sic] for students. (Follow-up Survey, Question 11, Nutmeg)

Additionally, thirteen participants connected these interactive relationships directly to teaching in some way.

The **interrealtionship** [sic] of design in general and effective (compelling) lessons specifically. (Follow-up Survey, Question 11, Caraway)

The triangle above describes the **multi-layered relationships** during the learning/teaching/mentoring phase of an educational endeavor. (Follow-up Survey, Question 11, Oregano)

In summary, participants appear to have engaged with triangles in variety of different ways as concrete tools for making sense and meaning of the complex conceptual content that they were trying to understand. Eight survey responses suggested that the triangle influenced participants' thinking in some way, while 7 comments linked the triangles to shifts in professional perspective or impacts on classroom practice. This indicates that the triangle paradigm may have facilitated the development of their understanding in some way. Findings from a pilot study (Montgomery, 2003) conducted with participants from a similar *Mentoring, Leadership, and Change* institute held in 2003 offer insights into some of the mechanisms by which this may have occurred.

Stable context for thinking. First, the triangle may have served as a stable context for thinking in a week filled with a diverse array of complex ideas from a wide variety of fields. Although these triangles originally served as a physical representation of a particular way of constructing culture, they also may have served as a “boundary object” (Cobb, 2003b)—a shared focus for participants’ attention which does “not carry meanings across boundaries, but instead constitute focal points around which interconnections between communities emerge” (p. 19). Although Cobb uses this idea to describe social interactions around a concrete artifact, I would argue that the concept can also be applied to conceptual communities. Hofstadter (1985) refers to these conceptual communities as “conceptual networks” (p. 237) and suggests that just as social collaboration is critical to the formation of social networks, that same “chemistry of concepts” (p. 250) is critical to the emergence of insight and creativity—both of which can lead to deep understanding. This idea is supported by Ainsworth and Loizou (2003), who explain that visual representations such as diagrams seem to foster expanded perspectives that span representations. They note that such representations catalyze more extended and sophisticated reasoning that focuses on links between interconnections. Thus, triangles may have functioned as a “boundary object”—a concrete referent for abstract conceptual content that helped participants to make conceptual connections.

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Van Labeke, 2002). Hofstadter (1985) elaborates, “. . . experience with a wide variety of things refines your category system and allows you to make incisive, abstract connections based on deep shared qualities” (p. 253). An interesting study conducted by Lamberti and Newsome in 1989 found that experts were better problem-solvers when working with abstract representations of the problem. By contrast, those who were not as skilled worked more effectively with concrete representations of the problem (Jonassen, 2003). Empirical work by Ball, Ormerod, & Morley (2004) suggests that this might be explained by differences in the kinds of reasoning that experts use by comparison with novices. Specifically, that experts use “schema-driven analogizing” (p. 2) to recognize and apply relevant knowledge abstracted from experience, while novices use “case-driven analogizing” (p. 2) to identify a concrete instance of a similar problem and then attempt to transfer the solution to the new context. They also note that similar surface features may facilitate a person’s ability to recognize an analogous situation or solution as conceptually relevant, increasing the likelihood of its spontaneous use.

In light of this information, it is possible that the triangles served as an external schema or heuristic that was useful to participants in several different ways. First, it made have made it possible for participants who were less familiar with the content to physically manipulate the triangles in concrete ways, thus assisting them in understanding the concepts “attached” to them. The visual and conceptual feedback from these interactions may also have helped participants to reason about conceptual relationships. Secondly, our application of the

triangles to different concepts may have provided a sense of similarity among concepts at a surface level that might have triggered the participants' recognition of deeper conceptual connections among the new concept and others we had already mapped onto the triangle. In so doing, it may have facilitated participants' ability to notice relationships among concepts and theories that they previously viewed as being separate. This may have enabled them to think at higher levels of abstraction and to more fully integrate their knowledge and understanding. Prior knowledge is another important factor in this process.

Predictability. Second, our recursive use of the triangles may have provided a degree of predictability regarding the purpose, process, and expectations for the task. This may have alleviated potential uncertainty and anxiety, thus allowing participants to devote all of their cognitive resources to understanding conceptual content instead of grappling with making sense of the task (or our expectations for their performance). Participants' familiarity with the task may also have activated prior knowledge, a critical factor in a person's ability to notice patterns according to Anderson & Woodill ([2004](#)). This may have enabled participants to recognize conceptual connections among discrete institute topics and processes more easily, and thus arrive at new insights more quickly. Paradoxically, when institute leaders' actions with respect to the triangle paradigm were atypical or unexpected, it is likely that their influence and meaning were amplified (as a function of the general predictability of the task). It is possible that this strong contrast between the expected action and the one that actually occurred may have drawn participants' attention to particular facets of

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the conceptual content under consideration. Perhaps this increased awareness of specific features served as a catalyst for some of the shifts in perception that participants reported in conjunction with their triangle experiences. It is also possible that these changes in perspective prompted participants to consider the consequences of relating that content in different ways more thoughtfully. More importantly, by helping participants operating from a particular metacognitive stance to view things through an alternative lens, the triangles may have positioned some participants to make more purposeful decisions about the structure of their own mental models with respect to that content.

Multiple forms of reasoning. Third, it is possible that our use of multiple representations of the triangles (paper triangle frames, whiteboard diagrams, etc.) allowed participants to draw on different forms of reasoning when thinking about the conceptual content attached to their geometric features. This may have enabled participants to understand more facets of the content than would have otherwise been visible to them in any single representation of it. This interpretation is consistent with research (Ainsworth & Van Labeke, 2002; Jonassen, 2003; Mishra & Nguyen-Jahiel, 1998, & Mishra, Spiro, & Feltovich, 1996) which suggests that what students can perceive about content and processes is, in large degree, determined by the form in which it is represented. The interaction between the physical triangle representations and their associated conceptual content may have resulted in a flow of both visual and conceptual feedback to participants that allowed them to continuously revise and refine their understanding.

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Cognitive flexibility. Finally, the triangle may also have functioned as a useful heuristic for participants. Abbott (2004) explains that heuristics are essentially tools for framing and reframing what we notice and how we understand it. Engaging learners in structured activities that expose them to experiences and patterns they can later draw on as effective decision-making heuristics may be one way to build professional experience, thus rapidly improving both individual expertise and organizational decision-making skills (Klein, 2003). The way in which the triangle functioned as a flexible template for representing so many different concepts, contexts, and processes may have reframed participants' perceptions in ways that pushed them to think in new, more cognitively flexible ways.

These findings do not apply to all participants, however. In a follow-up survey administered one year following the institute, participants were asked, "What does the above triangle mean to you?" One participant's answer suggested that the triangle was just a static representation of culture—"A *practical way to discuss culture, both small 'c' and large 'c'*" (*Follow-up Survey, Question 11, Dill*). This suggests that some participants may have viewed the triangle solely in terms of its original context. Abstracting the triangle from that context in order to use it as a heuristic tool may not have been helpful for some participants. It is also possible that the lack of reference to a second specific context in the survey question meant that there was nothing to trigger a shift from commenting on the concrete representation of the cultural triangle to commenting on its abstract use as a heuristic tool. A third possibility is that participants were

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not familiar enough with the original conceptual framework from the standards. Anderson & Woodill (2004) explain, "Information visualization, then, can be a great heuristic device, as long as the recipient is familiar enough with the conceptual framework in use by the sender so that s/he can adequately unpack its meaning" (p. 237). In addition to triangles, participants mentioned the architecture "field trip" they had taken during the institute as another example of an institute experience they found compelling.

The Architecture of Experience

The field trip. When asked to describe a compelling institute experience in the post-institute survey, three participants referred to the architecture "field trip" (see Chapter 5, Day 2). Although each of these participants provided slightly different reasons to explain why the experience was compelling for them, several common motifs appeared in their responses.

*Amid the many interesting experiences, the "field trip" day which had us observe a space for its purpose and design was **especially memorable and thus "compelling" to me**. The location we were driven to (thanks for the ride!) was **a unique one** due to its size, decor, and food offerings. It was also **memorable** because of the staff. **My entire group was touched** by the personable nature of our waitress and her generosity in answering questions and the fact that she voluntarily "whipped up" a phosphate for us to try free of charge when we asked what that was. All of us were from far away, so we had **new** food experiences and also had the opportunity to **network about our varied teaching experiences**. That kind of chance is **especially meaningful to me**. Finally, the outing was **unique and memorable** because we **discovered** the tempermental [sic] nature of the Ames bus system and had to walk home! (Post-institute Survey, Question 5, Coriander)*

Novelty. This participant attributed the compelling nature of the experience to its memorable nature. She noted specific characteristics of the

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experience that contributed to this effect. These included novelty or uniqueness, emotional impact, and the chance to share professional experiences with colleagues (which she describes as being personally meaningful to her). A second participant also comments on several of these characteristics.

*For me, the examination of two business establishments for graphic design and architecture was **compelling on several levels**. First, it was **motivating to go out into the community with colleagues to explore** Ames, a town that was **completely new for me**. Secondly, I **enjoyed investigating** restaurants from **new angles taking the design into account and looking for the organizing thread** that the owners created. (Post-institute Survey, Question 5, Tarragon)*

This participant indicates that the experience affected her on multiple levels, citing novelty, emotional impact (i.e., “*motivating*,” “*enjoyed*”), intellectual impact (e.g., “*explore*,” “*investigating*,” “*looking for the organizing thread*”), and the chance to spend time with colleagues. It is unclear as to whether her decision to mention going out into the community with colleagues indicates that leaving the classroom and spending time with colleagues contributed to the compelling quality of the experience for her or not. It may be that she is simply using this as a descriptive phrase to outline the context of the experience.

Collegial interactions. However, spending time with colleagues formed the primary substance of the following participant’s comments.

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*One of the compelling experiences that **I particularly enjoyed** during the institute was the field trip to compare two restaurants from a "design" standpoint. This experience **took place with four individuals who were not in my original group**. One of the members of our group drove us to Ames **to explore** the old town area. We read the guidelines for the activity and divided the tasks: reader of the article, photographer, note taker, etc. **All of the people in my group enjoyed exploring Ames**. The two restaurants we selected to compare allowed us to look at design, layout, lighting, seating, menus, decoration, etc. We decided to have lunch together at Aunt Maude's restaurant. **Our group formed a very positive relationship during this activity that lasted throughout the institute. I also plan to maintain contact with some of the individuals from this group** via email, etc. in the future. (Post-institute Survey, Question 5, Oregano)*

In this experience, the novelty appears to come from the fact that this participant did not travel with her focus topic group. Her comments regarding how much she and her group members "enjoyed" exploring Ames suggests that the affective component of the experience is part of what made it compelling. As with the previous participant, it is unclear whether her references to exploration reflect that as an important feature of the experience, or as mere background information. However, she notes the formation of relationships with colleagues and emphasizes that they were enduring. In informal telephone conversations a year following the institute, this participant expressed that she had experienced a great deal of tension while working with her focus topic group. The opportunity to spend time away from that tension doing something relaxing may help to explain part of the reason that she found this particular experience so compelling. This participant also seemed very concerned during our phone conversation that I understand that even though her field trip group had formed particularly positive relationships, they had not done so at the expense of the assignment they had

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At least one other participant expressed anxiety about this as well. This may demonstrate that participants are conflicted about what “counts” as learning. It may also indicate that participants are concerned about how institute leaders perceive them. In either case, it suggests that they had some misconceptions about our goals for the assignment in that one of its primary purposes was to give participants opportunities to build both social and professional relationships with one another early in the institute. Our intent was that these relationships would support future institute activities and become the foundation for their individual professional networks. The comments of a number of other participants that indicate that their compelling institute experiences were, in part, due to their interactions with others suggests that this intent may have been at least partially realized.

Professional Networking

Seven other participants mentioned professional networking or specific conversations with other participants as being particularly compelling.

*One of the compelling experiences that had happened to me during the Institute is the **interaction with other participants of the institute. It made me focused on my future professional development and broke the old stereotypes [sic] that I have had about some of the American professionals.** (Post-institute Survey, Question 5, Pseudonym omitted to protect participant)*

This participant’s response highlights that her interaction with other participants influenced her thinking in two key ways. First, it changed her focus. Secondly, it

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changed her perspective. Although she does not provide enough information to make it possible to determine the source of those changes, it seems reasonable to speculate that as she interacted with other participants, she became aware of additional information that caused her to re-evaluate some of the things she thought she knew. If this occurred, then it may be that this new information helped to correct existing misconceptions that she may have had, thus resulting in the transformations she mentions. Another participant's comments offer another potential explanation.

*I was **talking with Cherice** during a break in the afternoon in the classroom where we met. She was sharing informaiton [sic] about Rand Spyro [sic] and his ideas about how we tend to oversimplify messy topics for students which in the end makes it harder for them to understand and put the pieces of language all together. During the conversation **she encouraged me to say morea** bout [sic] several points I made, **giving me the opportunity to clarify my thoughts. The experience continued into the next day during the group discussion. I had had time to process the thoughts myslef, [sic] share them with another person and then hear them again** from Cherice. I was also given tthe [sic] **opportunity to share my "synthesis" of the information with other participants - all of which lead to thses [sic] ideas being more embedded in my thinking process.** (Post-institute Survey, Question 5, Cinnamon)*

In this case, it seems that the interaction with other participants did provide additional information. More importantly, however, the conversations appear to have provided this respondent with the opportunity to engage in substantive, recursive processing of this information. Each conversation appears to have contributed iteratively to the consolidation of the information, and to its subsequent integration into ever deepening layers of her thinking process. It is impossible to determine from her comments whether or not this cleared up any

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misconceptions or ultimately resulted in any personal or professional transformations. However, it does suggest that the transformative effects of collegial interactions noted in the prior respondent's comments may be a result of new information, the correction of misconceptions, the opportunity to engage in recursive processing, or perhaps a combination of these things. The role that participants' interactions with one another played in their learning is discussed in detail in Chapter 9. The compelling experiences described by other participants suggest that interactions with technology may have had similar transformative effects on participants' thinking.

Technology as a Tool for Transforming Perspective

Multimedia Examples. When asked to describe a compelling experience they had during the institute, numerous participants mentioned technology. (The topics in this section will be addressed in greater depth in Chapter 7). Five participants mentioned that listening to audio clips, and watching commercials and video clips during the institute had affected their thinking.

*Okay, now'll you know this is me (in case you don't already). **The watching and thinking about the "Green Day" music video.** Cindy and I talked about it for two days until she had the bright idea to research some of the thinking behind it. This happened in the classroom. **It was compelling because initially the disconnect [sic] between the images and lyrics didn't make sense to me and it forced me to think carefully about the relationship between the layers** of media in communicating a message. [Bold type face added by the researcher] (Post-institute Survey, Question 5, Pseudonym omitted to protect participant)*

In this first instance, what the participant found compelling was the cognitive conflict that the dissonance between the images and the lyrics of the music video created. This is in stark contrast to many of the other compelling institute

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However, it does appear to have provoked the same kind of sustained processing that many of the other participants noted had occurred in conjunction with the compelling experiences they had. Other participants also found the commercials and music video clips compelling, but for different reasons.

Watching the different commercials and music video clips was compelling. I kept thinking about how my students could use the same tools that other students have used in order to create projects - and it also made me realize that I don't necessarily have to understand the technology that they are using - I just have to give them the idea and the tools; they can figure out how to use those tools to create a meaningful experience(project). [Bold type face added by the researcher] (Post-institute Survey, Question 5, Thyme)

This participant also mentions ongoing reflection in relation to her exposure to these multimedia texts. However, the purpose of her reflection does not appear to be to make sense of the content, but rather, to find ways to transfer it into her own professional context. This pondering seems to have led to a change in her technological pedagogical content knowledge—her understanding of the relationships between herself, her students, and the technology. It appears that this insight may ultimately influence her practice.

In an informal telephone conversation, another participant made a comment about the professional development she has received in the past that may also help to explain these participants' comments about the ways in which the examples used during the institute facilitated their learning.

All the samples and all the information was about math and language arts, and so now I'm going, "How can I take this and use these examples and help language teachers understand these concepts?" . . . so then language teachers are comfortable to use that instead of being lectured by their principals saying, "Why aren't you using this?" because they haven't seen any samples. So I've been able to change these examples to foreign language examples. (Field Notes, 187-193, Ginger)

This statement is consistent with the literature which suggests that a great deal of the professional development experienced by world language teachers is focused on mathematics and language arts—subject areas which are commonly highlighted in standardized tests. It also offers several potential explanations for why some world language educators may find it difficult to transfer the things they learn in professional development sessions to their classroom practice. This participant explains that both the information and the examples provided during some of the other professional development sessions she has attended were not specific to foreign language. She implies that as a result, foreign language teachers did not feel comfortable with the material and thus, did not incorporate it into their practice. Her reflections indicate that this lack of classroom use occurred in spite of administrative pressure to integrate the material. She attributes this to a lack of subject-specific examples, noting that she is “translating” the strategies and resources to which she is exposed during such professional development so that they will be relevant and applicable to foreign language contexts.

Translation. This is a particularly interesting observation. An intriguing article by Holden & Von Kortzfleisch (2004) outlines the complex tasks and

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processes involved in translation. They note that both translation and transfer are actually social processes in which attempts to make sense and meaning of a given text are externalized. Those efforts are then combined with information about the target culture in ways that yield a message that can be internalized by the target audience. Put another way, both translation and transfer are processes that involve the transformation of knowledge:

. . . translation is indeed a kind of knowledge conversion which seeks to create common cognitive ground among people, among whom differences in language are a barrier to comprehension. . . . But more than that: translation in the sense of transposing a text in one language in terms of another is a notable form of converting tacit knowledge into explicit knowledge. (Holden & Von Kortzfleisch, 2004, p. 129)

The skills required by the process of language translation and those needed by teachers as they attempt to adapt or “translate” a new concept or teaching strategy into the situated contexts of their classrooms are remarkably similar.

Translators must first notice and identify the salient content and features of the genre and recognize the place of the particular text within the genre. Next, they must understand how the content and features work together to create meaning for the intended audience. The most successful translations do not rely on word-for-word substitutions, but rather, seek to render “thought for thought” (Barbara Baker, personal communication, 1999). This means that translators must learn to see the networks of associations among the individual words, abstracting their stated meanings as well as their allusions, inferences, and implications in order to produce a valid translation.

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In other words, successful translations require the same kinds of skills that distinguish novices from experts. Successful translators have an extensive repertoire of knowledge about genre, language, culture, and context that guides their attention as they work with a text. This enables them to identify which features of form and content are relevant to the task or “problem” of translating a particular text. Furthermore, their deep understanding of the effects that each individual word has on the larger network of relationships among the words and their contexts allows them to continuously frame-switch between word-level translation of individual phrases and how they contribute to the larger meaning of the overall text. As they encounter various decision points during the translation process, this frame-switching enables them to see and evaluate alternative options, selecting the one that will communicate the intended meaning most precisely. That is, a great deal of expertise is requisite in order to produce a successful translation.

Implications for professional development. The substantive expertise required to “*translate*” generic professional development into specific world language contexts has important implications in the context of professional development. Many professional development sessions are not differentiated (by disciplinary content; by levels of knowledge, skill, and understanding; or by experience) (Bernhardt, 2000). The analysis of this participant’s comment suggests that some teachers may not have sufficient time, cognitive flexibility, or adequate expertise to “translate” the concepts, principles, strategies, and materials from such sessions into their classroom practice. If this is, indeed, the

case, it would help to explain why participants noted that examples had played an important role in their learning during this institute. Jonassen (2003) articulates similar ideas, suggesting that when students construct “semantic nets” (p. 16), they must also isolate key concepts, organize them into clusters, link the individual nodes, and determine the conceptual relationship between each one. He also explains that “meaningful learning requires that learners connect new idea to prior knowledge. Semantic networks help in organizing learners’ knowledge by integration information into a progressively more complex conceptual framework” (p. 16).

Product creation. Nonetheless, for several other participants, the conceptual work with examples seems to have been less influential on their thinking than the hands-on opportunities to use technology to create a product.

. . . Creating a promo with my focus group was compelling; I realized that it is within my reach to do this kind of work using up-to-date technology (even being an imigrant [sic] to this new world.) . . . [Bold type face added by the researcher] (Post-institute Survey, Question 5, Caraway)

As in the previous example, this participant's comments also provide evidence of a change in perception which also appears to be connected to the participant's evaluation of her own technological skills. Unlike the previous participant, who is empowered by the realization that she does not have to understand the technology in order for her students to use it successfully, this participant is compelled by the discovery that she can work with these technologies successfully in spite of all that she does not know about them. This insight seems to be a direct result of her hands-on experiences with it. Seven other

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participants also noted their recognition of the technological gap between students and themselves as a compelling moment in their institute experience, as in this example.

*The experience I had at the Institute **did not happen in one day or in one instance. The realization of how far the technology train had past me came over the course of the institute as we looked at different pieces each day.** By the end, I had **a much clearer awareness of where I am and where students are technologically.** The gap between us is huge. **This realization in turn made me think** of the instructional strategies and the so called 'engaging focus' that most of my teachers are operating from. To the students, it must be like looking at pre-columbian [sic] art. [Bold type face added by the researcher] (Post-institute Survey, Question 5, Marjoram)*

This participant does not specifically mention audio and video clips, but speaks in more general terms about “*different pieces each day*” which led to her insights.

Like the previous three examples, the changes in her thinking appear to have occurred iteratively, across a somewhat extended period of time. She specifically notes a “*clearer awareness*” of the relationship between her knowledge and skills to those of her students. She indicates that this awareness turns her attention to the practice of those she supervises, and students’ perceptions of it. Although she does not explicitly state that she intends to act on this realization in any particular way, it is clear that her experience with and understanding of technology impacted her thinking in ways that are connected to her professional practice.

Participants noted other kinds of compelling experiences that occurred during the institute, along with a wide variety of explanations regarding why they were compelling. However, one thing that at least 13 of them had in common

was that participants attributed the compelling nature of the experience in large part to the thinking that accompanied it. For some participants, this thinking shifted the focus of their attention, producing changes in perception or meaningful realizations. For others, some facet of the experience challenged their thinking in ways that motivated ongoing reflection and fostered personal meaning-making. In many cases, these insights resulted in changes in perspective. As one participant explained, however,

*A compelling experience is a transformative one. One that makes me see, understand, and interact with the world differently as a result of having engaged with that experience. However, like many things in life, **it is not ONE experience that fosters transformation but rather a series of experiences that both work to use and build the muscles needed to engage with experiences in ways that allow the transformation to happen.***
(Post-institute Survey, Question 4, Nutmeg)

This is consistent with the literature on expertise, which suggests that as participants develop larger libraries of experience, they are better able to discriminate which features of a situation are relevant (and to see relevance in features that might previously have seemed extraneous to the situation). They are also able to identify patterns across experiences, and to frame problems in more productive ways. It is likely that the reflection that these experiences seem to provoke leads to deeper, more well-connected mental structures²⁷ that facilitate new insights. In an attempt to apply these ideas to the act of research, we now turn to a brief reflective deliberation about the insights revealed by findings from this chapter.

²⁷ Anderson & Woodill (2004) note that, "The categories we use, while the result of experience and learning, are not just a purely intellectual matter, but are neural structures with concrete, physical existences that can be measured" (p. 235).

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Reflective Deliberation

In the reflective deliberation that follows, the contributions that findings from this chapter make to the literature are outlined, followed by a brief exploration of the affordances and constraints of using the lenses of attention, expertise, and flow as tools for data analysis.

Contributions from the Data

The data that comprises this chapter yielded a great deal of information about how this group of world language educators defined compelling experiences, highlighted common patterns that spanned their experiences, and identified the institute activities that they labeled as compelling. In some respects, the findings affirmed ideas found in the literature. For example, two thirds of the participants in this study emphasized that compelling experiences have significant effects on attention that are both powerful and somewhat involuntary. Their prior knowledge and experiences seemed to play a role in this. Additionally, patterns in participants' comments revealed that in many cases, their experiences did alter their perception of their circumstances in ways that changed their future decisions and actions. According to participants, most transformative experiences first sharpened their *sensitivity to context*. Secondly, the experiences *challenged participants' perceptions* in ways that fostered *sustained reflection* and personal meaning making. Third, *emotional consequences* often accompanied the *personal connections* the experiences seemed to invite participants to make. Fourth, this sensory, intellectual, and emotional involvement appeared to evoke *shifts in awareness* that often

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motivated decisions or actions. Finally, in many cases, participants arrived at enduring *insights*—generalizations abstracted from the particulars of the experience. These findings both validate the experiential approach that guided the design of the institute, and complicate it.

However, one issue the data raised that was not readily apparent in the literature was the degree to which personally meaningful engagement in the sensory, emotional, and intellectual facets of an experience played an explicit role in supporting these shifts in attention, awareness, and thinking. In other words, the nature of participants' involvement and the degree to which they perceived the experience as personally relevant appeared to influence both the strength of their attention and the depth of transformation. Another finding that should not be overlooked is that attentive participation appears to be a necessary, but insufficient condition for stimulating personal and professional change. For example, while participants reported that many compelling experiences commanded their attention and encouraged their active participation, that fact did not always render transformation. A closer look at the data revealed that sustained, recursive reflection was frequently correlated with the sensory, intellectual, and emotional engagement participants described as essential components of many of their compelling experiences. In other words, it appears that the act of participating in the experiences was not transformative in and of itself, but rather, only when certain kinds of thinking accompanied that participation.

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In an attempt to better understand these phenomena, I returned to literature that addressed the role of cognition in pedagogical decision-making, as well as the relationship between cognition and creative insight. These explorations highlighted that insight may be a product of perceiving new conceptual connections among seemingly unrelated ideas and concepts. The lenses I chose were also instrumental in helping me to notice and better understand conceptual relationships. These relationships included the role that schema appear to play in reducing cognitive load, the manner in which attention seems to shape perception, and the reciprocal relationship between access to information and experience. Other relationships included the degree to which levels of abstraction may facilitate conceptual integration, the role that neurological and conceptual networks may play in learning, and the heightened perception that seems to result from increased opportunities to make conceptual connections. When brought into relation with the data, these ideas helped me to make sense of patterns I noticed in participants' comments.

Limitations of the Lenses

Although the literature with which I framed this chapter was useful in helping me to hypothesize about the relationships between attention, engagement, and learning, its cognitive orientation did not account for the affective components that participants highlighted as playing an influential role in their learning. It also completely obscured the impact of the social context in

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which professional development takes place and uncovered a host of new questions such as:

- *What motivated world language educators to engage deeply with the institute experiences they identified as compelling for them?*
- *What criteria did these language teachers use to determine whether or not a piece of information was relevant and, therefore, worthy of ongoing attention and reflection?*
- *How might professional developers assist teachers in building schema that will support them in noticing and interpreting important features of the contexts in which they work?*
- *Are the same conditions that sustain flow also those that support sustained reflection?*
- *Did the institute experiences participants identified as being more compelling than others actually contribute to their learning?*

In the next chapter, I explore these issues in relation to the question, *“What did participants say they learned from their institute experiences and how do they explain their learning?”* I draw on the additional theoretical lenses of transfer, knowledge representation, problem-framing, and visual cognition to help me do so.

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CHAPTER 6

PARTICIPANT LEARNING

Professional development is grounded in the premise that teachers will learn from it, and that what they learn will transfer into their classroom practice. However, studies suggest that the nature of transfer—the ability to apply knowledge and skills to novel contexts, tasks, and situations—is both situated and context-specific (Björklund, 2007; Borg, 2003). When the context, structure, or content of a problem situation is similar to one that learners have already encountered, they are likely apply to the new problem the same approaches, information, and strategies they used when addressing the previous one. In the remainder of this chapter, I outline the implications these ideas have for professional development, and then use the concepts of transfer, cognitive flexibility, and multiple representations to examine what participants say they learned from the summer institute that serves as the context for this study.

The Role of Transfer in Professional Development

The concept of transfer has important implications for professional development. First, it suggests that as long as the problems teachers encounter appear to be similar to ones they have confronted in the past, they are likely to continue using the same strategies they have always used. Second, when teachers are able to resolve the new problems they face by relying on strategies they have used in the past, it may be difficult to convince them to abandon these “successful” strategies in favor of alternative ones—even when the alternatives are more effective. Third, when professional development experiences are not

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clearly aligned with the problems teachers typically encounter in their classroom contexts, many teachers may not even notice that the professional development is relevant to their teaching. Consequently, the material presented is unlikely to transfer to teachers' practice in any significant way. Fourth, when the content, processes, and materials used during professional development do not reflect the daily reality of the classroom, teachers are less likely to see the strategies as useful (Guskey, 1986; Hawley & Valli, 1999). This diminishes the likelihood that they will attempt to apply them to their practice. Fifth, since teachers are generally asked to play the role of learners, not teachers, in professional development settings, it may be difficult for them to see how to extract tools used during their *learning* and apply them in the context of their *teaching*.

Hence, transfer is a problem of perceived relevance. In order to do things in new ways, teachers must first *realize* that their current strategies are ineffective. They must also *recognize* that the information and strategies they learn in professional development settings are relevant to their current challenges. Such awareness only becomes action when teachers are able to *perceive* opportunities to implement what they have learned within their classroom settings (Guskey, 1986; Guskey 2002). In order to do so successfully, they must also find ways to *overcome* existing barriers to change.

The perceptive processes that are foundational to successful transfer demand "cognitive flexibility" (Spiro, Feltovich, Jacobson, & Coulson, 1991). For example, the ability to critically reflect on and analyze one's own teaching and recognize how it might be improved requires teachers to step outside of their own

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perspectives. This necessitates tremendous mental flexibility, as do the mental gymnastics involved in bringing ideas into relation that seem unrelated on the surface, framing problems from different angles, and thinking about them from multiple perspectives. Nonetheless, these issues are deeply embedded in the successful transfer of the content of professional development sessions into classroom contexts. Furthermore, teachers must constantly reposition themselves in relation to the status quo so they can adapt potential solutions to overcome barriers inherent in the continuously changing circumstances of the particular contexts in which they are situated (Jonassen, 2003; Mishra & Nguyen-Jahiel, 1998; Mishra, Spiro, & Feltovich, 1996; Seitz, 1998; Spiro, Feltovich, Jacobson, & Coulson, 1991).

Yet, instead of reframing the perennial problems of education, professional development tends to reinvent solutions to them. Typically, professional development of this type is approached primarily from the angle that “the problem” is teacher practice which is erroneous, ineffective, or misguided (Hawley & Valli, 1999). The logical conclusion of that belief is that effective solutions will therefore target, eliminate, or replace that practice. This has yielded a steady parade of bandwagons filled with new buzzwords to learn, new programs to implement, new instructional strategies to try, and a host of new assessments to evaluate and report student (and teacher) progress. These “teacher proofed,” one-size-fits-all approaches curtail the creativity required to customize existing resources to meet individual student needs. In addition, they are typically implemented with little regard for differences in schools, classrooms,

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teachers, or students, and thus frequently fail to foster the professional decision-making skills needed to implement the instructional interventions in pedagogically sound ways. In other words, current models of professional development provide teachers with few opportunities to develop the attention-dependent knowledge, cognitive flexibility, or critical reflection skills they need to see opportunities for change in their professional contexts. Consequently, in its current state, much professional development actually interferes with the conditions that enable teachers to transfer what they learn to their classroom practice. Thus, what teachers learn in professional development sessions is unlikely to transform K-12 classroom practice in an enduring way.

Representing targeted conceptual content in both literal and figurative ways (Boland, et. al, 2001) may support the development of more flexible cognitive structures that foster transfer (Jonassen, 2003). Pedagogically distinct representations of the same content foreground its unique attributes (Shulman, 1986). When teachers present students with different representations of the same piece of content, they simultaneously guide and focus learners' attention on key characteristics and distinguishing features of the material. Using a variety of representations of a given piece of content is especially important in the case of abstract concepts that lack natural, concrete referents because of the way that "Representation stabilizes the idea or image in a material and makes possible a dialogue with it" (Eisner, 2002, p. 6). Some representations also provide additional information that complements and reinforces the material that was initially presented, while others offer contrasting information. Consequently,

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potential misinterpretations that might arise from working with a single representation are clarified and constrained by the features of each additional representation that is presented (Ainsworth & Van Labeke, 2002). When learners are exposed to an array of different representations, they have opportunities to compare them, to construct interpretations of their differences, and to make personal meaning from these juxtapositions. Working with multiple representations also has the potential to shift the focus of the learners' attention from the content itself to the relationships between different aspects of that content and its related contexts. As learners begin to notice these relationships, they are able to integrate isolated facets of the content into a more complete, complex, context-sensitive understanding. This focus on relationships is particularly useful in situations where the instructor wishes to develop shared definitions and understandings within a community of learners.

Assisting learners to perceive multiple facets of a given piece of content is not the only advantage of representing content in multiple ways. Mishra, Spiro, & Feltovich (1996) explain that such representations may also heavily influence cognitive processing: “. . . different media *prefigure* cognitive processes and the development of cognitive structures in different ways” (p. 288). A range of potential strategies for framing and solving problems is inherent in each type of media and technology tool and in the representations they are used to create. What learners notice when information is accessed through a blog is likely to be somewhat different from what they notice when the same information is presented as a PowerPoint™ presentation or a multimedia flash website. As the

effectiveness of each representation is necessarily context-specific and dependent on the demands of the problem, students and teachers who have been exposed to a wider variety of representations may be able to draw on a more extensive repertoire of problem frames, enabling them to select strategies more closely matched with the problem context (Ainsworth & Van Labeke, 2002). Thus, when professional developers present educators with a variety of representations, it is also likely that teachers will have opportunities to develop more nuanced, situated understandings of teaching and learning.

During the MLC 2006 summer institute, information was represented to participants through a variety of different strategies. Data from informal telephone conversations with participants and responses to post- and follow-up surveys indicate that participants felt these different representations supported their learning in important ways. Findings in this chapter address Research Question 3: *“What did participants say they learned?”* and briefly touch on Research Question 4, *“How did world language educators explain their learning (and/or breakdowns in their learning) with regard to this professional development experience?”* Research Question 4 will be explored in greater depth in Chapter 8. The following sections of this chapter explore how the lenses elaborated above guided the design of the institute and served as analytic tools for examining the data that are presented in the findings that follow. The chapter concludes with a reflective analysis of the contributions the data make to these lenses and a deliberation on their affordances and limitations as analytic tools.

How These Lenses Guided the Design of the Institute

One of the primary goals of professional development is to help teachers learn things that will improve their classroom practice. This creates a variety of problems for professional developers. First of all, teachers must recognize that what they are doing is not working. Secondly, teachers must learn things from the professional development that will help them to address the challenges they face in their classrooms. Third, they must recognize that what they are learning is relevant and notice opportunities to apply their learning in their classrooms. Finally, they must be able to overcome obstacles that might otherwise impede changes in their practice.

Each of these problems highlights a different aspect of transfer, or the act of taking knowledge and understanding gained in one context and applying it to another. One of the beliefs that guided my initial vision for the design of the institute was the idea that many world language educators do not realize that what they are doing is not effective because they have never seen or experienced it any other way. I also assumed that foreign language teachers who do not transfer information from professional development into their teaching may not do so because they do not believe that what they have heard will work, because they do not think it is any better than what they are currently doing, or because they think it will be too complicated to implement. Consequently, I felt that participants would be more successful in transferring information from the institute into their professional practice if they had personal experience with the strategies as learners prior to attempting to implement them as teachers.

Rationale for the Selection of These Lenses as Analytic Tools

After facilitating the institute and later immersing myself in data analysis, I recognized that my initial views on transfer were highly oversimplified. As I explored the work of scholars like Minsky (1974), I realized that transfer involves a constellation of mental processes with relationships that are much more complex than simply taking information from one context and moving it into another. Transfer requires sensitivity to the similarities and differences between the context in which information was learned and the new problem context in which it will be applied—something that most novices lack (Bransford, Brown, & Cocking, 1999; Krull, Oras, & Sisak, 2007). Furthermore, the degree to which a person perceives what was learned as being relevant to a new problem that has been encountered plays a significant role in determining whether or not the information will transfer. However, in order to transfer knowledge from professional development settings to the classroom, teachers must not only see relevance in content, but also perceive relevance in spite of clear differences in contexts and roles (i.e., they are acquiring the information as adult learners in professional development settings, but will be applying it as teachers of adolescents in classroom settings). This kind of noticing requires the ability to simultaneously attend to multiple contexts, to notice a variety of features, and to recognize their underlying conceptual similarities. These tasks often make heavy demands on prior knowledge and require tremendous cognitive flexibility, especially if teachers are already grappling with new ideas in an attempt to make sense and meaning of them. Moreover, common methods employed in

delivering professional development do not tend to be context-sensitive and few explicitly seek to develop the attention-dependent knowledge, cognitive flexibility, or critical reflection skills it appears that teachers would need in order to transfer new learning into classroom practice (Hawley & Valli, 1999).

Consequently, I anticipated that these aspects of transfer would surface both as participants described what they learned and as they offered explanations for their learning (or lack thereof). Furthermore, I subscribed to Jonassen's (2003) beliefs that pedagogical strategies that involved learners in representing content in multiple ways might foster context-sensitive awareness and support cognitive flexibility. I anticipated this would be likely to facilitate initial learning as well as develop understandings flexible enough to support its application in new contexts. As a result, I selected transfer (and the related concepts of knowledge representations and cognitive flexibility) as lenses for helping me to interpret the findings in both this chapter and in Chapter 8. These findings are described below.

Participant Learning

In a Follow-up Institute Survey administered one year following the institute, participants were asked to rate the degree to which the skills and information they gained from the institute had been useful to them professionally on a continuum of six categories that ranged from *Strongly disagree* to *Strongly agree*. These responses were converted to numbers and then averaged. The average response across participants was 5.25 (or just slightly higher than *Agree*). A second question asked participants about the degree to which they felt

that participation in the institute had influenced their classroom teaching, and yielded an average response across participants of 5 (or *Agree*). A third question inquired as to whether or not participants would recommend NFLRC institutes to others, and resulted in an average response across participants of 5.125 (also slightly higher than *Agree*). (See Table 6.1 for a detailed breakdown of responses. The first six numbers in each row correspond to the number of respondents who expressed each level of agreement. The last number in each row represents the average of all participants' responses on that question based on a scale of one to six.)

These results suggest that the majority of the participants agreed that they had learned something of value that they believe had transferred into their professional practice in some way. By contrast, it is likely that the responses of those participants who disagreed with these statements indicate that the institute was not useful, relevant, or meaningful to them. (A discussion regarding the experience of this subgroup of participants, along with additional information and interpretations of breakdowns in participants' learning, are provided in Chapter 9.)

Table 6.1. Disaggregation of Participants' Responses to Questions That Asked About the Utility, Relevance, and Value of Their Institute Experiences

Question Prompt	Number of Participants Who . . .						Average for ?
	Strongly disagree 1	Disagree 2	Somewhat disagree 3	Some what agree 4	Agree 5	Strongly agree 6	
The skills and information I gained from the Institute have been useful to me professionally	0	0	0	2	8	6	5.25
Participation in the Institute has influenced my classroom teaching.	0	1	0	2	8	5	5.00
I would recommend National K-12 Foreign Language Resource Center Institutes to colleagues/ other educators.	0	0	1	2	7	6	5.12

Meanwhile, these findings also lead to the question, "What did participants learn from the institute?" The institute evaluation report noted that Wilcoxon signed-ranks tests on matched pairs performed by the Research Institute for Studies in Education (RISE) at Iowa State University revealed statistically significant ($p < .01$) increases in participants' self-ratings of their knowledge 8 of the 19 topics that were evaluated in 2006 (Kemmis, 2006). These topics included: cognitive flexibility theory, community outreach, designing compelling experiences, principles of design, 21st Century learners, 21st Century literacies,

and 21st Century technologies ($p < .01$). The report also indicated statistically significant ($p < .05$) differences in participants' knowledge of three additional topics: leadership, metaphors as tools for learning, and visual thinking (Kemmis, 2006, pp. 29-31). Participants' post-institute and follow-up institute surveys offered additional insights into the nature of their learning with respect to many of these topics.

Metaphors as Tools for Teaching/Learning

Pre-institute survey results indicated that prior to the institute, participants did not use metaphors as tools for teaching and/or learning on a frequent basis. Only five participants said they used them once a week or more. Nine participants said they used them once a month or less, and four participants used them only once a year or less (see Table 6.1).

Table 6.2. Frequency of Use of Metaphors as Tools for Teaching/Learning

N = 18	Once a day	Once a week	Once a month	Once a year	Once a year or less
Number of Participants	2	3	9	3	1

Although the statistical results from the evaluation report revealed that following the institute, participants believed they had experienced a change in their understanding of metaphors, only two participants explicitly commented on metaphors in the post-institute and follow-up surveys. The first participant who mentioned metaphors only named them as part of a list of things she understood immediately following the institute that she had not understood prior to the institute: *"the many layers of learning strengthening [sic] metaphors technology"*

(*Post-institute Survey, Question 17, Ginger*). By contrast, the second participant commented explicitly on them.

I found the experience writing the metaphors compelling. Taking an image like the ladybugs along with the words, and asking us to relate that to something more abstract was compelling to me.
(*Post-institute Survey, Question 5, Turmeric*)

This participant's specific mention of combining an image with words (see Figure 4.8), and then relating that to something more abstract, suggests that this activity's impact on her may have had less to do with the metaphor itself and more to do with the pedagogical processes and the thinking they invited. There was no other mention of metaphors in the data pertaining to this study that could provide additional explanation.

However, metaphors were a prevalent theme in the findings of the pilot study conducted on a similar *Mentoring, Leadership, and Change* institute held in 2003 (Montgomery, 2003). In those findings, participants stated that although working with metaphors had been difficult for them, metaphors had been an important tool in helping them to make connections across topic areas, and in facilitating their exploration of "layers of perspectives and meanings" (Kemmis, 2003, p. 18).

Literature regarding the subject suggests that metaphors may play a role in facilitating comparisons and the "transfer of properties across symbol systems" (Seitz, 1998). Hofstadter (1985) explains,

The most reliable kinds of genuine insight come not from vague reminding experiences (as with the letters "NSF"), but from strong analogies in which one experience can be mapped onto another in a highly pleasing way. The tighter the fit, the deeper the insight, generally speaking. (p. 253)

Put another way, metaphors may function in much the same way that multiple representations do—providing participants with opportunities to notice multiple facets of a concept in ways that broaden and deepen their understanding. Metaphors may also activate prior knowledge, function as objects onto which conceptual content can be “cognitively offloaded” (Ainsworth & Loizou, 2003), and help participants to clarify and cement their own understanding as they attempt to explain their thinking to others.

It is likely that a combination of these possibilities may explain this participant’s response. An alternative possibility is that the activity described above gave participants who had reported an infrequent pre-institute use of metaphors more opportunities to make new connections as they thought explicitly about the use of metaphors, thus contributing to the statistically significant change in their self-assessment of understanding regarding this topic. A similar phenomenon occurred with respect to the topic of visual thinking.

Visual Thinking

Although the institute evaluation report also indicated statistically significant changes regarding participants’ understanding of visual thinking, not one participant commented on it specifically in either the pre- or post-institute surveys. However, unlike the topic of metaphors, participants did say a great deal about the use of visuals in both the post-institute and follow-up institute surveys. Many commented on the power of the “visual examples” and the approach of layering or *“repeating the same visual with layers of new concepts that were inter-related”* (Post-institute Survey, Question 10, Caraway). Some

participants stated that they intended to incorporate more visuals into their upcoming lessons or presentations because of their effects on the learning environment, engagement, or thinking. Several also mentioned that they intended to provide students with more opportunities to communicate their understanding using digital audio and visual media.

A number of scholars have underscored the important role of visual thinking in learning (Anderson & Woodill, 2004; McLoughlin & Krakowski, 2001; Russell, 2003; Sankey, 2002). Scholarship on visual cognition and representation indicates that approximately 50% of the brain's neurons are devoted to visual processes (Anderson & Woodill, 2004) and that these processes play a key role in cognition, reasoning, and problem-solving (McLoughlin & Krakowski, 2001; Seitz, 1998). In most adults, working memory can only handle approximately seven chunks of new information at a time. By contrast, the visual cortex processes information in a parallel fashion (Sankey, 2003). Consequently, it can manage, synthesize, and integrate large quantities of discrete information quickly and efficiently. Research suggests that this visual processing can be harnessed in the service of learning.

First of all, this information implies that teachers can facilitate learning by offering students no more than five to seven chunks of information at a time (Sousa, 1995). If these chunks are sufficiently complex, well-contextualized, and have been carefully organized in densely connected ways, students are even more likely to benefit from them. Secondly, if students' involvement with the information contains a strong visual component, the efficiency of their learning is

likely to increase (Sankey, 2003). One possible explanation is that perception is intimately linked with cognition. Visual representations can facilitate the recognition and comprehension of patterns (Few, 2004; Russell, 2003), perhaps because visual representations group information in ways that make patterns easier to notice (Ainsworth & Van Labeke, 2002). Visual representations can also enable learners to discover new patterns (Anderson & Woodill, 2004). In fact, according to Sankey (2002), information presented visually is so powerful that if verbal information and visual information are presented together, but are incongruent with one another, the visual information will predominate. This means that it is very important for teachers to understand how the brain processes visual information.

Few (2004) outlines a number of visual attributes that guide the preattentive processing the brain uses to determine where to focus its attention. They include: color, curvature, enclosure, hue, intensity, line length, line width, orientation, position, shape, and size. He argues that these attributes are not perceptually equivalent—that some are easier to perceive and have a stronger effect on attention than others. An awareness of these effects can be used by teachers when preparing visual presentations of information so that it is easier for learners to absorb. However, while adjusting the formatting of visual presentations can improve comprehension, it does not guarantee it. The type of visual materials used, and the ways learners are asked to engage with them also influence learning.

A study by Ainsworth & Loizou (2003) theorizes that visual materials such

as diagrams create a context, and at times, a schema for new information. They (and other scholars such as Russell, 2003) argue that the brain can also “offload” complex aspects of the task onto visual representations associated with it. This frees up limited stores of attention, distributes the cognitive processing load more evenly across different areas of the brain, and constrains possible (mis)interpretations. In this way, it improves the efficiency of the working memory and facilitates learning (Ainsworth & Van Labeke, 2002; McLoughlin & Krakowski, 2001). Ainsworth & Loizou (2003) also found that visual representations that appear in conjunction with text seem to invite students to engage in more self-explanation than text alone (which many learners seem to assume is complete when they encounter it). Participation in this self-explanation supports learners in actively making sense and constructing meaning from the information through “re-representation,” thus fostering inference-making.

The presence of diagrams and related texts also seems to generate thinking of a more integrative, synthesizing nature, particularly when learners are asked to work across diagrams (Ainsworth & Loizou, 2003). Mishra, Spiro, & Feltovich (1996) elaborate, positing that combining text with graphics or video pushes the brain to integrate analytic and reflective thinking processes with temporal and spatial ones. Since thinking is a critical component of learning, it is important for teachers to consider the cognitive effects of the materials and activities with which they ask students to engage. Eisner (2002) explains, “. . . the curriculum is a mind-altering device . . . the selection of a material or activity is also the selection of an array of forces that will influence how students will be

challenged to think” (p. 72). Developing a wider repertoire of ways to represent content may equip teachers with a larger collection of tools for effecting metacognitive interventions that can guide students’ thinking.

However, participants’ comments do not indicate that they fully recognize the connections between the visual media they mention and the thinking that this literature indicates it may facilitate. While their comments in both the post- and follow-up institute surveys frequently refer both to thinking and to students, there are a paucity of statements about visual thinking. This may indicate that although participants’ institute experiences persuaded them of the potential influence of visual media, institute leaders did not help participants to make clear connections between that influence and its potential effects on students’ thinking or learning.

Coburn (2003) notes that targeted changes in classroom practice can be “implemented at varying degrees of depth” (p. 5). The more distant an innovation is from existing practice and the more levels of practice it involves, the more likely it will require “well-elaborated materials and sustained, ongoing professional development” (p. 9) in order for its implementation to be sustained over time at a degree of depth sufficient to initiate and maintain change. Thus, it is possible that although participants felt they understood more about these topics following the institute, the support was not strong enough and their understanding was not sufficiently deep enough to influence their pedagogical thinking or practice in any substantive or sustained manner. The fact that the post-institute and follow-up institute surveys did not specifically request

participants to comment on these topics may also have influenced the amount of thought that participants gave to them, and/or the lack of statements participants made about them.

Cognitive Flexibility & Community Outreach

Although the statistical results in the institute evaluation report indicated that participants had experienced more significant changes in their knowledge of cognitive flexibility and community outreach than they did in their knowledge of metaphors or visual thinking, none of the participants specifically commented on these topics in the post-institute or follow-up institute surveys either. Participants' comments regarding community outreach were limited to the generic use of the word *community*, and were usually used to refer to stakeholders or contexts for the work participants were doing, with one notable exception:

At the SCOLT conference in March, I will give a presentation on "Advocacy" - one which in the past has not drawn many participants. I plan to change the way this "session" is structured to give the participants a chance to share what community outreach/advocacy looks like in their own situations. I may actually structure the session with "centers" as we did during one of our presentations. Participants can explore different areas and then report back to the group as a whole. (Post-institute Survey, Question 6, Cinnamon)

This participant's plans to present on the topics of advocacy and community outreach suggest that she intends to pursue the topic. However, it is likely that this may have more to do with her prior knowledge of and interest in the topic, as her pre-institute survey results indicate that she was already experimenting with the topic prior to the institute. The statistical results noting that other participants' understanding of these topics changed significantly may simply mean that they

had less prior knowledge regarding these topics before attending the institute. It may also be inferred from participants' lack of comments about these topics in post-institute and follow-up surveys that although they feel they know a lot more about the topics than they did prior to attending the institute, they are not currently mobilizing that increased understanding in their professional practice in any conscious or deliberate way.

Mentoring, Leadership, & Change

By contrast with the four topics listed above, participants talked a great deal about how their understanding of the concepts of mentoring, leadership, and change had shifted. However, of these three topics, participants' self-assessments only showed statistically significant changes with respect to the category of leadership. The reasons for this are unclear. Several participants raised the idea that mentoring, leadership, and change are inextricably connected, and that relationships influence their ability to successfully initiate, implement, and/or sustain change.

... Mentoring, Leadership and Change is first and foremost relational. If there is to be an effective mentoring relationship, the parties involved need to remain open to the possibility of what can be achieved through positive interactions with others. (Post-institute Survey, Question 8, Oregano)

So it may be that participants did not make clear distinctions between these three, related concepts. Perhaps they think most about leadership, and thus were most aware of changes in their understanding with respect to that concept. Other participants' responses to a follow-up institute survey question asking what, if anything, they understood about mentoring, leadership, and/or change

that they did not understand immediately following the institute offer limited support for this hypothesis.

I am still working on leadership aspects (Follow-up Institute Survey, Question 17, Turmeric)

A leader has to have a vision , be able to focus and have his/ her tools(strategies and tactics) to fulfil [sic] his/ her vision. That vision should be appropriate [sic] to demands of the society which the leader lives in or trying to change. (Post-institute Survey, Question 8, Saffron)

It may also be that institute leaders did not apportion enough time during the institute for these concepts.

I would have liked to have seen more time spent on mentoring and leadership and not so much on "design." (Follow-up Institute Survey, Question 18, Dill)

It is also possible that participants brought more prior knowledge regarding these concepts to the institute, and therefore, that the changes they reported were less statistically significant as a result. A fourth potential explanation is that perhaps the abstract nature of these concepts demanded more cognitive processing time, in conjunction with opportunities for participants to experience their daily professional responsibilities in relation to the ideas before they were able to self-identify changes in their knowledge or understanding. For example, the post-institute survey response of one participant suggests that she does not feel she gained much knowledge or skill during the institute regarding respect to mentoring, leadership, or change.

I think that I understand more about Teaching and Learning in the focus areas and compelling frames than I have gained in the Mentoring/Leadership/Change areas. As a district point man for LOTE, I can see impact in terms of development of learning experiences, in professional development for teachers, in

curriculum and assessment. I don't know if my understanding is tweaked because of the lens (my job) I'm looking at all of this through. (Post-institute Survey, Question 8, Marjoram)

However, in her response to an identical question on a follow-up survey one year later, she talks extensively about leadership and change.

A) the nature of a compelling experience and how it can be used; how to teach a change experience B) philosophical reasons why teachers resist change; how to more effectively lead through change; how to make technological change more palatable to teachers (Follow-up Institute Survey, Question 17, Marjoram)

This participant's follow-up comments contain traces of the things she said in her post-institute survey response, but her follow-up response is much more precise and more clearly grounded in the specific contexts of her daily work. She begins with the same focus on teaching, learning, and the compelling frames that she pursued in her post-institute survey response, but then uses it as a springboard for articulating clear connections to the issues of leadership, change, and technology. One could argue that these richer, well-blended understandings were the result of the time these concepts had to filter through the contexts of her professional activities during the year. It is also possible that the participant's changes in understanding have nothing to do with the conceptual sense she made from institute concepts and more to do with the meaning that her professional experiences over the course of the year added to them. The contrast in these two responses from the same participant may also demonstrate that participants are not able to accurately assess the extent of their learning immediately following a professional development experience. It may be that the

concepts have to simmer over time before participants' self-assessments may be viewed as complete. Another participant explains,

. . . Good teaching and learning is sometimes "messy" before concepts and clarity begin to make sense in the mind(s) of those participating in learning groups. . . . (Post-institute Survey, Question 8, Oregano)

Irrespective of the reasons that participants' self-assessments of their experiences with mentoring/leadership/change seem to differ from their comments about these topics, several open-ended survey responses suggest that some participants learned many practical things about these concepts from the institute. For example, one of the things participants emphasized they learned is the importance of attending to the needs of those one is attempting to mentor, lead, or inspire to change. One participant's response offers a relatively concise summary of many of the ideas noted by other participants.

*Many concepts of the Institute, including quality teaching, professional development, advertsing, [sic] etc. apply directly to being an effective leader or mentor, and to being an agent of change in an institution. All stakeholders need to have a voice and be heard. There should be a shared vision or goal, time is necessary in many ways (for the process to occur, for ongoing support or learning), accountability or individual responsibility, etc. **Stakeholders don't want change, PD, or mentoring pushed on them - they should have the latitude to pull what they need from these opportunities.** (Post-institute Survey, Question 8, Caraway)*

The idea of allowing stakeholders to "pull" what they need from learning opportunities came up repeatedly in other participants' comments, who often spoke in post-institute and follow-up surveys about the efforts they were making to offer students more choice and voice in their assignments and classroom interactions. Other participants made parallel statements about the need for

teacher-leaders to continually adjust their actions to the changing needs of those they serve and the specific contexts in which they work, as in these representative comments.

*B. Change in relationships happens all of the time. The leader/mentor/change agent has a responsibility to consider impact careful, **be flexible** – but mostly, to **take on the challenge of staying up with and adjusting to the needs of others**. (Post-institute Survey, Question 8, Rosemary)*

*Change is many times scary, but if we want to compel our students to learn more and have an excitement, [sic] **we need to look at their needs and how they think**. The world has changed so much. (Post-institute Survey, Question 8, Fennel)*

Some participants also noted that their institute experiences had made them aware of other issues involved in mentoring others toward change. These issues included the idea that deep understanding means making connections that extend beyond the visible surface of a topic, and that novices need a balance of both challenge and support in order to grow.

*That **moving people to the next step of understanding means moving through and deep, more than just to**. (Post-institute Survey, Question 8, Ginger)*

I also will be more sensitive to the need for challenging new teachers, not merely supporting them as they navigate their first year or two in the profession. (Post-institute Survey, Question 8, Tarragon)

A few participants even mentioned concrete strategies they had learned during the institute that had helped them to engage in these processes more effectively.

*... I've learned **the power of saying "I hear you. Let me think about that for a moment."** (Post-institute Survey, Question 8, Mint)*

*I also realize that I can mentor other teachers and pre-service teachers in a more effective manner. I liked **practicing having***

conversations without using the word "but". I think it is a very important skill - it causes you to be more open-minded. I also enjoyed talking out statements and making them tie together (the end of one sentence and the beginning of the next sentence being similar). . . . (Post-institute Survey, Question 8, Thyme)

For other participants, institute content regarding one-to-one mentoring seemed less influential than activities which raised awareness about the organizational contexts in which the activities of mentoring, leadership, and change commonly occur.

. . . B)I was particularly touched by the demonstration of "leadership" styles which Cherice had us do as we self-assessed and grouped ourselves. When she read the descriptions of each of the 4 categories and there were no participants in the "political" area, this drove home what I hadn't realized about leadership in language educators and explains a lot about how difficult it is for us to bring about change, and perhaps why it is difficult to inspire language teachers to be involved in professional associations. (Post-institute Survey, Question 8, Coriander)

At least two participants were able to transfer this information to their own professional situations in ways that appear to be influencing their understanding.

I have since come to an increased appreciation for the power and influence of context on teaching and learning as well as mentoring. In essence the institute laid the foundation for my understanding of my current historical context (2007) in a new way and as a result, an evolving understanding is occurring about what that context is and its potential influences on educative relationships. (Follow-up Survey, Question 17, Nutmeg)

I understand that teaching and learning and mentoring, leadership and change are essentially relational. The efforts that I am putting into understanding the dynamics of the various relationships have enhanced my perspective and allowed for a deeper exchange with colleagues, student teachers, cooperating teachers, school personnel, etc. (Follow-up Survey, Question 17, Oregano)

Their comments about the importance of the contexts and dynamics of professional relationships echo those made by other participants about the two topics that seem to have influenced their learning most powerfully: instructional design and 21st Century learners, literacies, and technologies.

21st Century Learners, Literacies, & Technologies

Gap Between Students & Teachers

Perhaps the most striking pattern in participants' comments about what they learned was the abundance of comments about 21st Century learners, literacies, and technologies. Numerous participants commented in the follow-up survey that the institute experiences that had the greatest impact on their professional/teaching responsibilities over the previous year were conversations sparked by Marc Prensky's (2001) article, *Digital Natives, Digital Immigrants*, and the professional interactions with other colleagues during the institute. (The topic of professional networking will be addressed in Chapter 9).

I would hope to re-create this realization--the gap between what most of our students work with each day and what frames teachers use to engage the students. We seriously need to think about that is engaging and relevant to the students not what we are comfortable with. (Post-institute Survey, Question 6, Marjoram)

The last line of Marjoram's comment implies that the ideas teachers think about incorporating into their own practice are often those with which they are already most comfortable. A study by Borg (2003) affirms this interpretation, explaining that language teachers more readily adopt practices that are congruent with their existing beliefs and prior language learning experiences unless they are

confronted with evidence that contradicts them. It appears that for some participants, the institute may have provided such counterevidence.

My experience at the institute has brought me a deeper understanding of where my students stand as "digital natives" and where I stand as an "immigrant". Throughout the week, I would find myself flashing on experiences when I would observe my students "off task" and have to "redirect" their focus. While I still feel that much of their distractions are counter to what we are doing in the learning environment, I have a better idea of their multiple interests and the appeal of technology to them. I think one of the most basic concepts I need to remember as I design learning experiences is to provide as many elements of choice and diverse paths to arrive at learning as possible. . . . (Post-institute Survey, Question 8, Coriander)

Coriander notes that the information she acquired during the course of the institute has focused her attention on her students, raising her awareness of the gap between her perspective and theirs. She comments on the processing that this information provoked, explaining that her understanding of her students' behaviors has expanded to include their interests and the appeal technology has for them. She then lists how she plans to apply this understanding in her classroom—providing more choice and a broader range of potential epistemological pathways to her students.

At least 3 other participants also commented on their intentions to give students more options, using language such as, *"I plan . . . to make more options [sic] that will allow students to discover for themselves the thrill of exploring a new location"* (Mint) and *"I plan to assign multiple project choices to my students this year—realizing that they are able to implement technology that I may not be familiar with"* (Thyme).

Other participants' comments were less extensive. Nonetheless, their remarks touched on similar ideas—the gaps that exist between teachers' perspectives and those of their students; the ways in which more attention to relevance may better engage students with content; and the importance of establishing relationships between students, content, and teachers.

*The greater need to **connect with today's technology "native" students in projects that better relate to their lives**, . . . (Post-institute Survey, Question 8, Dill)*

*. . . **Before the institute I was not as aware of the growing gap between teachers and learnings [sic] in processing styles, and feel that it is even more important that teachers stop ignoring all the other aspects of students' lives, but rather exploit those interests to achieve a more likely goal.** (Post-institute Survey, Question 8, Basil)*

Both of these comments demonstrate an increased awareness of the disparity between the perspectives of K-12 students and their teachers. The first indicates an interest in increasing the degree of relevance present in the projects assigned to students. However, the second response demonstrates the recognition that the above-mentioned disparity extends to the way teachers and students think about and process information. It also suggests a growing awareness that attention to other aspects of students' lives may be a potentially fruitful way to influence their thinking.

Engagement

Other participants said less about differences in their perspectives and those of students and more about engagement. Several participants offered generic comments indicating that the institute had helped them with the task of engaging students, as in this representative comment:

I really think I have more compelling ideas for engaging my students in ways I'm not sure I would have thought of before. . . . (Post-institute Survey, Question 8, Turmeric)

Others noted specific approaches they believed would help them to accomplish that task.

In order for teaching and learning to be compelling for 21st Century learners, a multi-media (multiple representational) approach is more effective than a uni-dimensional approach. . . . (Post-institute Survey, Question 8, Oregano)

I've been awed by the technical abilities of our students. The university largely ignores the impact of environment and the need for differentiated learning, so I've given a lot of thought to those two aspects. . . . (Post-institute Survey, Question 8, Mint)

A few participants offered thoughtful reflections that demonstrated that they had developed deep and well-connected understandings of these topics.

. . . I think the idea of me as yearning for the ways of the "old country" in terms of modern technologies, and only learning little chunks as I absolutely had to really struck me deeply. This is where students live. I am missing out on the potential for powerful connections for my students. So, in order to be an effective teacher and maximize the learning of relevant and practical material by my students, I need to get with the program. The concept of "pushing and pulling" information made a big impact on me in terms of thinking about my teaching. I have been pushing information; there has been very little pull by students. That needs to flip so that students are taking more responsibility for their own learning, personalizing it, making it relevant, and directing it in ways that make it compelling for them. I gave lip service to teacher as facilitator; I now feel the importance of that down to my core. (Post-institute Survey, Question 8, Caraway)

Like the other participants, Caraway's comments begin with a reference to the metaphor used in the Prensky (2001) article, indicating that the metaphor had a strong impact. This could be because the article framed the differences between the rising generation of students and their teachers in a context that

many foreign language teachers grasp intimately—the idea of immigration, the culture shock that immigrants often experience, the “native” accent that remains part of the way older immigrants communicate in English, and the fact that younger immigrants often have no trace of such an accent. It may be that this metaphor seemed extremely relevant to participants’ content area, connected easily with their personal experiences, and activated a tremendous amount of prior knowledge. It may also be that the article was easy to read and understand, thus making the concepts it explained accessible to participants. Whatever the case, this participant explicitly notes that she saw connections between the article and her personal experiences with technology. She also explains that the insights these connections produced had a strong internal impact, causing her to recognize pieces that had previously been missing from her understanding. She indicates how these insights relate to her practice, and again reiterates the extent to which they have transformed her. As in previous participants’ responses, she alludes to the fact that she plans to offer students more autonomy in their learning—opportunities to “pull” information, personalize it, and customize it in ways that are meaningful to them.

These comments are consistent with Borg’s ([2003](#)) extensive review of the literature on the relationships between language teachers’ beliefs and their classroom practices. He explains that in some studies, teachers’ concerns for the contextual and student-related factors of their professional work were so high that they eclipsed the content-related facets of their thinking at times. For example one study of language teachers found that, “In shaping the actual

practices adopted in the classroom, the teachers' beliefs about the motivational needs of their students, then, appeared to be more powerful than the beliefs held by the teachers about effective reading instruction" (p. 103). Another study of how teachers respond to educational research found that teachers were most interested in studies that provided insights regarding what they could do to improve students' learning, as opposed to studies that were focused on subject matter (Kennedy, 1996).

In other words, in light of intense and competing demands, teachers may choose to devote their limited supply of attention and other resources to the factors of their professional lives that they perceive as most prominent and critical for their day-to-day survival. According to the literature, it appears that student engagement is high on that priority list.

Relationships with Students

In addition to engaging students in relationships with content, several participants also mentioned the importance of engaging them in relationships.

Teaching and learning are big words, but the experiences are really individualized – it's a person to person endeavor, enhanced by technology and the compelling frames' contexts, but still the most important piece is the relationship between student and teacher. . . . (Post-institute Survey, Question 8, Rosemary)

Rosemary focuses on the individual nature of every experience, even those designed for a large group. Her focus on her individual relationships with students appears to arise out of this understanding. Other participants also articulated things they had learned about relating to their students.

Students need to feel comfortable in school, and have a "place" that they feel welcome and that they belong. Even though I always have thought that my classroom is a comfortable place (colorful, random, things all over the walls...) it is still mostly "mine". When I set up my classroom for this year, I will have some of my things on the walls and on my desk, but I will also create a space for my students - a place that they can put up things that are meaningful to them (okay - so we'll have to talk about appropriateness, but that's okay...). . . . (Post-institute Survey, Question 8, Thyme)

The content and phrasing of the first sentence of Thyme's comment hints that she, too, may be drawing heavily on the architecture frame as she ponders her relationship with students. As part of their work with architecture, participants were asked to read an arts-based research article by Thomas & Knowles (2002) about the ways in which students experience the "place" of school. The article contained extensive photography and poetry created by secondary students regarding this topic. Many of the conclusions of the article are also represented among participants' comments in this study. Specifically, interdisciplinary approaches to learning have the potential to foreground students' prior knowledge and experience in ways that help them to form attachments to school. Such attachments have the potential to empower them to assume ownership of the location, substance, and process of their learning in ways that may allow them to transform themselves, reform educational practice, and make important contributions to their communities.

Professional Transformations

Participants' interactions with one another were another important source of professional transformation, and appear to have been influenced by the things they learned at the institute.

In this past year, it was not compelling experiences I designed but rather I thought about how to use the ideas of compelling experiences (coherence, resonance, and cognitive dissonance) to influence the kinds of relationships I had with the people I work with and supervise. (Follow-up Institute Survey, Question 16, Nutmeg)

Nutmeg is not the only participant whose professional relationships were influenced by the principles she learned at the institute. In an informal conversation one year following the institute, another participant characterized herself as hanging onto the “coattails” (*Field Notes, Lines 3-4, Pseudonym omitted to protect participant*) of one of her colleagues. It is noteworthy that she made this comment in spite of the fact that she had been very professionally active at the local, regional, and national levels; had been honored for her contributions to the profession as a practitioner; and had been invited to testify to a Senate Committee on matters of policy regarding world language education. However, she also spoke of the ways in which some of the professional recognition she had received following the institute had helped her to, “. . . feel I have something to say that is worthwhile” (*Field Notes, Line 23, Pseudonym omitted to protect participant*). She also stated that she had “grown a lot professionally” because of this recognition, explaining that it had moved her “into a different room.” Her comments implied that her status among her colleagues had increased, that she had gained increased access to professional information and opportunities, and that her professional voice had been amplified.

Ginger, who was serving as a classroom teacher in a K-12 setting, recounted some of the recognition she had received as a result of invitations to participate in projects because of the things she had learned from the institute.

During her description of these opportunities, she expressed surprise and excitement at having been invited by one of the universities in her state to present a workshop on technology.

I'm even going to the University of [name of state] and they want me to do a workshop in technology. I thought, "Holy crap! I'm just the wiki woman!" I'm now known as the wiki woman in [name of state]. (Field Notes, Lines 149-151, Orange Group, Ginger)

This comment implies pleasure at being chosen, noticed, and recognized for her potential to make contributions that people working at the university level might value. It also indicates that a progressive shift may have occurred in her self-perception. The words "*I'm now known as*" suggest that the manner in which she applied and shared her institute experiences with wikis helped her to develop a professional reputation as someone with significant expertise in this topic. The phrase also indicates that this was not previously the case. Upon receiving the invitation, her thought to herself that she was "***just the wiki woman***" also implies that she may never have considered her knowledge or expertise as spanning more than her immediate activities before. The invitation seems to have provided her with a new view of herself that may expand her confidence in her professional value, knowledge, and skills, as well as her vision of her professional potential.

One of the institute leaders offered an interesting explanation for this phenomenon. She notes that an exchange of professional capital occurs in such situations.

*Part of the role of the presider—**By her introducing you to the group, physically, literally introducing you, that provides you access and entry to their community of practice . . . It's a recognition of your experience, your expertise, and your role in the community. It recognizes the presenter and what they bring to the community.** (Field Notes, Lines 174-177, 184-185, 190-191, Cindy).*

She goes on to explain that presenters are “coming in as the perceived expert,” and therefore, are perceived as having,

*. . . the power and the knowledge, and **by giving the feedback and validating what other people are doing, you're passing the power and the knowledge to them.** (Field Notes, Lines 229-232, Cindy)*

It appears that Ginger may perceive university faculty members and the institutions within which they work as “experts.” Consequently, the invitation to give a presentation to people working in that context had the effect of giving her access to that professional community while simultaneously validating her expertise. It is likely that this validation had a more powerful effect on her self-perception than if someone from her own professional context had extended the same invitation. Lave & Wenger (1991) elaborate,

As an aspect of social practice, learning involves the whole person; it implies not only a relation to specific activities, but a relation to social communities—it implies becoming a full participant, a member, a kind of person The person is defined by as well as defines these relations. Learning thus implies becoming a different person with respect to the possibilities enabled by these systems of relations. (p. 53)

In other words, the university's invitation was, symbolically, also an invitation to participate more fully in a community of practice from which Ginger may have previously felt excluded. This affirmation of her professional value appears to have helped her to see new possibilities for herself as a professional, as well as

for her larger participation in the field of education. According to Lave & Wenger's (1991) thoughts above, Ginger is likely to redefine herself in relation to these new opportunities.

This also makes sense within the context of scholarship on creativity, which suggests that the process of comparing a piece of work to existing products, practices, and perspectives is inherent to the process by which contributions are validated as having made a creative contribution to a domain. Csikszentmihalyi's (1996) work on creativity posits that in order for a person to make a contribution to a domain that is recognized as creative, the person must first have privileged access to the domain. Second, the person must bring relevant information from other domains (that is not already widely circulating within the domain) to bear on the task. Third, the person must be in a position where the members of the domain whose opinions "count" can notice and validate the contribution as being creative. The more expansive a person's professional network, the more access the person is likely to have to information within the domain. It is also likely that those with wide ranging networks will have access to information that does not overlap that which is commonly circulating among other professionals within their primary domain of expertise. In addition, it stands to reason that those with extensive networks will have a larger reservoir of social capital that they can leverage to disseminate their contributions in ways that are noticed by those with sufficient power and influence to validate them as creative contributions to the field.

Empirical work by Becker & Riel (2000) builds on Lave & Wenger's conclusions. It notes the strong relationship between increasing engagement in professional communities of practice, teacher learning, and student learning. In a study of 4,000 teachers, Riel & Becker (2000) found that the most professionally engaged teachers reported spending more than twice the amount of time in professional development as their colleagues who scored low on measures of professional engagement. The teaching philosophy and practice of teacher-leaders who invested heavily in their own education differed a great deal from that of their colleagues who had not. High levels of professional engagement were correlated with a constructivist approach to teaching, learning, and technology use. Additionally, highly professionally engaged teachers were also able to implement their constructivist beliefs more effectively in their classrooms than their colleagues who had similar philosophies, but were not as professionally engaged. The study also emphasized that the role that these teachers played in their professional communities of practice was reflected in the roles that students play in these teachers' classrooms. The involvement and participation of these teachers in professional communities of practice seemed to change the information and professional opportunities to which they had access, the impact of the professional contributions they were able to make, and the ways in which they interacted with their students. Riel & Becker posit that this may be a result of the knowledge and skills they gained from their interactions with other professionals, as well as from the institutional power they may have gained as a result of the professional opportunities that flowed from these

interactions. Specifically, their professional credibility and status may protect them somewhat from common institutional pressures, giving them the space they need to pursue their philosophies of education in their classrooms. Interestingly, participants in MLC 2006 did not always appear to equate their professional activities with knowledge or expertise.

I don't know about expertise, I have a lot of involvement, I'm still working on increasing my own expertise and that's part of why I'm so involved. (Field Notes, Lines 7-8, Yellow Group, Sage)

Nonetheless, this participant does seem to recognize that professional involvement is critical to improving her expertise.

Other institute participants also appeared to recognize, at least to some degree, the importance of professional engagement. They seemed particularly aware of the potential influence of their colleagues' judgments in determining the value of their professional contributions. This factor may help to account for the sense of honor several participants mentioned had resulted from their selection to attend the institute, as well as the feelings of self doubt that many experienced prior to, during, and following the institute. An awareness of the professional impact of their colleagues' judgments also contributes to explaining why some participants may have engaged in comparing themselves to their colleagues. In some ways, these comparisons may have helped them to evaluate their position within larger professional networks, as well as the potential that they could fully participate in the interactions within such networks. (These issues will be addressed in greater depth in Chapter 9.)

Participants who had extensive professional networks prior to attending the institute may have been able to share new information with their colleagues that was not circulating in those networks at that time, thus gaining them increased status and social capital among those networks. It appears that participants who did not have strong professional networks prior to the institute may have been able to expand their small professional circles in substantive ways. In either case, the professional networking appears to have been especially beneficial to participants—especially for those who reported experiencing significant professional isolation prior to attending the institute. The increased knowledge and skill that participants gained at the institute seems to have made it possible for some to extend their professional networks. For several this resulted in professional transformations.

The ultimate goal of professional development is that it results in changes in practice. As participants outlined what they learned as a result of their participation in the institute, they also implied (and in some cases, clearly stated) that the institute had changed their practice. They attributed these changes to a variety of different factors. However, in general, it seems that some of the pedagogical approaches employed during the institute may have contributed in substantive ways to these shifts.

I would not say that I now understand something totally new as a result of this institute but I would say that is because of the fact that this is a playground I have been playing in beforehand. On the other hand, I think this institute added a very important layer to my previous understanding. Specifically, I feel as though I have a better handle, in concrete ways, of what it means to be a student in the 21st century. Working with the concepts about news and film making and

marketing filled an important gap in my understanding of the world in which I, and my students, live. This will help me be more effective in my various capacities (which include teaching, mentoring, [sic] and leading). It will help me be more effective because I think I will be able to better connect the goals of the classroom with the outside world and bring the outside world into the classroom. It was also wonderful (Post-institute Survey, Question 8, Nutmeg)

The prior knowledge of this participant appears to have impacted, at least to some degree, how she self-assessed the institute's impact on the degree of change in her professional understanding. It is possible that participants like Nutmeg and Rosemary were more open to thinking flexibly than their colleagues:

All through the institute I kept my thinking in "what if" mode -- so I could imagine how things might be used to impact all of the levels of people I need to work with -- whether they know it or not. (Post-institute Survey, Question 5, Rosemary)

Rosemary's comment once again raises the link between cognition and imagination. Her decision to keep her thinking "in 'what if' mode" may have positioned her to receive new ideas more readily, think more flexibly, and see possibilities more easily. It is also possible that repeated cycles of iteration may improve participants' ability to recognize what is relevant over time. Progressive repetition or spiraling of content may enable participants to become increasingly familiar with various aspects of the content. As they do so, they may find it easier to ignore what has become "familiar," and thus, each new iteration may improve their ability to attend to an increasingly large number of features. This may enable them to discern the features of a situation which are most relevant to the task at hand more easily, and to perceive new possibilities for potentially productive connections. The reflective analysis that follows functions as just

such an iteration. It highlights productive possibilities that emerge from findings in this chapter.

Reflective Deliberation

This reflective deliberation outlines some of the primary contributions that findings from this chapter make to the literature. Following this discussion, the chapter briefly explores the use of transfer, expertise, knowledge representation, and visual cognition as lenses that both augment and limit data analysis.

Contributions from the Data

Findings in this chapter suggest that the majority of participants learned something of value from the institute that they believed had transferred into their professional practice in some way. The topics that participants most frequently mentioned as influential included student engagement; technology; the use of visual examples as pedagogical tools; the concepts of mentoring, leadership, and change; and shifts in their professional self-perceptions. Participants' comments highlighted several factors that seem to have facilitated the "transfer" of concepts from these areas into their professional practice. These factors included a focus on students, cognitive disequilibrium, progressive exploration of concepts at increasing levels of depth, and time.

Student engagement. Participants' comments indicate that they prioritized the topic of student engagement as one of daily concern, as well as critically relevant to their practice. They noted that the institute helped them to develop an increased awareness of the disparity between the perspectives of K-12 students and their teachers. According to the data, the fact that technology

integration was framed in terms of 21st Century learners' interests, needs, and skills accounts for a great deal of participants' subsequent experimentation with it in their practice. It seems that participants' saw clear connections between these ideas and the problem of student engagement. This may account for the degree to which strategies for providing students with more opportunities to customize their own learning experiences through choice, differentiation, personalization, and self-expression were reflected in the changes participants reported making to their practice following their participation in the institute.

Institute leaders used Marc Prensky's (2001) article, *Digital Natives, Digital Immigrants* to frame discussions about the interests, needs, and skills of 21st Century learners. The article uses the metaphor of the experiences of an immigrant taking up residence in another country to highlight contrasts in the knowledge and skills of young people who have grown up with technology with those of adults who are newcomers to digital territories. This framing appears to have had a strong influence on participants' thinking and practice. The reasons for this are not completely clear. However, it is reasonable to assume that the ways in which the metaphoric approach of the article tapped participants' prior knowledge, experiences, and expertise in the field of language and culture may have made the content more comprehensible, increasing their perception of the relevance of the ideas to their professional contexts. The article may also have provided participants with concrete, instantly accessible language that they could use when attempting to further consider the ideas in conversation with colleagues. The potency of the article's influence may also be attributable to the

personal resonance participants experienced when reading the article. It may be that because it made sense and was congruent with participants' prior experiences, they were more easily able to make space in their schemata for the perspectives it espoused. A similar affective component may help to explain the transfer of other technology-related ideas into participants' practice.

Although institute leaders introduced multimedia and visual representations with an emphasis on their pedagogical affordances in supporting cognition, as well as a strategy for engaging learners, it is noteworthy that the rationales participants offered for incorporating them into their practice following the institute focused almost exclusively on their potential to engage students. Their decision-making did not reflect purposeful selection of visual representations as strategic forms of metacognitive intervention in students' thinking. This implies that even in teachers' decisions to implement research-based practices, affective concerns may play just as a strong role in transfer as cognitive ones.

Cognitive disequilibrium. Some literature suggests that teachers are most likely to incorporate ideas into their practice that affirm their existing practice unless they are confronted with evidence that contradicts them (Coburn, 2003). Findings from this study suggest that institute experiences may have challenged some participants' beliefs in ways that encouraged them to reflect on and, in some cases, make changes to their practice. This was particularly apparent in the area of 21st Century learners, literacies, and technologies. Multiple participants expressed that the institute had challenged their

understanding of their students, the skills they possessed, and the things they needed to learn for future success. They noted that an increased awareness of the growing gap between how students and teachers engage with technology had positioned them to understand things about their students' learning needs that were prompting changes in their practice. For many participants, the extensive use of visual representations seemed to have a similar effect on their thinking. Some reported becoming entangled in pondering the layers of an image or video clip that seemed to conflict, while others commented on the ways in which repeated exposure to multimedia materials contrasted with their own practice as teachers and experiences as learners. The cognitive disequilibrium these conflicts and contrasts seem to have evoked appears to have prompted discomfort for some participants. However, it also seems to have fostered sustained attention and reflection as participants attempted to make sense of the facets of the experience that did not align—particularly in cases where participants felt they received adequate support in helping them mediate the disequilibrium.

Perhaps the most vivid illustration from the data of this principle revolved around the ways in which institute experiences seem to have challenged participants' self-perceptions. In multiple cases, participants expressed that in spite of extensive professional involvement, they did not view themselves as leaders. Other participants commented that they did not feel they had anything to contribute that would be valued by professionals outside of their own local contexts. It appears that the knowledge, skills, and professional relationships

participants acquired through their institute experiences may have provided them with increased access to opportunities to participate more fully in professional communities. As they did so, and discovered that their contributions were valued by others whom they viewed as leaders, their perceptions of themselves were challenged. Some remarked that their status among their colleagues had improved and that their professional voice had been amplified—both factors that provided feedback which reinforced their position as valued contributors. In other words, the important role that perception of contextual similarities and differences plays in facilitating experts' ability to recognize potentially fruitful opportunities to apply their knowledge and skills in new situations may extend to self-perception as well. That is, participants' inability to perceive their *own* relevance to a professional community of practice may limit their ability to apply their expertise within that community in much the same way that a failure to recognize that a new problem shares underlying characteristics of a familiar one appears to impede the transfer of information from one problem context to another. One pedagogical strategy that appeared to support participants in recognizing the relevance of content was making multiple passes through a concept or text, but for different purposes and at increasing levels of depth.

Progressive exploration of concepts at increasing levels of depth.

Findings from this study indicate that repeated exposures to the same concept, video clip, or visual representation may have facilitated participants' thinking and thus, motivated them to experiment with similar strategies. However, participants' comments indicate that it was not the repetition, per se,

that was helpful, but rather, the fact that a new conceptual layer was progressively added with each iteration. It is possible that this continual revisiting of institute content provided participants with ongoing opportunities to reflect on it and thus make more personal connections to it, as well as more sense and meaning of it. It is also plausible that this recursive spiraling supported participants in developing more tightly connected conceptual networks of understanding regarding each idea. This could be due to the fact that participants were increasingly more familiar with the conceptual context with each cycle of iteration, thus freeing them to ignore what had become “familiar.” This may have allowed them to increasingly attend to additional facets of each concept, and to notice important details of them at progressively finer levels of discrimination.

It may also be that the introduction of new lenses over time enabled participants to view institute content from a wider variety of perspectives. In this way, participants may have experienced an expansion and refinement of their understanding similar to that described by Jonassen (2003) as a result of the way in which each new lens or “representation” refocused their attention on the distinctive features made available through it. Irrespective of the mechanism, the kinds of thinking described in this paragraph all require more than fleeting attention and brief moments of time to unfold. Indeed, findings from this study indicate that time was another important factor that may be important in facilitating transfer.

Time. Findings from this study indicate that time was a factor that may have both supported and constrained participants' ability to transfer institute content into their professional practice. Some participants noted that having such a large chunk of time protected from family and professional responsibilities enabled them to immerse themselves more fully, to ponder more thoroughly, and to learn more deeply from the ideas presented during the institute. Other participants noted that when inadequate amounts of time were allotted to institute tasks, it was difficult for them to transfer what they had been learning to the projects they were asked to complete. Data from post-institute and follow-up institute surveys and conversations also indicated that after participants had time to test institute concepts against their beliefs and apply them to the realities of their professional contexts in the year following the institute, their understandings were much more robust and well-developed. Their follow-up responses were much more elaborated, precise, and more clearly grounded in specific contexts. In evaluations administered immediately following the institute, participants' self-assessments of changes in their knowledge did not concur with their post- and follow-up institute reports of changes in their knowledge and professional practice. This suggests that time may be an important factor in the extent to which participants are able to fully and accurately evaluate the extent of their learning following a professional development experience.

While findings from this study suggest that the factors listed above may contribute to transfer, they also indicate that these same factors may be involved in constraining it. For example, affective components of the institute—particularly

those generated by small group interactions—constrained participants' learning. For some participants, the cognitive disequilibrium they experienced in conjunction with the content and structure of the institute seemed so disorienting that it severely disrupted their learning (and presumably limited transfer). For other participants, the progressive exploration of concepts through new lenses appeared to generate such a high cognitive load that they were unable to fully absorb the content, much less transfer it into their practice. In a like manner, the lens of transfer offers researchers a number of affordances, but also imposes various constraints. These issues are discussed in the following sections.

Affordances of the Lenses

Ultimately, both transfer and research are about abstraction. Both require the ability to extract sophisticated conceptual understandings from the particulars of an experience, recognize their relevance to other situations and problems, and apply them in ways that do meaningful work. The concept of transfer was especially useful to me as a researcher in that it promoted sensitivity to context and greater attention to the situated nature of professional development, teaching, and learning. It highlighted that much of the understanding I sought was likely to be attention-dependent, and implied that I needed to draw on a variety of theoretical lenses, representing the data in multiple ways in order to better perceive context-sensitive elements within it.

These facets of the concept of transfer were also useful in directing my attention to the ways in which the differing professional contexts in which participants work may have influenced the institute content to which they were

most responsive. (I explore this hypothesis more fully in Chapter 9).

Additionally, the idea that transfer is context-sensitive helped me to recognize the role that situating technology within the context of student learning may have played in facilitating the subsequent experimentation with technology and visual media that participants reported following the institute.

The lens of transfer was most useful to me, however, when I began considering it in relation to the lenses of expertise, knowledge representation, and visual cognition. For example, studies on expertise note the essential role that schema play in guiding attention, facilitating information processing, and supporting transfer. These ideas prompted me to begin to look at subsets of participants, based on their professional roles, responsibilities, and technological expertise. My explorations revealed that participants did, indeed, seem to approach their institute experiences with different schemata that appeared closely linked to the professional contexts in which they worked. In a similar way, the idea that different kinds of representations foreground different facets of information and stimulate different cognitive processes (Ainsworth & Loizou, 2003; Ainsworth & Van Labeke, 2002; Jonassen, 2003; **Mishra & Nguyen-Jahiel, 1998**; **Mishra, Spiro, & Feltovich, 1996**) pushed me to examine the data for participant comments that linked changes in their understanding to specific institute content and pedagogy. (Findings from that examination are reported in Chapter 8.)

Finally, the lens of visual cognition was especially useful in helping me to interpret data from this chapter because of its attention to perception and related

visual processes in transfer. Research on visual cognition demonstrates that visual processes play an extremely important, but relatively unacknowledged role in cognition, reasoning, and problem-solving (McLoughlin & Krakowski, 2001; Seitz, 1998). According to this literature, visual representations may reduce cognitive load by supporting parallel processing, accommodating cognitive offloading, and by providing context and schema that facilitate pattern recognition and inference-making. In other words, representing content in multiple ways may enable professional developers to highlight relevance while limiting cognitive load. This lens helped me to recognize that abundant references in the data to the effect of multimedia materials used during the institute may have had less to do with the way in which these materials captured participants' attention and more to do with the ways in which the materials supported participants' thinking. Specifically, studies about the effects of multiple representations on cognition and the literature on expertise both support the inference that iterative frame-switching may be an important mechanism in facilitating transfer. This provides insight into why some participants expressed that using frames from other disciplines to progressively explore concepts at increasing levels of depth contributed to their learning in such potent ways. Nonetheless, literature on problem representation suggests that transfer is also an issue of learning to work in multiple problem spaces simultaneously. Hence, when teachers do not recognize that frames pertaining to one problem space may also be equally relevant to other, seemingly unrelated problem spaces, transfer may be severely impeded. This perspective suggests that professional development that

encourages conceptual blending, fosters the recognition of similarities among distinctively different problem spaces, and encourages the mapping of key concepts or heuristics from one domain to solve problems in another may be especially effective in facilitating transfer. This is because each of these strategies may promote more integrative thinking by priming different schemata and tapping multiple forms of reasoning. These ideas helped to account for the some of the frustration and confusion that some participants seemed to experience in relation to institute content. They also highlighted that in order to better ensure transfer, institute leaders needed to more directly and explicitly connect each frame from other disciplines to the context of world language education. On a more positive note, these concepts also provided insight into participants' comments about how the use of the triangle and other, similar heuristics, facilitated their learning.

One consequence of this amalgamated perspective is that tensions are likely to emerge among the lenses. Although this can certainly create problems, the presence of tension is not always disadvantageous. In fact, the concept of transfer, empirical work on knowledge representation, and findings from this study all illuminate the positive contributions that tensions inherent in both the data and the lenses may provide. As I grappled with these tensions, I was sensitized to specific elements of the phenomena under study that would otherwise have been inaccessible to me. Each tension led to new questions that pushed me to look at the data in new ways. The ensuing, iterative reflection that occurred as I attempted to reconcile the tensions revealed by differing lenses and

representations supported a much more robust analysis of the data. For me, the lens of transfer affirmed that design-based approaches to research can, indeed, make fruitful contributions to research.

Limitations of the Lenses

The concept of transfer is useful in guiding researchers toward productive questions to ask about professional development in world language education, such as: *What did participants say they learned? Is there any evidence to support that their learning did actually transfer into their professional practice? Of the things participants learned, which ones do they report as having impacted their practice? What conditions appear to have supported transfer?* However, the concept is not very helpful in uncovering the answers to these questions and does not explain the idiosyncratic nature of much of what appears to have transferred into participants' practice. In the remainder of this section, several additional weaknesses in using the lens of transfer as an analytic tool will be explored.

Discussions of transfer commonly focus on specific cognitive aspects of transfer at the expense of others. For instance, attention to the ways in which failure to perceive deep similarities between problem contexts impedes transfer may simultaneously mask how recursive grappling with incongruities can support transfer. Meanwhile, the search for evidence of transfer—whether or not specific content or instructional strategies are observable in educators' professional practice—may conceal that reflection might be a critical, preparatory step that is essential to transferring information into professional practice. The heavy

emphasis on outcomes inherent in transfer also obscures the perspective that it may be an ongoing, iterative process as opposed to an event with immediate effects that are clearly visible. Furthermore, transfer's cognitive focus fails to account for affective components that may play an important role in both facilitating and constraining transfer.

The lens also places a heavy emphasis on individual cognition and in doing so, may miss that there also appears to be a social dimension involved in transfer. According to Lave & Wenger (1991), on one level, learning means increased access to and participation in professional communities of practice. Findings from a study by Becker & Riel (2000) indicate that professionally engaged teachers enact a more constructivist orientation toward their teaching, learning, and technology use. Given that this kind of an orientation is one of the primary things that professional developers hope will transfer into the practice of world language educators, attending to the kind of learning communities need to support transfer seems prudent.

Although the lens of knowledge representation is useful in suggesting possible ways that professional developers might guide attention and support thinking that may result in transfer, it does not offer much information about the specific kinds of representations that are effective in supporting the learning of world language educators. It also fails to consider if providing participants with a variety of representations is sufficient, or whether opportunities to create their own representations are essential. Moreover, the lens does not fully account for how the pedagogical strategies used to engage participants with various

representations may influence what participants gain from working with them. In addition, the lens does not adequately account for differential levels of cognitive flexibility that may exist among participants, nor does it address how participants' interpersonal interactions with others may alter what they notice in the representations. Along these same lines, neither this lens nor the lens of visual cognition fully consider how resistance from participants whose prior experience with teaching and learning has not included multiple representations or visuals may influence their learning and their ability transfer institute content into their classrooms.

The next chapter draws on the lens of transliteracy as a context for why it is important for world language educators to develop skill in crafting and interpreting multiple representations. It then explores how these ideas functioned in the context of participants' experiences with technology during the institute.

CHAPTER 7

DEVELOPING TRANSLITERACY

Although most world language educators would agree that the development of advanced communicative proficiency and cultural competence are at the core of language learning, many have not considered the fact that technology is an important medium through which communicative and cultural exchanges now flow. Yet, recent advances in technology offer language teachers and their students unprecedented access to the linguistic and cultural resources of target language speakers from around the world. Web 2.0 technologies²⁸ in particular make it possible for students to create materials in the target language, and to communicate and collaborate with other people, places, and cultures. Unfortunately, in spite of growing trends toward distance learning and online courses in language education, many world language teachers are ill-equipped to engage their students in technology-mediated interactions with people from other languages and cultures in pedagogically sound ways (White, 2006). Even fewer possess the transliteracy²⁹ skills requisite for preparing students to actively create or successfully participate in the social contexts where they will ultimately live and work (ACTFL, 2009; Neville, 2009). In the remainder

²⁸ For the purposes of this dissertation, the term *web 2.0* will be used to encompass a wide range of online, participatory media, including blogs and microblogging sites (such as *Twitter*), information sharing sites (like *Flickr*, *Google Tools*, and *YouTube*), social bookmarking sites (such as *CiteULike*, *del.icio.us*, and *Diigo*), social networking sites (i.e., *Facebook*, *Ning*, and *MySpace*), and wikis (like *PBWiki*, *Wikispaces*, and *Wikipedia*). These media tend to emphasize user-created communication (especially within and between social networks), collaboration, customizability, interactivity, information sharing and remixing, and creativity. They have led to practices such as mashups, online conferencing, and viral marketing.

²⁹ Thomas, et. al (2007) define transliteracy as the ability to critically and creatively “read, write, and interact across a wide range of genres, media, platforms, and tools” (p. 1).

of this chapter, I explore the potential consequences of these ideas for world language education. I briefly explain how the lens of transliteracy guided the design of the institute and offer a rationale for interrogating data on participants' technology through this lens. I then employ the concept of transliteracy to examine the implications of the data for professional development. I conclude the chapter with a reflective deliberation on the affordances and limitations of the use of transliteracy as an analytic tool.

How the Lens of Transliteracy Guided the Design of the Institute

As literacy is redefined to include the emerging set of skills that students need to live and learn in a rapidly changing society, the importance of assisting both students and teachers in developing technological competence is quickly becoming apparent. Because so much global communication in business, government, and industry is mediated by technology, it makes sense that in foreign language classrooms, where communicative and intercultural competence are among the primary goals, technology-related issues would also play an important role. World language teachers have, in fact, identified technology-related professional development as one of their most pressing needs (ACTFL, 2009; Neville, 2009). Recent studies support this, maintaining that neither K-12 nor university world language educators are adequately equipped to engage their students in technology-mediated interactions with people from other languages and cultures in pedagogically sound ways (ACTFL, 2009; Arnold, 2007; Meskill, Mossop, DiAngelo, & Pasquale, 2002; Neville, 2009; White, 2006). The definition of transliteracy underscores the importance of

developing competence in communicating across communities, cultures, and platforms using a variety of media and other tools. These ideas guided our conception of the institute curriculum as one that would support world language teachers in developing skills in the use of a variety of emerging, social technologies to engage students in creating with language and communicating with people from other cultures.

Rationale for the Selection of the Lens as an Analytic Tool

I selected transliteracy (Thomas, et. al, 2007) as the principal analytic lens for the data in this chapter because of the ecological perspective with which it approaches communication, literacy, and technology. The concept of transliteracy affirms the social, cultural, and historical contexts of literacy, while emphasizing the ways in which audiences, contexts, purposes, and tools for communication are constantly evolving as a result of continuously changing social realities and emerging technologies. Transliteracy theory acknowledges the networked and overlapping nature of discourse communities, but simultaneously accommodates the important influence of individuals and specific technologies within these social networks. The lens of transliteracy also emphasizes the reciprocal relationship between form and content, and highlights the dynamic ways that multiple kinds of literacy continuously shape one another. Because transliteracy skills draw heavily on a person's capacity for higher order thinking, their development may facilitate proficiency in flexible frame-shifting and an accompanying fluency in multiple perspectives that contributes to expertise. Thus, the lens seemed especially relevant to this study.

Implications of Transliteracy for World Language Education

In a recent survey of 2,236 world language teachers administered by ACTFL (2009), more than 70% of non-technology-using teachers and 60% of technology-using teachers reported that they most needed technology-related professional development. A particularly interesting correlation surfaced, indicating that technology-using teachers may be more likely to conduct their advanced classes in the target language 100% of the time (i.e., this was true for 35% more of the technology-using teachers than the non-technology-using teachers). Additionally, compared to non-technology-using teachers, more of the technology-using teachers reported a need for professional development about assessment, culture, instructional strategies, and theoretical background in language teaching and learning. This may mean that technology-using teachers lack understanding and skill in a wide array of areas outside the field of technology. However, the contrast between technology-using and non-technology-using teachers also suggests that technology-using teachers may simply be more receptive to learning new professional knowledge and skills, perhaps because their technology use provides them with expanded access to professional information and social networks that make them more aware of gaps in their pedagogical understanding than non-technology-using teachers.

Several other studies note that while many university foreign language professors can now use technology for presentational or utilitarian purposes such as posting materials online, few use more interactive multimedia, webware, or social technologies to engage students in communication and creation with

language (Arnold, 2007; Meskill, Mossop, DiAngelo, & Pasquale, 2002).

Because educators lack awareness of and skills in using these technologies (many of which are free and readily available), it is difficult and expensive for them to involve students in cross-cultural communications with target language speakers in other countries.

The implications of these studies are particularly important given the changes in the sociocultural contexts in which world language teachers do their work. Information continues to proliferate at a remarkable rate, and new technologies have made instantaneous, global dissemination possible (Siemens, 2005a). Complex problem sets have arisen from the increasing interaction among people and ideas from diverse cultures and environments (Canton, 2006; Jonassen, 2003). New kinds of communities are emerging, new cultural norms and boundaries are solidifying, new forms of interaction are becoming possible, and new kinds of poverty, warfare, and crime are developing (BBC News, 2005; Burbules & Callister, 2000; Kharif, 2005; Rheingold, 2000; Zetter, 2009). The fact that such problems result from a synergy of contexts suggests that their solutions are also likely to be dynamic and distributed among multiple fields, domains, and cultures (Canton, 2006; Jonassen, 2003).

One natural consequence of these shifts in culture and society is that they are redefining literacy—the skills students need to be well-equipped to live, learn, and teach successfully within these new contexts (Cazden, Cope, Fairclough, Gee, Kalantzis, et. al, 1996; Ferdig, 2006; Kobrin, 1997; Jonassen, 2005; Sankey, 2003). To function in such a globally complex and multifaceted society,

learners need the ability to choose between multiple perspectives and frames of reference. They must also know how to critically evaluate the credibility of the resources they encounter. Additionally, learners must possess the cognitive flexibility to analyze, interpret, synthesize, and represent information from ill-structured domains in powerful ways (Spiro, Feltovich, Jacobson, & Coulson, 1991; Jonassen, 2003).

If students are to flexibly select from a wide range of cultural, linguistic, and technological understandings as tools for problem-solving and the creation of “social futures” (Cazden, Cope, Fairclough, Gee, Kalantzis, et. al, 1996), teachers must develop these skills as well (Johnson, Levine, & Smith, 2009). Yet in spite of substantive attention to school reform and technology integration, change has been slow in the curriculum, culture, and concomitant teaching practices of most American teachers (including those in language classrooms) (Cuban, 2001; Johnson, Levine, & Smith, 2009; Tyack & Cuban, 1995).

Teaching continues to consist primarily of telling, and learners are viewed as consumers rather than as active creators. Educators, journalists, researchers, policymakers, and politicians have underscored the potential economic, political, and social consequences of the nation’s failure to equip students with the ability to communicate (Armstrong & Warlick, 2004; Benkler, 2006; Burbules & Callister, 2000; Eisner, 2002, Florida, 2005; Freed, 2003; García, Bartlett, & Kleifgen, 2006; Johnson, Levine, & Smith, 2009; Leu, Kinzer, Coiro, & Kammack, 2004; Prensky, 2001; Rheingold, 2008; Wilhelm, 2000). They have also highlighted the critical need for “transliteracy”—the ability to critically and creatively “read, write,

and interact across a wide range of genres, media, platforms, and tools”

(Thomas, et. al, 2007, p. 1) for meaningful purposes. Many of these scholars have strongly emphasized that it is impossible to teach students to communicate within and across multiple cultures, domains, and languages without first possessing these skills oneself.

However, supporting teachers in the development of transliteracy skills and the pedagogical reasoning they need to successfully engage students in problem-solving and communication through new technologies is no easy task. This is difficult, in part, because such development must occur in multiple layers and on multiple levels. It requires that teachers not only have access to new technologies, but also that they develop new literacies, make changes to their instructional practices, and cultivate new ways of seeing that facilitate the design and application of transformative pedagogies. These pedagogies must move educators to represent content in multiple ways and from multiple perspectives (Sankey, 2002) that help students navigate their information-rich world and the new languages and cultures associated with it (boyd, 2007a; boyd, 2007b; Brown & Duguid, 1999; Prensky, 2001; Prensky, 2004). Livingstone (2003) notes that this is a non-linear process that requires teachers to “access, analyse, evaluate and create messages across a variety of contexts” (p. 1). In other words, transliteracy is more than just technological skill—it is a way of thinking that draws heavily on higher order cognitive processes.

It is noteworthy that many of the higher order thinking skills involved in transliteracy are also foundational to the characteristics that distinguish experts

from novices. These characteristics include the ability to: *analyze* (recognize patterns); *evaluate* (identify relevant features and use them to select potentially applicable problem frames); and *synthesize* [flexibly “conditionalize” knowledge by organizing relevant information from prior experiences into a feasible solution or path to action in a new context (Bransford, Brown, & Cocking, 1999)].

Yet, in professional development sessions that take an “explain, train, and maintain” approach, the primary emphasis is the transmission of information and the adoption of prescribed approaches, not the development of teachers’ pedagogical reasoning skills. This common focus on *tools* and *training* instead of on the development of *skills* and *pedagogical reasoning* means that educators may find it difficult to recognize that technology integration is not a task, but rather, a way of thinking about teaching and learning that has the potential to transform the act itself. It also suggests they may not be able to teach differently until they learn to think differently, and that they will need significant support in applying transliteracy skills to the task of creating meaningful learning opportunities for students (Brown & Duguid, 1999; Siemens, 2005a; Siemens, 2008a; Siemens, 2008b). Such shifts in both perspective and practice will be difficult to initiate unless teachers first acquire experience, skill, and confidence in applying transliteracies to both their personal lives and their professional productivity (Thomas, et. al, 2007; Thomas, 2008). Changes in perspective and practice will be difficult to maintain if the assessment practices in K-12 schools and the review, tenure, and promotion structures in universities do not change as well (Johnson, Levine, & Smith, 2009).

Consequently, those who provide professional development need information about the kinds of technologies world language educators are using, the purposes for which they are using them, and the perspectives that guide their use. Such information may yield insights into teachers' prior knowledge and experiences with technology, as well as their level of skill in using it. These insights can be used to develop learning environments and experiences tailored specifically for foreign language professionals that will promote further growth in this area. They may also help world language educators to leverage current technologies as tools for addressing the problems they encounter in conjunction with their professional roles and responsibilities.

This chapter will investigate these issues through Research Questions 3c, *"What did participants say they learned about technology?"*, and Research Question 4, *"How do world language educators explain their learning (and/or breakdowns in their learning) with regard to this professional development experience?"* The chapter uses data from the Pre-Institute Survey to explore participants' access to technology at home and in the schools or institutions where they work. It also inquires into participants' familiarity with current technologies, the frequency of their use of specific technologies, and the ways in which participants were using them prior to attending the institute. In addition, the chapter uses data from a Post-institute Survey, informal conversations with participants, and follow-up interviews to examine the influence of technology on participants' thinking, future plans, and classroom practice. It concludes with a

discussion of implications for professional development. A summary of the findings from these data sources appears below.

Participants' Technology Use

Access to Technology at Home

Prior to participation in the institute, each participant had access to an average of 4.89 different technologies at home. The technologies participants mentioned most frequently included hardware such as computers, digital cameras, digital videocameras, CD players, and DVD players (see Table 7.1). All 18 participants reported that they had a computer of some kind at home, and three participants stated that they had more than one computer (e.g., desktop and a laptop, or a Gateway and a Mac). Ten participants made explicit reference to having internet access in conjunction with their computers, and several additional participants made comments about the things they do with their computers (such as *"remote access to district servers," "web searches,"* references to e-mail and Ebay, etc.) that indicate they probably have internet access even though they did not specifically mention it. A few participants referred to the peripherals attached to their computers, while others made no mention of such items. However, several participants used phrases such as *"burn CDs"* or *"print pictures"* that indicate that they probably have access to these items.

Only four participants mentioned televisions, two participants commented on iPods, and only one participant noted having a cell phone, one a PDA, and one a fax machine. However, statistics regarding television ownership in the

United States make it unlikely that only 4 of 18 participants own televisions.

Additionally, several participants provided cell phone numbers to institute leaders, suggesting that they do, indeed, have access to them.

One possible explanation for the absence of these items in participants' responses is that these devices have become such a regular part of their day-to-day routines that they do not think of them as "technologies." It may also be that participants assumed that we were most interested in their use of "new" or "emerging" technologies, and as they do not consider televisions or cell phones "new," they did not bother to list them. The participant who did mention owning a cell phone also noted that she had internet access in conjunction with it. Thus, it may be that the ability to access the internet on her cell phone was new to her, and caused her to think of her cell phone as "a technology."

Table 7.1. Participants' Access to Technology at Home

Type of Home Access	Type of Technology	Number of Participants Reporting Home Access
Access to Audio/Video Recording & Playback Equipment	Digital camera	8
	DVD player	8
	Digital videocamera	6
	TV	4
	CD player	3
	TiVO	2
	VCR	2
	mp3 player	2 (1 video)
	Karaoke machine	1
	LCD player	1
	Stereo	1
	Surround sound	1
	Videorecorder	1
Access to Computers	Computer	6
	Computer (Laptop)	6
	Computer (PC)	5
	Computer (Mac)	3
	Computer (Desktop)	2
Access to Internet/Wireless Connectivity	Internet	4
	Internet (DSL/High Speed)	3
	Wireless Connectivity	2
	Internet (Dial-up)	1
Access to Peripherals	CD Burner	4
	Printer	4
	Scanner	3
	CD Drive	2
	DVD Burner	1
	DVD Drive	1
	Photo printer	1
	USB Ports	1
Access to Technologies for Personal Productivity	Cell Phone	1
	Copier	1
	Fax machine	1
	Flash drive	1
	PDA	1

Uses of Technology at Home

Prior to the institute, participants said they used the technologies to which they had access at home for a variety of purposes. Common responses included maintaining personal and professional relationships through e-mail; personal entertainment (listening to music, watching movies); editing, storing, or printing photos; burning CDs; and web-surfing. Only one participant described using these technologies for more expansive personal purposes like banking and shopping. Nine of the 18 participants reported that they also used these technologies for at least one professional purpose. These purposes typically included communicating with professional organizations and fulfilling professional responsibilities associated with those organizations (such as creating flyers and newsletters, maintaining membership databases, or updating organizational websites); preparing instructional materials (using Word, PowerPoint™, and Excel); teaching online courses (with Blackboard or WebCT); research; and writing.

Eleven of 18 participants named specific software and/or webware applications in their responses. The majority were applications that are part of the Microsoft Office Suite—Access, Excel, PowerPoint™, Publisher, and Word. One participant mentioned iMovie, one commented on Dreamweaver, and three referred to Blackboard or WebCT. Five of the 11 participants who named specific software referred to it as something they “do” with technology:

*. . . I e-mail and **do word documents**. . . . (Pre-institute Survey, Question 3, Caraway)*

*. . . **Word and Power Point development** for school mostly (Pre-institute Survey, Question 3, Rosemary)*

*. . . I use Email at home and **work in Word documents and PowerPoint mostly**. . . . (Pre-institute Survey, Question 3, Mint)*

*. . . web searches, e-mail, **word processing, spreadsheets, PowerPoint presentations**, burn CDs (Pre-institute Survey, Question 3, Tarragon)*

These participants also happened to be among those with the lowest self-ratings regarding knowledge of 21st Century technologies on the Pre-institute Surveys. By contrast, the other 6 of these 11 participants' descriptions connected the applications they listed to the purposes for which they used them, as in these representative examples:

*. . . I **also maintain the membership database** for [state world language professional organization] (**MS Access**), **manage the finances** for [state world language professional organization] (**MS Excel**), and **edit the newsletter** for [state world language professional organization] (**MS Publisher**) (Pre-institute Survey, Question 3, Coriander)*

*. . . I ask students to **submit assignments on line** and submit them to **WebCT Vista**. . . . (Pre-institute Survey, Question 3, Oregano)*

*. . . laptop and desktop with high speed internet (**create and maintain web pages using Dreamweaver**, answer e-mail, **create brochures/flyers using MS Publisher**; **create presentations on PowerPoint** (Pre-institute Survey, Question 3, Sage)*

These six participants' self-ratings of their technology knowledge were also higher than those of the other five. This may indicate that as participants' technology knowledge and skills increase, their attention shifts from a focus on the specific products themselves to the overarching tasks those products allow

them to accomplish. Many participants also mentioned specific contexts related to their technology use.

. . . I do banking, school work, and shopping on-line. . . . (Pre-institute Survey, Question 3, Fennel)

. . . I also use it to work on conference materials for our state language conferences, university classes, and research. . . . (Pre-institute Survey, Question 3, Thyme)

Participants also frequently distinguished between personal and professional use, as in this representative example:

. . . I have a digital camera and digital camcorder, which I mostly use for vacation/travel use, but also occasionally use for family or professional events. I have the usual TV, DVD, VCR. When I had the International Channel on my cable, I used to record the evening news from France to use snippets in my classroom. Now the only professional use is previewing DVDs for classroom use. (Pre-institute Survey, Question 3, Turmeric)

Taken together, this data hints that the more frequently people use various technologies, the more likely they are to mention the contexts and purposes for which they use them (as opposed to solely naming particular applications). As participants' level of comfort in using a given tool increases, they may be more likely to use the tool across multiple contexts—sometimes for purposes that extend beyond those for which the tool was originally intended. As their use of the tool becomes more ubiquitous, it may be that they have a greater tendency to organize their thinking about that tool in terms of criteria intrinsic to their daily workflow (such as the contexts, purposes, or tasks that determine its use) rather than by extrinsic criteria (such as the name of the tool, its features, or the functions for which it was originally intended). More research is needed in order

to determine whether these patterns in the way participants talked about the technologies they use are reliable indications of technological knowledge or skill.

Issues of access and skill may have also impacted the technology use of some participants. The participants who voluntarily raised these issues also happen to be among the group that self-rated their knowledge of new technologies the lowest. For example, one person said,

*PC Computer and **dead printer** CD drive **but no DVD drive - no burner, no UBS [sic] port** DVD on the TV Word and Power Point development for school mostly (Pre-institute Survey, Question 3, Rosemary)*

This participant's response raises questions about the degree to which low access and low technology knowledge or skill may be correlated. This participant may not have invested in technology equipment at home because she perceives herself as lacking technology-related knowledge, and thus assumes that she does not know how to use it (or will not use it) due to a lack of skill. It may also be that she has access to so much equipment at school that acquiring such equipment at home seems unnecessary. It is also possible that a lack of equipment at home has made it difficult for her to acquire the skills she needs in order to develop the knowledge which would enable her to take greater advantage of the technology to which she has access at school. (According to this participant's self-reports, that access appears to be substantial). She may not have time during the school day to develop additional skill in using the technology she has there, and limited home access may prevent her from using time outside of school for this purpose.

By contrast with the previous participant, the one quoted below has access to technology both at home and at school, and seems willing and interested in learning to use it.

*I have a pc with scanner. **My PC is loaded with programs and features I have not yet learned how to use.** I e-mail and do word documents. I can work with photos and get them onto my ebay [sic] listings. **This summer I hope to learn** how to do nice movies/slide shows with music clips. (Pre-institute Survey, Question 3, Caraway)*

This response evokes the question, “Why hasn’t this participant learned to use the technology available to her?”—especially since she indicates that she has already developed basic skills in working with text, images, and several different software applications. It may be that the computer is new, and thus, that she only recently acquired access to the features it offers. However, her comment about hoping to learn to do some of these things over the summer suggests that time may be the primary issue for her. Another participant’s response raises similar questions:

At home, I havew [sic] a computer with Internet hook-up, with which I check e-mail. I also use my computer as a glorified [sic] typewriter. I’ll will be teaching a FLmethods [sic] class in the fall so I’ll be again on Blackboard, a progam [sic] I used working on my terminal degree. (Pre-institute Survey, Question 3, Dill)

This participant has computer and internet access at home and his responses to other Pre-institute Survey questions indicate that he has substantial access to technology in the workplace as well. It may also be that he lacks the knowledge, skill, and/or interest to experiment with them beyond the utilitarian uses he mentions (checking e-mail, typing documents, and managing his courses) without substantial intervention from others. However, he mentioned that he was

working on making a movie prior to the institute, which suggests that he is not without some level of skill (unless he was receiving substantial support from others during the process). It is thus unclear whether he is being modest in the self-rating of his technology knowledge or simply views new technologies as nothing more than “glorified” tools that are unworthy of additional attention because they do not alter what it is already possible to accomplish without them in any substantial way.

It is also noteworthy that other participants who were teaching at the university level also specifically mentioned the use of particular course management systems such as Blackboard and Web CT. It is possible that the use of technology by these faculty members is limited—so when asked about their technology use, they mentioned only the minimal technology skills their daily tasks require of them—e-mail, typing documents, and working with course management systems. On the other hand, the mention of these course management systems may indicate that the use of these technologies constitutes an important change in the way university faculty engage with their courses and their students, and thus when asked about their technology use, they emphasized these (in at least one case, with a sense of accomplishment). It may also be that the use of such course management systems is looked upon favorably by the institutions who have invested in them, and that these faculty members are actually on the cutting edge by comparison with their peers, who may not yet have fully embraced the use of such technology.

By contrast, only one of the educators working at the K-12 level mentioned a course management system, and that teacher's courses were all delivered in collaboration with a university. This may signal that course management systems are primarily a tool used at the university level. Given the expense attached to most course management systems, it is likely that the majority of these K-12 teachers do not have access to them, and thus, do not use them. As we did not ask participants specifically about their access to course management systems in any of our survey instruments, it is impossible to conclusively determine the reasons for the difference in responses among educators working at the K-12 level and those working in institutions of higher education. We did, however, inquire about the other kinds of technology to which participants had access at work.

Access to Technology at Work

Prior to participation in the institute, 80% of participants reported that they had access to six or more technologies in their schools or institutions. All participants had access to a computer for teacher use and a CD player. Eighty percent of participants also had access to a computer lab, a DVD player, a VCR and TV, and an overhead projector. More than half of participants had access to a data projector, a digital camera, a tape recorder, and a digital videocamera (see Table 7.2, which is organized by most frequently used technologies).

Fewer than 50% of the participants had access to a laptop cart, four or five computers in their classrooms or offices for student use, a smart board, wireless connectivity, or a document camera (i.e., Elmo). Only 30% had access to a

digital voice recorder, and only 15% had access to an MP3 player or a walk-and-talk board at work. The sole participant who had access to a green screen or Polycom was a teacher based at a university who taught K-12 language courses through a distance learning network.

Table 7.2. Participants' Access to Technology at Work

Type of Access	Type of Technology	Number of Participants Reporting Access
Access to Computers	Computer for teacher use	18
	Computer lab	16
	4-5 computers in classroom or office for student use	6
	Laptop cart	6
Access to Projection Equipment	VCR and TV	17
	Overhead projector	16
	Data projector	13
	Document camera (i.e., Elmo)	5
	Smart board	5
	Walk-and-talk board	1
Access to Wireless Connectivity	Wireless connectivity	7
Access to Audio/Video Recording & Playback Equipment	CD player	18
	VCR and TV	17
	DVD player	17
	Digital camera	14
	Tape recorder	13
	Digital videocamera	11
	Digital voice recorder	6
	Mp3 player	3
Access to Videoconferencing Equipment	Green screen	1
	Polycom	1

Most of the technologies to which a majority of participants lacked access also happened to be items that would be particularly helpful in facilitating student use of the technology in the classroom (such as clusters of computers, laptop carts, mp3 players, smart boards, and wireless connectivity). This may help to explain why so many participants' comments about technology use in their classrooms were heavily teacher-focused across data sources. If student use of technology in the classroom is, indeed, related to access to particular kinds of technologies, then several participants' comments about new technologies to which they would soon have access may be signs that student use in their classrooms may increase in the future.

ELMO, Smart board, and projector are being installed this summer. . . . (Pre-institute Survey, Question 5, Cayenne)

. . . I have just learned about the smart board. We have an ATM connection, and are being encouraged to use that technology. . . . (Pre-institute Survey, Question 5, Caraway)

These responses, in conjunction with others, indicate that some schools are continuing to invest in new technologies—particularly Smartboards. Fennel outlined some of the ways in which she plans to use the new technologies to which she will soon have access.

. . . I use the overhead for many things though next year I will have a wireless VPU and I have a tablet that will act as a Smart Board using DyKnow software. I will, however, be able to walk around the room and use it instead of have [sic] to stay at the front of the class. My students have done some work with Audacity, but they will be required to use it and keep an oral portfolio next year. We are also setting up video conferencing with native speakers. (Pre-institute Survey, Question 5, Fennel)

Fennel seems to believe these technologies will offer her more mobility in the classroom, but does not discuss how she thinks this might affect her teaching or students' learning. She also notes that these technologies have created opportunities for interactions with native speakers of the target language, and that her students will have the opportunity to use some of them for assessment purposes. However, even though her comments clearly indicate that her thinking about technology and its use in her classroom extends to students, the manner in which her comments are phrased implies that she is thinking primarily of how the new technologies will affect the ways she, the teacher, is accustomed to working in her classroom.

This is consistent with the literature on teacher beliefs in language education which suggests that teachers make sense of new innovations through the lenses of their existing beliefs and practices (Borg, 2003). It may be that teachers first need time to make sense of innovations within the context of their own professional practice before they will be ready to consider their implications for students. This implies that to help teachers adopt innovations into their practice, professional developers must build on teachers' existing beliefs, prior knowledge, and pedagogy. It is likely that doing so will better enable them to help educators see how these technologies can support existing practice, as well as assist them in envisioning new possibilities for that practice. We turn now to some of the technology-related practices in which participants reported they engaged at work.

Uses of Technology at Work

Prior to the institute, participants used the technologies to which they had access at work for a wide range of purposes. These purposes encompassed those indicated in Table 7.3.

Table 7.3. Purposes of Participants' Technology Use at Work

Number of Participants	Purpose
9	Display assignment answers and instructions, data, graphic organizers, realia, and visuals
8	Show video clips or movies
7	Play music or sing songs
5	Student projects
4	Assess students using alternative and online assessments
3	Communicate (through distribution lists and e-mail)
4	Engage students (using online exercises, overhead games, virtual tours, webquests)
4	Listening exercises (audio streaming, CDs, podcasts)
4	Make videos
3	Deliver instruction or demonstrate concepts (using chalkboard, Flash, PowerPoint, or over distance learning networks)
3	Prepare teaching materials
3	Student research
2	Maintain records such as attendance and grades
2	Review
1	Individualize instruction (Blackboard)
1	Meet with other teachers (teleconferencing)
1	Model technology-infused lessons for student teachers
1	Take photos of students during projects

While the majority of these purposes were mentioned by only one or two participants, participants' responses did converge around 3 uses—displaying images and information (67%); playing music, listening exercises, or singing songs (61%); and showing video clips or watching movies (44%).

Although all but one participant noted using e-mail at work on a daily basis, only 3 mentioned it specifically when asked how they used the technology to which they have access at work. A similar pattern appeared with regard to maintaining records and preparing materials. Few participants listed these as purposes for which they use the technology they have at school, although these are very common uses of technology in schools and many participants noted that they use technology at home for this purpose. This may mean that these educators simply do most of their grading and preparation at home. It is also possible that these educators use multimedia material only as a supplement to the learning activities they plan for their students, rather than as a key component of their lessons. Consequently, when these participants think about technology, they think of it as “enrichment” rather than something integral to their daily instructional practice. If this is the case, it is likely that participants’ use of older technologies such as chalkboards, overhead projectors, cassette players, and VCRs are also underrepresented in these findings.

Although some participants said they used technology to “engage” students with content, this engagement seemed to have less to do with students’ interactive use of the technology and more to do with the display of information, as in this representative response.

*All of this technology is used to **engage my students** in the content **through the display** of visuals or through multi-media, such as film segments, audio segments, French TV broadcasts, virtual tours, online driving tests (in France), etc. The tape recorders are used **to practice** for the speaking portion of the AP exam. (Pre-institute Survey, Question 3, Sage)*

This teacher uses a wide variety of multimedia materials, many of which appear to be culturally authentic, in order to expose her students to content in interesting ways. However, most of the items she mentions are not things that would require students to actively participate in their creation. Instead, they seem to be things students would consume by listening to or watching them. This was also true of other participants' responses.

*... **I've created** a number of Flash files **with which my students can practice** pronunciation [sic] and see communication structures.
... (Pre-institute Survey, Question 3, Basil)*

This participant implies that there is value in helping students to visualize communicative acts. His use of Flash suggests that the activities he is producing for students are probably animated or interactive in some way. Nonetheless, there still appears to be a strong emphasis on demonstration. In fact, when aggregated, participants' responses indicate that 80% used technology primarily for "show and tell."

***I use** the computer to maintain daily records (attendance, grades, email) and produce teaching materials as needed. **I occasionally connect** to the internet as a teaching tool to **display visuals from websites to my students** using a TVator connecting my computer to the TV in my room. **I use the CD player daily to play** music for my classes, and the tape feature on it to play listening exercises related to our text materials. **I use the VCR and TV to play** the text related videos. **I occasionally take my classes to the computer lab (especially the older classes) to do** "webquests" that relate to our curriculum. **I use the overhead daily to display** transparencies (both ancillaries and self-produced) as visuals, instructions, and graphic organizers for class activities. **I also use the board to demonstrate concepts**, and have the students demonstrate their work on the board. (Pre-institute Survey, Question 3, Coriander)*

It appears that this participant uses the technology primarily to demonstrate, display, or play things for her classes. With the exception of web quests and demonstrating their work on the board, no mention is made of students using any of the technology in interactive or creative ways. This participant's response is not uncommon. While various participants commented that students used technology to participate in assessments, complete listening activities and online exercises, research information, or submit assignments, only 28% of participants mentioned activities in which students were given opportunities to create something with the technology (such as a brochure, a lesson, a PowerPoint™, or a short video).³⁰

Numerous scholars discuss the ways in which the tools one uses influence what it is possible for one to think (Elliot Eisner, 2002; McLoughlin & Krakowski, 2001; and Mishra, Spiro, & Feltovich, 1996). If students' use of technology is limited to listening and watching, with no real provision made for creative interaction or participation, the degree to which they will be able to develop increased proficiency in speaking and writing is also likely to be limited, as is their development of the higher order critical thinking skills, decision-making, and evaluative judgment commonly associated with the design process inherent in such creative activities is also likely to be limited. This is especially true in classrooms where the teachers themselves use technologies somewhat

³⁰ Participants exhibited a substantive degree of change in this area following their participation in the institute. This change will be discussed later in this chapter.

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indiscriminately. In fact, only one participant explicitly mentioned that her selection and use of technology was guided by her instructional purposes.

Depends upon my purposes. Last fall, I co-taught a course in which we used technology to project images because paintings were an integral part of the course. (Pre-institute Survey, Question 5, Nutmeg)

By contrast, most participants seemed to associate particular technologies with a limited range of specific functions. Their responses indicate that few of them stray beyond the originally intended uses of each technology. This inability to see beyond the obvious or learned functions of an object is known as “functional fixedness” (Mishra & Koehler, 2007). Such functional fixedness may make it difficult for educators to recognize the relevance of particular technologies to their instructional goals and objectives. It may also make it difficult for them to notice how slight adaptations to the structure, function, or use of a technology might greatly increase its relevance, utility, and impact in the classroom. Yet, according to Hofstadter (1985), such variations are at the heart of most creative innovation. Thus, one issue of potential importance for professional developers to investigate is what pedagogical strategies might help to move participants beyond functional fixedness to experiment with the *possibilities* inherent in technologies, and not just the obvious features of the tools themselves. However, participants who do not use technology on a regular basis may find this difficult. Consequently, it is important to gather information about the frequency and nature of participants’ technology use.

Frequency of Technology Use

When asked about the frequency with which they used current technologies in a Pre-institute Survey question, all participants indicated that they engaged in word processing on a daily basis, with the exception of one person, who did so weekly. All participants also reported using e-mail daily, except for one, whose response indicated that she didn't know what e-mail was. She had used e-mail to communicate with institute leaders prior to the institute, so it is likely that her response was either a mistake, or intended as a joke. The majority of participants also noted that they used search engines and PowerPoint™ on at least a weekly basis.

Participants used other technologies less frequently. Prior to the institute, the use of digital cameras and photo editing were only monthly activities for approximately 50% of the participants (in spite of the fact that 78% had access to digital cameras at school and 44% also had access to them at home). Roughly 50% participants engaged less than once a year with an audio/video editing program, blogs, a digital videocamera, an MP3 player, a podcast, web authoring tools, webquests, or wikis. The MP3 player may be explained by lack of access, as only 22% reported having access to one at school and only 11% reported having access to one at home. The limited use of the other technologies occurred in spite of the fact that all participants had access to computers at school and at home and 61% had access to digital video cameras at work. We did not inquire about access to specific software or internet access at work. However, most teachers provided a work e-mail address on their institute

applications, suggesting that they probably have some level of connectivity.

Thus, one interpretation of these findings is that at least half of the participants use technology primarily in utilitarian ways and as passive consumers, seldom engaging with it as active producers of content. This is congruent with the finding mentioned above that few participants engaged students in using technology for creative purposes—a trend that continued with respect to web 2.0 technologies.

Familiarity with Current Technologies

Seventy-eight percent of participants did not know about Flickr, machinima, RSS, or social bookmarking, and 67% of participants were inexperienced or infrequent users of audio and video editing programs, blogs, MP3 players, podcasts, web authoring, web quests, and wikis³¹ (see Table 7.4). Table 7.4 contains a master list of the technologies about which participants were asked, followed by the numbers of participants who said that they did not know about the technology or used it once a year or less. Bold typeface is used to highlight instances where more than half of the participants were unfamiliar with the technology in question.

³¹ We engaged participants with a wiki prior to the administration of the Pre-institute Survey, which may explain why survey results indicate some participants were already familiar with wikis.

Table 7.4. Familiarity with Various Kinds of Hardware & Software (Based on Frequency of Use)

Total Number of Unfamiliar or Infrequent Users (n=18)		I don't know what this is	Use once a year or less
17	Flickr	15	2
16	Machinima	16	0
16	RSS/XML Feeds & Aggregators (such as Bloglines)	14	2
16	Vlog or Vodcast	12	4
15	Social Bookmarking/Tagging (such as del.icio.us)	15	0
14	Audio Editing Program (such as Audacity or Sound Forge)	7	7
14	Video Editing Program (such as iMovie, Pinnacle Studio)	4	10
14	Webquests	4	10
12	Blogs	2	10
12	Podcast	4	8
12	Web Authoring Tool (such as Dreamweaver or Frontpage)	3	9
11	MP3 Player (such as an iPod)	1	10
11	Wikis	1	10
9	Digital Video Camera	1	8
7	Database/Spreadsheet (such as Microsoft Access, Excel, or Filemaker Pro)	1	6
5	Photo Editing Program (such as Photoshop)	0	5
4	Digital Camera	0	4
1	Presentation Program (such as PowerPoint)	0	1
1	E-mail	1	0
0	Search Engine (such as Google or Yahoo)	0	0
0	Word Processing Program (such as Microsoft Word or Word Perfect)	0	0

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These responses suggest that web 2.0 technologies (and related hardware and software typically used for creative purposes) were new to more than 70% of the participants (depending on the technology). Web 2.0 technologies are generally associated with creation, customization, and active participation in online communities. Participants' unfamiliarity with both these technologies and creative multimedia tools such as audio and video editing programs implies that most were not actively creating or customizing multimedia content. Thus, it is also unlikely that they were engaging others in doing so. This helps to explain the lack of confidence and reluctance that some participants expressed about involving students in using these technologies for creative purposes.

Disaggregating this data by individual participants revealed some additional patterns of interest. In Figure 7.1 below, each letter represents one of the 18 world language educators who participated in the institute. The number associated with each participant represents the number of different technology items the participant marked with the response: "I don't know what this is." By drawing a circle that encompasses the majority of participants' responses (represented by the shaded area in Figure 7.1 below), it becomes evident that most participants were unaware of between 3 and 5 technologies on the list. By contrast, the six participants whose responses placed them outside of the circle were unfamiliar with between 6 and 12 different technologies.

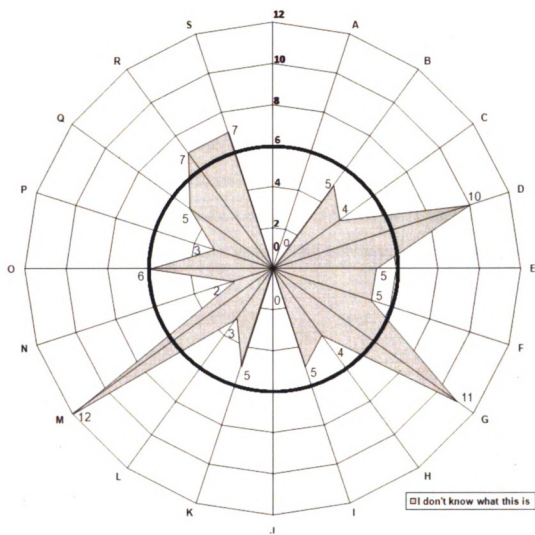


Figure 7.1. Participants' Pre-Institute Prior Knowledge of Particular Technologies

This figure frames a clear problem for the professional developer—how to organize technology-related information and learning experiences to build the knowledge of “outlying” participants while simultaneously ensuring that other participants do not disengage? This question will be explored in greater detail in the discussion section of this chapter. However, a comparison of self-assessment data from the Pre- and Post-institute Surveys reveals that institute leaders may have been at least partially successful in this task as participants did experience a change in their understanding of content that was foundational to the topic of technology³². Table 7.5 below shows how participants self-assessed their experience with the institute topics of 21st Century Literacies, 21st Century Learners, and 21st Century Technologies both before and after the institute.

³² Much of this content was focused on web 2.0 technologies.

Table 7.5. Changes in Participants' Familiarity with 21st Century Literacies, Learners, & Technologies

Survey Prompt: Please mark the category that best describes your experience with each of the following topics. (Mark only one response per topic.)						
Institute Topics	21st Century Learners		21st Century Literacies		21st Century Technologies	
Self-assessment Rating Categories	Pre-institute Survey	Post-institute Survey	Pre-institute Survey	Post-institute Survey	Pre-institute Survey	Post-institute Survey
I am UNFAMILIAR with key concepts and principles.	3	0	6	0	4	0
I can LIST key concepts and principles.	6	2	2	2	3	3
I have EXPERIMENTED WITH THE APPLICATION of key concepts and principles.	5	7	5	6	8	5
I can CORRECT MISCONCEPTIONS others have about key concepts and principles.	3	5	3	7	1	7
I can MODEL how to apply key concepts and principles.	1	4	1	3	2	3

Surprisingly, more participants gave themselves low self-ratings³³ regarding their experience with the subject of 21st Century learners than they did with respect to 21st Century literacies or technologies. These low self-ratings were not limited to a particular professional context—participants in this group included K-12 classroom teachers, program administrators, and

³³ "Low self-ratings" are defined here as participants who marked that they were either *UNFAMILIAR* with or could only *LIST* key concepts and principles.

university faculty members. This may indicate that these world language educators are feeling somewhat out of touch with their students. It may also be that they interpreted the question as being about the ways in which students will learn in the future—something about which they may feel they do not yet have a great deal of information or understanding. The other strong pattern that emerged regarding this question is that this group also encompassed a majority of the participants who also rated themselves as having limited knowledge of 21st Century technologies (and, in most cases, of 21st Century literacies as well). This suggests that these educators may feel unprepared to address issues of teaching and learning in the 21st Century. It may also mean that they see connections between learners, literacy, and technology.

When asked in general about their experience with 21st Century technologies and 21st Century literacies, only 44% of the participants marked answers that indicated low levels of familiarity or skill. This contrasts sharply with the findings gleaned from the more specific survey questions noted above which indicated that more than 70% were unfamiliar with a wide range of technologies. This suggests that participants' definitions of "21st Century Technologies" may have differed from those of institute leaders. Institute leaders may have considered a wider range of technologies than participants and may have drawn much finer distinctions among them. This also indicates that in order to obtain a clear picture of participants' prior knowledge and skill, it may be necessary for professional development providers to ask very specific, content-related questions instead of referring more globally to general categories of content.

Although the percentage of participants who indicated that they had experimented with or had some degree of expertise with 21st Century literacies or technologies were 50% and 61% respectively, that number rose to 83% or more of participants by the conclusion of the institute. In the institute evaluation report prepared by the Research Institute for Studies in Education (RISE), a Wilcoxon signed-ranks statistical test using matched pairs revealed that increases in participants' understanding in all three of these topic areas was significant ($p < .01$) (Kemmis, 2006). Participants' responses to other survey questions provide additional insight regarding these findings.

Influence of Technology on Participants' Thinking

When asked to describe a compelling experience they had during the institute, many participants mentioned technology. The reasons for this were varied, and addressed topics such as multimedia, product creation, and students. However, common to participants' comments across these topics were references to the ways in which the topics had affected their thinking.

Multimedia

Several participants noted that watching audio and video clips during the institute was compelling and had affected their thinking.

*... **The watching and thinking about the "Green Day" music video.** Cindy and I talked about it for two days until she had the bright idea to research some of the thinking behind it. This happened in the classroom. It was compelling because initially the disconnect between the images and lyrics didn't make sense to me and it forced me to think carefully about the relationship between the layers of media in communicating a message. (Post-institute Survey, Question 5, Pseudonym omitted to protect participant)*

For this participant, the power of the multimedia experience seems to be correlated with the depth and complexity that resulted from the juxtaposition of the various layers of media which comprised it. The incongruence of the layers captured her attention and the complexity of the message embedded within those layers caused her to continue to ponder their content. She attributes the compelling nature of the experience to the cognitive conflict that this incongruence produced and the sustained thinking it engendered. This explanation is consistent with the work of scholars like Rand Spiro, who explain that offering students “bite-sized chunks of complexity” (Spiro, Feltovich, Jacobson, & Coulson, 1991) can help them begin to grasp the nuances of complex, ill-structured domains. The “grappling,” or sustained mental engagement with the relationships among the various media elements that the experience seems to have prompted is a critical component of learning (Eisner, 2002; Meskill & Anthony, 2007; Sizer & Sizer, 1999; Sousa, 1995). Continued engagement with the concepts increases the likelihood that participants will make connections between the new information and their prior knowledge. Other participants reported that watching multimedia clips affected their thinking in similar ways.

Watching the different commercials and music video clips was compelling. I kept thinking about how my students could use the same tools that other students have used in order to create projects - and it also made me realize that I don't necessarily have to understand the technology that they are using - I just have to give them the idea and the tools; they can figure out how to use those tools to create a meaningful experience(project). (Post-institute Survey, Question 5, Thyme)

For this participant, the thinking these clips evoked had less to do with incongruence in the content and more to do with the fact that some of the examples that were shown had been created by students. As in the case of the previous participant, the clips captured her attention and compelled her to spend time pondering the meaning of what she was seeing (albeit for different reasons). As she viewed the work these students had done and considered its relationship to her own professional teaching context, she came to new understandings.

In each of these examples, the multimedia clips seem to have captured participants' attention. Unlike text, which may often be viewed as a completed piece of content to be absorbed or digested, multimedia may invite participants to engage with it in more dialogic ways that activate both emotional and intellectual processes. (Ainsworth & Loizou, 2003). This may enable participants to recognize relevance to their own professional contexts more readily. The layered, dimensionalized nature of multimedia may also position participants to be more sensitive to relationships among conceptual elements. As a result, participants may think in more sustained ways about these relationships. In other words, because understanding is a product of interactions between the physical environment, social interaction, and mental lattices of cognition, multimodality is essential to constructing complete meanings (Goodwin, 1994; Goodwin, 2000; Goodwin, 2003).

Product Creation

The active creation of multimedia products using various technologies was also especially compelling for some participants.

***Video taping our mini-movie** one evening after class. The experience took place in a hotel meeting room, at a bus stop, and back in a hotel room to edit the movie. It was compelling because it drew upon our sense of creativity while also **requiring us to use newly acquired technological skills** to communicate our message. (Post-institute Survey, Question 5, Sage)*

Several facets of this response seem important. This experience took place in a group, after class, and outside of the classroom. It took participants to a number of locations that were not part of their typical daily routines. Although this participant does not mention a relationship between this fact and the compelling nature of the experience, it is consistent with the pattern of “foreign contexts” that emerged in conjunction with participants’ descriptions of compelling experiences in Chapter 5. This participant attributes the compelling nature of this particular experience to the way in which the task tapped participants’ creativity, the manner in which the task demanded that participants apply what they had learned, and the fact that both were used in the service of a communicative act. In other words, following the presentation of new material, this task helped participants to continue to move through the cycle of professional development identified by several participants in Chapter 8 through conversation, application, and reflection. The opportunity to “think” creatively, applying new knowledge and skills in the service of this “doing” and “communicating,” appears to have been a motivating factor for this participant.

Several other participants also commented on how empowering it was to discover that they could work with these technologies successfully.

. . . Creating a promo with my focus group was compelling; I realized that it is within my reach to do this kind of work using up-to-date technology (even being an imigrant [sic] to this new world.) (Post-institute Survey, Question 5, Caraway)

As in the previous example, this experience took place in a group during the completion of a creative task. As this participant attempted to make meaning of the creative work she was doing with the technology, she experienced epiphanies about her relationship to the technology. Her experience with the technology seems to have prompted her to re-evaluate her beliefs about her capacity to use “*up-to-date technology*.” Other participants expressed similar sentiments about the way that successful, hands-on experiences with technology made them feel.

the [sic] day we conquered [sic] the podcast program. (Post-institute Survey, Question 5, Ginger)

All of these responses share several common characteristics. In each instance, participants were involved in an act of creation. In two of the responses, that creation was also accompanied by reflection which led to a realization of some sort. In all three of the responses, participants referred to the fact that they given the opportunity to apply their “newly acquired technological skills” as being compelling, noting that this helped them to come to realizations such as, “it is within my reach to do this kind of work with up-to-date technology.” Some even referenced their efforts with terms like “conquered,” which suggests that they

found the tasks challenging and implies that they felt a measure of satisfaction upon completing them.

Another participant offers additional insight into how these creative experiences may have supported learning.

*If I had not had a chance to play and interact, being the orange person I am, **an orange bodily kinesthetic**³⁴, I wouldn't have had the confidence . . . [I] explore online, click on sites, watch videos online. I can teach myself because I got the foundation of what all that was and the confidence and a lot of other squiggly things. (Field Notes, Lines 142-147, Ginger)*

This participant's comments corroborate the interpretation that hands-on, creative activity with technology supported reflection, self-awareness, and skill building in ways that contributed to increases in personal confidence and professional motivation to engage with technology. Later in this same conversation, the participant indicated that her experiences during the institute had equipped her with a sense of responsibility that moved her to share the information, and that hands-on opportunities to experiment with a variety of things had given her the confidence to do so.

*I think that the other thing I would say is giving us an opportunity to try a lot of things so we had a little bit of confidence to go out and spread the word. . . . I quite often say to people about that summer, sometimes you get to learn something and you move up a notch, sometimes you go to a place and you move to a parallel path. Does that make sense? . . . **sometimes it shifts you so much you can't travel that same path. You have to go to a new parallel path** now that you have this information—how dare you not share it. (Field Notes, Lines 129-132, 136-138, Ginger)*

This interpretation is also congruent with research in education and neuroscience which underscores that visual processes play an important part in cognition

³⁴ The phrase “being the orange person I am, an orange bodily kinesthetic” refers to the True Colors Test (Miscin, 2008) that participants completed during the first day of the institute.

(Mishra, Spiro, & Feltovich, 1996; Moore, Cohen, & Ranganath, 2006; Sankey, 2003). Recent educational philosophy and scholarship also highlight the role that creative, arts-based tasks play in cognitive development, noting that “. . . verbal interactions initiate conversations but it is the act of representing these thoughts that leads to extension and amplification” (Eisner, 2002, McLoughlin & Krakowski, 2001, p. 13-8). This statement also has implications regarding the political consequences of creation. One only has to look at the materials produced in schools to discover that the production, distribution, and involved in representing and enacting understanding (such as lesson plans, textbooks, and student work) structure the experiences of those who interact with them in very powerful ways. Because they are so ever-present, they become embedded and are taken for granted as essential parts of what constitute the infrastructure for all future teaching, learning, and creative production.

The influence of creative production on participants may also be partially explained by literature on motivation, which indicates that when people are engaged in a challenging task that is well-matched with their skill level, they experience an increased sense of self-efficacy, a great deal of personal satisfaction, and improved intrinsic motivation (Malone, 1980; Ryan & Deci, 2000). Some researchers have identified correlations between such changes and changes in teachers' practices. Kagan (1992) reported on a number of empirical studies about self-efficacy. These studies indicated that teachers with higher levels of self-efficacy were more likely to persevere when confronted with failure, to use new curricula, and to change their practices in conjunction with

staff development. The influence of these multimedia experiences and creative tasks on participants' thinking appears to have been further augmented by bringing them into relation with the topic of "students."

Students

When asked about the institute experiences that had the greatest impact on their professional/teaching responsibilities over the last year, participants' answers clustered around four topics: 1) professional relationships³⁵, 2) metacognitive meddling, 3) crafting compelling experiences, and 4) the relationships between technology, students, and learning.

One participant commented on the concept of metacognitive meddling: *the cognitive meddling discussion/explanation - i think about that a lot (Follow-up Institute Survey, Question 10, Cayenne)*. This participant is referring to a whole group conversation about the connective processes involved in organizing collections of unrelated facts, using them as raw materials for building understanding, and transforming that understanding into expertise. During this discussion, institute leaders used ideas developed by Tom Bird³⁶ (2007) to help participants unpack the metacognitive work involved in this process. We illustrated the ways in which students' prior knowledge and experience (or lack thereof) sometimes constrains the metacognitive space within which teachers and students can develop relationships around the "boundary objects" of content

³⁵ Three participants' comments addressed their professional associations with other participants during and following the institute. This topic will be addressed in Chapter 9.

³⁶ "Metacognitive meddling" is a term Tom Bird (2007) coined to describe the metacognitive moves that teacher educators make when attempting to influence the beliefs and practices of teacher-candidates.

and curriculum. We also outlined some ways in which teachers might effectively “meddle” with students’ thinking, challenging their preconceptions and misconceptions in ways that expand their engagement with the material and extend the depth and breadth of their understanding. The fact that this participant continues to think about the conversation “a lot” even a year following the institute suggests that it was, indeed, important to her. Unfortunately, she does not elaborate on which pieces of the conversation she continues to ponder, or on the ways in which they have influenced her professional work.

The focus of two other participants’ remarks was on metacognitive, design-based approaches to curriculum development. One of these participants emphasized the ways in which these approaches influenced her thinking.

The work on “crafting” curriculum and instruction the way architects “craft” a place or musicians “craft” a song. (Follow-up Institute Survey, Question 10, Sage)

Of note in this response are the cognitive processes that are implied. The quotation marks suggest a very deliberate use of the word *crafting*. They encourage special attention to the meaning of the word and invite the reader to contrast what it connotes with the way curriculum is traditionally developed. The participant further clarifies what she means by offering two specific examples. The comparisons she makes between teachers, architects, and musicians seem to emphasize the metacognitive aspects of the relationship between the artistic process and the products that arise from it. They also highlight the comparative thinking involved in the work to which she refers. This undercurrent of

metacognitive thinking grounded in metaphoric comparisons permeated the responses of other participants as well.

Eight different participants commented on technology. Some participants stated that *"the technology update"* (Follow-up Institute Survey, Question 10, Caraway) had influenced their practice the most. However, the responses of other participants suggested that the impact of the technology on their professional activities may have had less to do with the technology itself and more to do with the thinking that the exploration of its relationship to other issues sparked. These issues included topics such as *"compelling' classroom experiences"* (Tarragon) and *"21st century learning"* (Ginger). Bringing technology into relation with the topic of learning in the 21st Century may have provided participants with opportunities to look beyond the tools and their features, and to consider not only the challenges, but also the possibilities inherent in using technology in the classroom.

Probably the use of technology inthe [sic] classroom as a tool to reach students. (Follow-up Institute Survey, Question 10, Dill)

This participant notes opportunities in the technology for building relationships with students. The responses of numerous other participants indicate that conversations about relationships between students, technology, and learning spawned by Marc Prensky's (2001) article entitled, *Digital Natives*, *Digital Immigrants* were especially influential on participants' thinking and practice.

Recognizing that our students are technological natives and that we are technological immigrants has been the most useful concept. (Follow-up Institute Survey, Question 10, Mint)

The metaphor of students as natives and teachers as immigrants to the “foreign” culture of an increasingly digital world seems to have been particularly powerful for many participants. This may be because it referenced issues with which foreign language teachers are so intimately familiar as a result of their professional experiences with speakers of languages other than English. These issues included comments Prensky (2001) made about the culture shock involved in learning to communicate in a language and culture that are not part of one’s heritage, references to how hard it is to remove traces of one’s “native” accent when speaking in a second language, and the ineffective strategies that native speakers of a language often use when attempting to make themselves understood by non-native speakers. In the second half of the article, Prensky uses this metaphor as the foundation of a number of comparisons between students and teachers. These comparisons seem to have deeply affected participants.

The Prensky article (Technological Natives vs. Immigrants) - I have referenced it in every class that I have taken as well as every one I have taught. (Follow-up Institute Survey, Question 10, Thyme)

The article appears to have influenced both the teaching this participant did following the institute, her future learning, and the contributions she was able to make to the learning of others. The overarching influence of these metaphorical comparisons was also evident in the responses of several other participants, who experienced epiphanies with respect to technology and their students. In many cases, this led to further reflection regarding their own pedagogy, the pedagogy

of those they supervise, and their roles as teacher educators, as in the representative response below.

The focus on thinking about teaching students in the year 2007 has influenced my thinking in profound ways. Specifically, I am wrestling with how to prepare teachers who are teaching these students. (Follow-up Institute Survey, Question 10, Nutmeg)

This participant notes that the institute leaders' focus on the relationships between current sociocultural contexts, students, and teaching is what influenced her thinking. She also notes that she is "wrestling" with how to apply these ideas to the context of teacher preparation. Her use of the word "wrestling" indicates that she is continuing to process these ideas and intimates that there is a measure of struggle or cognitive conflict involved in her efforts. This ongoing, reflective processing bodes well for the likelihood that such ideas will ultimately become a part of this teacher's long-term repertoire.

Other participants also talked about how the relationships between technology, teaching, learning, and students had influenced their thinking. Several mentioned that this was a process that occurred over time.

The experience I had at the Institute did not happen in one day or in one instance. The realization of how far the technology train had past [sic] me came over the course of the institute as we looked at different pieces each day. By the end, I had a much clearer awareness of where I am and where students are technologically. The gap between us is huge. This realization in turn made me think of the instructional strategies and the so called 'engaging focus' that most of my teachers are operating from. To the students, it must be like looking at pre-columbian [sic] art. (Post-institute Survey, Question 5, Marjoram)

This participant notes that she experienced a change in awareness during the institute. She emphasizes that this shift in awareness was a process, rather

than an isolated or climactic event. She notes that her experiences at the institute did not just help her to see herself or her students differently, but rather, that they enabled her to perceive the *relationship* between herself and her students more clearly. She explains how this change in awareness led to shifts in perception which prompted additional reflection. She then comments on the further realizations yielded by this reflection regarding the teachers she supervises. The cognitive processes she describes seem to mirror the instructional cycle of presentation of information, conversation (cognitive processing), application, reflection, and feedback & adjustment that participants described in Chapter 8. This suggests that the pedagogical components that participants identified as being essential to a successful professional development experience are closely linked to a similar cycle of cognitive processes that appear to be responsible for transformations in participants' understanding. It is likely that such transformations are pre-requisites to changes in participants' professional practice.

Another participant also commented on the role that time played in augmenting the influence of the metaphorical comparisons on her thinking and practice and its effects on her teacher preparation efforts.

The digital natives/digital immigrants conversations--these concepts have become more impactful to me over time that I thought that they would--not only w/ students but with the new generation of teachers that we are bringing into the classroom. In our district teams we have begun to look at how to leverage the technology we have available to make the classroom experience not as 'foreign' to the students from the perspective of technology. How can we incorporate the technology backgrounds of our clientel [sic] more integrally into the curriculum? Instead of relying on just what our teachers are comfortable with or are prepared to do. I've tried to nudge my teachers more toward a proficiency in the digital language.
(Follow-up Institute Survey, Question 10, Marjoram)

The explicit mention of “conversations” here is important because it indicates that the conceptual content of the article was not the sole motivating force behind the work this participant is doing in her district. Her remarks also indicate that participation in a single conversation following the reading of the article does not fully account for its influence on her practice, but rather, a series of conversations that occurred during the course of the institute. The opportunity to think about the concepts involved in those conversations (such as the idea of culture shock in a “foreign” country) over an extended period of time following the institute seems to have enabled her to absorb these ideas more deeply, to think about their applicability across contexts (such as in the classroom with students and with new generations of teachers), and to begin to engage colleagues in applying them to the context-specific issues she is encountering in her district. Her mention of “*what teachers are comfortable with or prepared to do*” implies that teachers often rely on what they have been taught to do and/or feel they have the knowledge and skills to accomplish, even when it is not what is best for their students. The notion of “*proficiency in the digital language*” she raises is

essentially a comparison of learning to use new technologies in the classroom with the processes involved in developing students' proficiency in a foreign language. This suggests that she has forged functional analogies between her prior professional knowledge of language learning and the literacy challenges involved in learning to use new technologies. It also offers useful information for professional developers about the processes and strategies that might be needed in order to help teachers to embrace and integrate new technologies in pedagogically sound ways that benefit students. The changes that these participants experienced in their thinking also seem to have affected their plans for their teaching in the future.

Influence of Technology on Participants' Future Plans

When asked in the Post-institute Survey how they anticipated that their technology use might change as a result of the institute, nine participants mentioned that technology would be an integral part of the compelling experiences they hoped to create for others. Figure 7.2 is a tag cloud that illustrates the changes participants described with the greatest frequency. The words that appear the largest in size are those that were mentioned most frequently.



Figure 7.2. Screenshot of tag cloud of participants' anticipated changes in technology use (integration into practice).

The size of the verbs “access,” “aware,” “create,” “incorporate,” and “use” in comparison with the size of most of the other words on the page indicates that they were all central to participants’ thinking in some way. Other words that are relatively large in size include various technologies. Those focused on multimedia creation such as audio, video, podcasts, and wikis drew substantive attention, while the internet, portfolios, and websites were discussed less frequently. Of special interest here is the prominence of the word “students.” It indicates that participants’ responses to this question were strongly connected with students.

Plans for Creating Compelling Experiences

The plans that participants outlined in the Post-institute Survey for creating compelling experiences for others drew heavily on technology.

Rationale for Technology Integration & Dissemination

At least four participants commented that they had been thinking about ways to use technology as a tool for community outreach--to build relationships beyond the classroom with people “*during professional development, working with community and parents*” (Post-institute Survey, Question 3, Saffron).

Another participant planned to “*create some ‘promotional items’ for my school web site and for our regional organization as well*” (Post-institute Survey, Question 3, Cinnamon). A third participant noted,

*I am thinking about how to use technology **on a programmatic level**. For example, we require students in the teacher prep program to create portfolios. I would like to move to electronic portfolios in the future. Also, I am thinking about how to use technology as a **tool to reach and collaborate with the constituents of teacher preparation**. (Post-institute Survey, Question 3, Nutmeg)*

However, all of the participants who made such statements were those whose professional responsibilities locate them both in the world of the classroom and in the world beyond it. These responsibilities include distance teaching, professional presentations at a national level, program coordination, and teacher preparation. In each of their responses, participants offered information about the reasons they were planning to make these changes to their practice (see Table 7.6).

Table 7.6: Participants' Rationales for Changes in Practice

Anticipated Change(s) in Practice	Rationale
• I will share websites from the institute. • I will create an environment with visuals and sound some key words and ideas from the institute – • I'll add streaming videoclips • have students groups build an audio/video/lyrics presentation of a song to share with the class	... to demonstrate some of the easy possibilities that other [sic] can adopt as well as give, I hope, an inspirational tone to the meeting (Post-institute Survey, Question 6, Rosemary)
I'd like to show my staff some of the tools that we use in language classes (and new websites and tools that I will use as a result of this institute)	... so that they can create compelling experiences for their students as well. If I can create a comelling [sic] experience for our staff, I hope it will encourage them to do the same for all of our students. (Post-institute Survey, Question 6, Thyme)
use I-movie, podcaster , and various engaging Internet tools	... to better connect with teachers and students (Post-institute Survey, Question 3, Dill)
podcasting and blogs	... for their use as instructional tools (Post-institute Survey, Question 3, Tarragon)
Podcasts	... allow for a richer use of multi media that would be enjoyable for students and colleagues . (Post-institute Survey, Question 6, Oregano)
Garage Band to create mini-videos	... think having them create the video and audio layers and edit them together will really make them feel empowered . And by putting together something for others, they will internalize the linguistic and cultural aspects of whatever they are recording (Post-institute Survey, Question 6, Turmeric)
"... more interactional experiences for my students at all levels, especially using technology such as the internet to have them participate in ' webquests '"	When I have challenged myself to create these kinds of experiences in the past couple of years, the students' response has been overwhelmingly positive, so I know that these activities have a tremendous impact . (Post-institute Survey, Question 6, Coriander)

Anticipated affective impact. It is noteworthy that an affective component factored heavily into their stated rationales. They hoped to provide an *“inspirational tone,”* to *“encourage”* colleagues to adopt the technologies, to *“better connect with teachers and students,”* and to make technology use *“richer”* and *“more enjoyable.”* Others noted that they wanted students to *“feel empowered”* or commented on the fact that students responses to similar activities in the past had been *“overwhelmingly positive.”* Only three gave rationales that were primarily instructional or pedagogical in nature, and even those were paired with affective components. These responses suggest that how technology makes participants “feel” is a much more important factor in encouraging experimentation, adoption, and dissemination than what it can accomplish pedagogically. This has strong implications for professional developers who hope to encourage participants to integrate technology. A focus on students also seemed to play an important role in shaping participants’ plans to implement institute content in their classrooms.

Focus on students. At least 6 participants specifically mentioned that they planned to integrate websites and tools that were demonstrated during the institute into their plans in order to enhance their instruction. Five participants expressed enthusiasm for using multimedia and multisensory approaches to better engage students, and three others talked of using layers of conceptual content to accomplish this. This increased focus on students was a common theme that ran through many other participants’ responses as well.

*I think my **focus will shift more from ME using the technology to my STUDENTS using it.** (Post-institute Survey, Question 3, Basil)*

*Greater use of digital visual and audio media both by myself to craft content and **by students to experiment with communicating their understanding of the content.** (Post-institute Survey, Question 3, Sage)*

Increased options for learning. Five participants indicated a desire to provide students with more choices, using language such as,

***I plan . . . to make more options [sic] that will allow students to discover for themselves the thrill of exploring a new location.** (Post-institute Survey, Question 3, Mint)*

***I plan to assign multiple project choices to my students this year—realizing that they are able to implement technology that I may not be familiar with.** (Post-institute Survey, Question 3, Thyme)*

Several stated that they intended to use learning centers as one vehicle for increasing students' options for learning. Comments about giving students more opportunities to create with technology as a way of demonstrating their learning were closely connected with many of these responses. This may be, in part, because of the opportunities participants had to create with technology in learning centers during the institute. Nine participants spoke of inviting students to use technology to create movies, podcasts, and other projects.

In general, participants' hoped to alter their classroom climate by connecting with and engaging their students and colleagues in enjoyable ways. Many also wanted to model for colleagues the strategies and tools they experienced during the institute in hopes that colleagues would also be inspired

to adopt them. Only two participants offered rationales that dealt specifically with the effects of these practices on students. For example, one person said,

*. . . When I have challenged myself to create these kinds of experiences in the past couple of years, **the students' response has been overwhelmingly positive, so I know that these activities have a tremendous impact.** (Post-institute Survey, Question 6, Coriander)*

This participant indicates that her interest in incorporating more interactive, technology-based experiences is the result of the positive student responses such activities have garnered in the past. She infers from this that these activities have “a tremendous impact.” However, she does not offer any additional information or interpretations regarding why she thinks these activities evoked such positive responses from her students, nor does she explain whether or not they accomplished her intended purposes. In fact, only one participant offered a pedagogical rationale for the technologies she planned to incorporate into her future instruction.

*I hope to really take advantage of Garage Band to create mini-videos, or better yet, have my students create them. I think **having them create the video and audio layers and edit them together will really make them feel empowered. And by putting together something for others, they will internalize the linguistic and cultural aspects of whatever they are recording.** (Post-institute Survey, Question 6, Turmeric)*

This participant's thinking attends to both the emotional and cognitive effects on students that she believes incorporating these technologies will yield. Her plans focus on student creation. She anticipates that having students work together to create layered, multimedia materials will empower them and focuses on the opportunities that such creative group work provide for students to

internalize both language and culture—two key instructional goals in foreign language classes.

Pedagogical Goals for Technology Use

The fact that other participants did not connect their future plans to use technology to pedagogical goals is somewhat troubling. It raises questions about the degree to which educators think deeply about the pedagogical purposes or long-term effects on their students of the lessons and activities they employ in their teaching. It also raises questions about whether it is possible for educators to make deep connections between new technologies (or new instructional strategies and techniques of any kind) and their practice immediately following initial exposure to them. The literature regarding technology use in foreign language speaks to many of these issues. Kern (2006) explains that pedagogy is what affects students' ability to learn language and culture from computer-assisted activities, not the technology itself. Meskill, Mossop, DiAngelo, & Pascale (2002) concur. They suggest that novice language teachers have a tendency to focus primarily on the technology tools and their own teaching, while experts are more attuned to the connections between the contextual and social features of the activity and their learning goals for students. As a result, experts typically attend to the pedagogical and motivational features of technology, emphasizing process over product. This positions them to take the risks required to flexibly adjust their teaching to the moment-to-moment issues presented by their teaching contexts and their students. This also enables them to share the learning process with their students. By contrast, novices worry about classroom

management. This results in continual attempts to “control” the learning environment, the learning activities, and the learners themselves. As a result, novice teachers emphasize a completed product.

It is likely that each of these factors make contributions to explaining why participants did not offer more information about their pedagogical goals. It is also possible that participants omitted the information because the survey question only asked participants to describe a compelling experience they hoped to create and the techniques they intended to use in doing so without specifically inquiring into the rationale behind the choice of those techniques.

Concerns About Future Technology Use

Several participants raised concerns about integrating the new material in a “doable” (*Coriander*) way, such as finding PC-compatible software that is as easy to use as the Mac software used during the institute, teachers’ lack of technology knowledge and skill compared with that of students, lack of access to equipment, lack of time, and the lack of “position” required to expand the practices at a district level.

I was made aware of technologies that were unknown to me, so I anticipate exploring them some more. Unfortunately, I don't have access to many of the technologies at school because my computer there is SO old or because we don't have some of the equipment necessary to the task. I think I am more likely to access different sources of information via the internet as I design lessons and have students do research (Post-institute Survey, Question 3, Coriander)

Participant comments regarding these concerns are congruent with the literature regarding barriers to technology use in language education, and will be

addressed in more detail in Chapter 9—a chapter devoted to breakdowns in participants' learning.

The Role of Prior Knowledge in Participants' Future Plans

In response to a Post-institute Survey question which asked participants how they anticipated that their technology use might change as a result of the institute, several commented that they would expand efforts in which they had already been engaged.

*I have **moved to a greater depth of things I was already familiar with** and I learned many new things. I really liked garage band [sic] and Podcasts. (Post-institute Survey, Question 3, Ginger)*

The institute appears to have offered this participant the opportunity to broaden and deepen her understanding. Her response suggests that she intends to do more with what she already knows, and that if she makes any changes to her technology use, they will revolve around the addition of Garage Band and podcasting. Although she does not say a lot about what she intends to do with these technologies, she does state that she “liked” them. One potential inference that may be drawn from this is that positive, hands-on experiences with different applications (such as Garage Band) may play an important role in teachers' willingness to incorporate the use of those particular technologies into their classrooms. This inference is supported by a variety of other participants' responses to questions in the post- and Follow-up Surveys.

The chance to build on existing knowledge and skill in ways that seem relevant appears to be a second factor that has the potential to influence teachers' adoption of new technologies.

I anticipate adding more sound to things that I've already designed. When I am abroad in the future, I will take more video instead of just focusing on images. Also, I will give students more options for creating a final project using technology. (Post-institute Survey, Question 3, Mint)

This participant indicates that her technology use will change in three major ways: revision, production, and instruction. First, she believes she will revise extant materials, adding new, multimedia layers to things she has already created. By implication, this seems to suggest that she valued the multimedia components of the institute sufficiently to consider returning to things she has already created in order to add them to those items. This is consistent with the literature on professional development that indicates that when teachers do choose to incorporate what they have learned from professional development sessions into their work, they tend to add new materials, strategies, and tools on top of their existing practice rather than altering their practice in any fundamental way (Coburn, 2003; Cohen & Hill, 2000; Hill, 2004). Second, this teacher thinks she will approach the acquisition and production of new materials differently—focusing more on gathering dynamic, multimedia footage instead of static images. From this, it may be inferred that participation in the institute helped her to see something about the value of video that she did not recognize before. Third, she intends to allow her students to use a wider range of technologies when preparing final course projects. In other words, her answer suggests that her institute experiences have motivated her to reconsider the materials she has created, those she might create in the future, and the nature of the assignments she gives to her students—the products of her teaching. However, what her

response does not include is any mention of potential shifts in her pedagogical practice or in her professional perspectives.

By contrast, the two participants below make more explicit connections between their practice and the affordances of some of the technologies that were modeled during the institute.

I already use technology a lot, but I am going to incorporate newer (i.e. podcast) this year. I also will have a smartboard [sic] and elmo [sic] this fall. I would like my students to create an iMovie as a final project for the language festival. podcasts lesson plans for the sub, podcast 'challenge' assignments (students can opt to take a challenge assignments through out the year for fabulous bags o crap at the end of the year), music to convey a sense of time/history to a unit, I could go on and on. I am very excited about this year. (Post-institute Survey, Question 3, Cayenne).

This participant also begins her response by noting that she already uses technology often. As in the case of the two participants above, this suggests that she is thinking about the potential ways she may use technology in the future from the perspective of what she already does. She begins by simply naming some of the hardware to which she will have access. She does not offer specific ideas for using this hardware or comments about how she thinks it might influence her practice. This may indicate that she has not had sufficient experience with the new hardware to really know what it can do or to envision how she might use it. However, she makes clear connections between many of the technologies to which she was exposed during the institute, the instructional purposes for which she might use them, and her curricular activities. Like many other participants, podcasting appears to have captured her attention. But unlike others who mention it only in a general way, this participant offers several

different and very specific ways she intends to use podcasts. The uses she notes, such as “*challenge assignments*” and “*lesson plans for the sub*” are clearly variations from the originally intended uses of podcasts. This may be viewed as evidence that she has been able to move past “functional fixedness” in thinking about them. It seems that the more she considers ways she might customize technologies to better address the curricular and logistical problems she faces in her professional context, the more potential uses she is able to envision (such as establishing the historical context of a unit, generating products for the language festival, addressing issues of student enrichment and motivation, or planning for substitutes). In other words, her remarks show that she is able to see a clear space and place for these new ideas, as well a myriad of alternative uses for them in different contexts and for different purposes.

According to Hofstadter (1985), this ability to see the possibilities for innovation inherent in slight variations is a hallmark feature of creativity. This participant’s remarks indicate that she has begun to make connections between the concepts and tools to which she was exposed during the institute and a variety of different professional contexts. This is another important sign of both cognitive flexibility and transfer (Jonassen, 2003; Sizer, 1999). Borg (2003) explains that a major factor in teachers’ ability to align their instruction with their pedagogical beliefs is the degree to which they are able to overcome contextual barriers. This participant’s ability to see such a wide variety of applications for what she has learned suggests that she sees these technologies as being highly compatible with the existing situation in which she works. It may also be inferred

that this particular teacher is very creative. This suggests that she may be able to overcome any contextual barriers or constraints with which she is confronted. It is likely that she has the skills needed to take a flexible approach to any problems she might encounter. Thus, it appears very likely that these ideas and tools will transfer into her classroom practice.

In addition to the ability to perceive possibilities in slight variations of an object or situation, other common characteristics of creativity include elaboration, flexibility, ideational fluency, originality, problem sensitivity, and redefinition or tolerance of ambiguity (Csikszentmihalyi, 1996; Kraft, 2005). When evidence of these characteristics is present, it may mean that there is a greater likelihood that the teacher will implement and sustain changes in professional practice. Several of these characteristics are clearly evident in the response below.

*I have the seeds of several compelling experinces [sic] I hope to bring into my curriculum. The old "draw a floor plan of your room or dream house" idea **would be expanded**, looking at the whole idea of home. **Personal space relates to identity**. An "MTV cribs" type product might be a part of this. **Students would examine the concept of home in other cultures**. There could be a tie-in with people who chose to stay in their home community despite fame and fortune (John Mellencamp, Dilln King). **These are the concepts**. The specifics might include students making a film about their town. I haven't worked it out yet. **I have always used music in the classroom and have presented wokshops [sic] about the use of music in the modern language classroom. I want to go back to the lessons and activities I have used as models, and I want to take those activities and use them as a starting point to truly create compelling experiences.** (Post-institute Survey, Question 6, Caraway)*

As was the case in the previous response, this participant also plans to return to and revise lessons and activities she has already designed. Her use of the word "models" suggests that she will begin with her most successful

activities. Toward the end of her comments, she indicates that she wants to use these activities as *“a starting point to truly create compelling experiences.”* Her use of the word *“truly”* implies that she is now viewing her previous work from a new perspective—one that has caused her to re-evaluate her original efforts. It also suggests that she has made the judgment that these activities are not compelling when the word is defined as she now understands it. The initial part of her response offers some additional clues to that definition.

As with other participants, she begins by thinking about things with which she is already familiar—such as existing curricular topics and the student projects commonly associated with them. She refers to a project that is commonly used in beginning Spanish courses in order to reinforce household vocabulary, outlining several possibilities for expanding this project into a *“compelling experience.”* She implicates nearly all of the National Standards for Foreign Language Learning (National Standards in Foreign Language Education Project, 1999/2006) in the ideas she offers:

- Communication – Each of the student projects she brainstorms (MTV Cribs, famous people, making a film about the town in which students live) could be used as opportunities to engage students in communication about topics of interest to them.
- Cultures - She expresses an interest in engaging students in an examination of *“the concept of home in other cultures.”*
- Connections - She entertains connections to other disciplines (such as art, filmmaking, music, and psychology)

- Communities – Engaging students in activities such as considering “people who chose to stay in their home community despite fame and fortune” and “making a film about their town” would address the communities standard very well if she emphasizes the target language speakers who are involved in these communities and their accompanying cultures.

These standards-based activity ideas encompass both product-based ideas for working with technology as well as strong indications that she is also carefully considering the deeper conceptual perspectives that link them.

Nonetheless, the disconnected, somewhat random articulation of these ideas affirms the participant’s statement, “*I haven’t worked it out yet.*” In its current state, her current repertoire of technology-related options for thought and action does not appear to easily accommodate the new ideas to which she has been exposed. This is illustrated by her response to another survey question about how participants intended to incorporate technology into their teaching.

I am planning to totally revamp my curriculum and try to integrate technology as effectively as I can to engage students and create meaningful, compelling experiences. I will attempt to use all the different technologies highlighted during the institute. I want to put this new knowledge right into practice so that I keep the momentum going from the Institute. (Post-institute Survey, Question 3, Caraway)

This response affirms her willingness and interest in altering her practice in order to accommodate what she has learned. However, note the vague (albeit sincere) nature of her intentions. The phrases “*totally revamp*” and “*integrate technology as effectively as I can*” are not connected to any specific actions or examples.

This pattern continues when she says, “*I will attempt to use **all** the different technologies.*”

The absolutist nature of these statements implies that she feels a strong need for change in her practice. However, these statements do not evidence the same degree of discrimination between specific technologies or the purposeful decision-making that were evident in the previous participant's statements. It is noteworthy that this participant's responses to the Pre-institute Survey indicate that her prior knowledge regarding technology and the frequency with which she used many technologies was very low. Consequently, there is some justification for considering her a novice user. This, in conjunction with her responses, suggests that she may not have a sufficient amount of background knowledge to realistically assess what will be involved in technology integration—particularly given the wide range of technologies demonstrated during the institute, and the variety of purposes for which they could be used.

When her responses from both questions are viewed in light of one another, an interesting phenomenon emerges. It appears that she can see many more specific possibilities for integrating institute content (including technology) into her existing practice when this problem is framed from the perspective of crafting compelling experiences as opposed to when it is framed as one of technology integration. This is consistent with scholarship that distinguishes between the thinking and decision-making practices of novices versus those of experts. Such scholarship maintains that novices have difficulty framing problems and identifying the factors of a situation that are most relevant to the

problems they have framed (Jonassen, 2003; Minsky, 1974). This participant appears to understand that technology integration has the potential to engage her students more fully and that it may support the creation of “*meaningful, compelling experiences*.” She also recognizes that she has achieved a degree of momentum in her thinking and skills that could be leveraged if she acts on these understandings sooner rather than later. However, her comments suggest that she may not have the nuanced understanding required to match particular technologies with specific curricular goals, professional projects, or student needs. According to Meskill, Mossop, DiAngelo, & Pasquale (2002), even extensive technology training is less predictive of a teacher’s comfort level and success with technology integration than strong conceptual understanding or extensive classroom experience. Yet, when the problem is framed in terms of ideas and concepts with which she is already familiar, she appears quite capable of brainstorming applications for the new ideas to which she has been exposed. Her comments regarding the compelling experiences she hopes to create make it apparent that her thinking about the pedagogical practices in which she has engaged up to this point is changing. It is also noteworthy that these changes appear to be more substantive than those mentioned by many of the other participants—involving substantial transformations in the fundamental organization and planning of the curriculum as opposed to superficial additions to pedagogical practice.

The influence that problem-framing may have had on the specificity and sophistication of this participant’s responses once again raise the issue of prior

knowledge and heuristics as effective tools for tapping it. It also raises questions about whether technology integration might be accelerated by simultaneously approaching it from multiple perspectives. In the case of this institute, technology was framed in several ways: literacy; student cognition, engagement, and performance; as a tool for fostering language development; as a tool for mentoring others; and as a vehicle for initiating, implementing, and sustaining change. It may be that the variety of lenses and perspectives through which participants were invited to view technology facilitated their learning by increasing the likelihood that they would be able to access key information through their existing prior knowledge. This would help to account, at least in part, for the substantive evidence that the technology-related facets of the institute influenced participants' thinking, as well as their ideas about actual and future classroom practice. It is also possible that the plethora of potential perspectives overwhelmed participants, making it difficult for them to see clear connections among these topics and obscuring their relevance to classroom practice. This could help to explain the lack of specificity in some of the participants' comments.

Influence on Classroom Practice

In the Pre-institute Survey, only one participant mentioned technology as a part of an experience she had found compelling, and only four participants mentioned technology (e-mail, film and internet, a virtual tour, a WebCT Vista online course, and a webquest) as a part of the compelling experiences they created for students.

In the Post-institute Survey, several participants stated that increased awareness of current uses of technology, students' perspectives, and pedagogical strategies would influence their practice. Of all of the strategies mentioned by participants, technology was rated the highest, discussed most frequently across the surveys and informal telephone conversations, and appeared to have been most fully integrated into participants' existing professional paradigms and practices. Numerous participants indicated that they intended to offer students more choices, explore movie making and podcasting, provide students with more opportunities to use technology to create content, and to more carefully consider the ways in which technologies could be used to strengthen relationships. We were interested in the degree to which participants actually implemented these changes in their classroom practice.

A Follow-up Survey administered one year following the institute asked participants how their experiences with technology during the institute had influenced their teaching during the year following the institute. Thirteen of 18 participants completed the survey. Only three participants expressed that their institute technology experiences had not affected their practice.

It hasn't. (Follow-up Institute Survey, Question 13, Mint)

It did not because I did not teach. (Follow-up Institute Survey, Question 13, Nutmeg)

unfortunately, the experiences with technology were limited to watching rather than doing (Follow-up Institute Survey, Question 13, Tarragon)

The other 10 participants who responded to the survey indicated the institute had influenced their use of technology in some way. Four participants noted in

follow-up institute surveys and informal telephone conversations that their institute experiences had motivated them to seek funding for technology integration by submitting requests to school officials and seeking grants. Their efforts included piloting online courses and obtaining equipment such as computer labs, digital cameras, ELMOs, iPods, and LCD projectors.

*It showed me that the school should [sic] have an appropriate new technology to be able to meet the requirement of contemporary teaching. So, **now the school is working on ordering [sic] a new computer lab that will be able to use new tech.** That would create an environment [sic] to use all the knowledge [sic] received during the institute, and make it more productive. (Follow-up Institute Survey, Question 13, Saffron)*

This participant's comment suggests that the institute may have influenced her understanding of the demands of "contemporary teaching." Her comment also implies that she may have had conversations with others in her building which may have influenced the school's determination to improve its technology access. She believes that this increased access will alter the learning environment in her school in ways that will make it possible for her to use what she has learned during the institute in productive ways.

***I submitted a request to get an LCD projector and an ELMO (document camera) for my classroom and it was [sic] approved!** I no longer use my overhead - I use the computer, ELMO, and LCD projector. :) (Follow-up Institute Survey, Question 13, Thyme)*

The exclamation point used by this participant suggests that she is excited (and perhaps somewhat surprised) by the fact that her request for hardware was approved. The emoticon at the end of her response demonstrates pleasure about the fact that she is no longer using her overhead projector. However, the source of this pleasure is unclear. It may be that she views her abandonment of

the overhead projector as evidence of improvement in her technology skills. She may also believe that her uses of the computer, ELMO, and LCD projector are more pedagogically sound than her use of the overhead, or that they are assisting her students in making greater progress with respect to the goals and objectives of her lessons. It could also be that she simply expects the response to please institute leaders. It is likely that some combination of these possibilities is involved.

Eight participants indicated that their experiences with technology during the institute had prompted them to integrate technology into their instruction, conference presentations, methods courses, and student projects.

Very much. I have integrated new technologies and have required their use by my students in their projects. (Follow-up Institute Survey, Question 13, Caraway)

*The experiences with technology were helpful during the institute because **they have influenced my classroom teaching and conference presentations** during the past year. I strive to integrate technology to enhance instruction whenever possible.* (Follow-up Institute Survey, Question 13, Oregano)

However, as the representative responses above demonstrate, four of these eight participants did not offer any details about the technologies they were using, their purposes or strategies for using them, or the frequency with which they were using them. By contrast, the other four participants provided explicit details about the nature and substance of their technology integration, as in this response:

1. immediately a built a wikispace [sic] for my classes 2. I taught dept. member how to integrate wikis, 3. built a wikispace [sic] for our school Professional Learning communities. 4. Have shared how to use Wikispaces [sic] to many colleagues in my presentation throughout the states. 5. used [sic] lots of tech in the classroom such as youtube [sic] and podcasts 5. won a creativity grant to purchase a movie camera, 2 digital cameras and one IPOD to use in my claases [sic] 6. going to attend anothe [sic] tech workshop this summer in San Diego (Follow-up Institute Survey, Question 13, Ginger)

These participants named specific technologies they were using, including ELMO, iMovie, iTunes, podcasts, Smartboard, YouTube, and wikis. They also noted particular purposes for doing so with phrases like, “audio editing” (Turmeric), “create several podcasts for students (when I was gone)” and “had students use iMovie to create a tv [sic] show ‘pilot’” (Cayenne). Some stated specific contexts for their technology use, such as “for our school Professional Learning communities,” “in my presentation throughout the states” (Ginger) and “to create collaborative spaces for other language teachers” (Sage). One stated that she had already engaged students in using some of the technologies, and two others indicated that they intended to do so in the future. At least one participant also mentioned the frequency with which she used various technologies, with temporal markers such as, “weekly” and “every day” (Cayenne).

An interesting pattern emerged among these two groups of respondents. Participants who rated themselves on the Pre-institute Survey as being unfamiliar with (or only able to list) key concepts and principles associated with 21st Century technologies provided only general statements about their technology use (or did not respond to the Follow-up Survey at all). However, 70% of the participants

who reported that their institute experiences with technology had influenced their classroom practice were those who reported having experimented with 21st Century technologies prior to the institute. The participants who provided the most expansive detail about their technology use also came from this group.

Two of these participants also explicitly stated that they already had strong personal technology skills in their Follow-up Surveys. They indicated they had leveraged these skills in the service of students or colleagues, experimenting with technologies that were new to them (such as podcasting and wikis) in the process.

I already use a lot of technology myself, but I did create several podcasts for students (when I was gone), had students use iMovie to create a tv show 'pilot', used iTunes in class weekly (music videos and songs), and of course we used powerpoint a lot too. I have a smartboard in my classroom along with an ELMO document projector, so we use tech every day. (Follow-up Institute Survey, Question 13, Cayenne)

I was already highly proficient in technology and technology integration, however, I have extensively used wikis to create collaborative spaces for other language teachers. When I return to the classroom next year, I hope to use wikis with my students. (Follow-up Institute Survey, Question 13, Sage)

This pattern suggests that prior knowledge may play an important role in participants' ability to absorb technology-related information and to articulate its influence. Research regarding the differences between novices and experts suggests that those with more prior experience and expertise may find it easier to distinguish which features of a given technology are most relevant to their professional work and to identify potential breakdowns in process (Meskill, Mossop, DiAngelo, & Pasquale, 2002). Thus, they are more likely to notice

potential opportunities to incorporate innovations into their classroom practice, and their instructional decisions about which technologies to employ and how to do so are more likely to be a good “fit” with their goals, needs, and interests. They are also more likely to work across problem contexts, and to have a large repertoire of heuristics they can use to identify, frame, and evaluate problems and potential solutions. As a result, it is likely that they will recognize ways to circumvent the obstacles they may encounter more readily, and to ask more incisive questions when seeking information or help. All of these factors contribute to the likelihood that the active transfer and application of new technologies in classroom settings would be more easily detected in the practice of participants who have already been engaged in experimentation with such concepts, principles, or tools.

In other words, prior knowledge appears to influence the degree to which participants can absorb, articulate, and apply technology-related information and tools in their classroom practice. The responses of several participants imply that an important function of professional development experiences may be that they help to develop the prior knowledge necessary for participants to avail themselves of future professional opportunities, to request funding for equipment, and to pursue additional learning on their own.

*The technology piece was **the piece I was most uncomfortable with at the time**, but it is also the piece that **has staying [sic] in my mind the longest**. I have found myself in situations, unanticipated, that **I have been able to use the Institute experiences as my prior knowledge**. The technology aspect has **been more applicable than I thought it would**. (Follow-up Institute Survey, Question 13, Marjoram)*

Of interest here is the contrast this participant draws between her discomfort and the long-term impact of the experience on her professional activities. It appears that the discomfort or incongruence of the experience provoked a substantive amount of additional cognitive processing which may have led to increased connections. Also worthy of note is that although it may be inferred that she did not expect the things she learned about technology during the institute to be professionally useful to her, they provided her with schema that she was able to use as "*prior knowledge*" when confronted with the topic in future endeavors. The unanticipated utility of her institute experiences appears to have increased both her perception of their relevance and their value. Thus, professional developers must not only consider the immediate use-value of the content and professional development experiences they plan for participants, but must also carefully calculate the degree to which such experiences are likely to become valuable to participants in the future. This point is underscored by the response of another participant who indicates that he was able to use his institute experiences in the short-term context of his methods course, but also as the foundation for a more long-term career move.

As an administrator, I used much of what I learned via technology in a FL methods class I taught. Also, I also accepted a position as the founding principal at a virtual high school, something for which the Institute set the stage. (Follow-up Institute Survey, Question 13, Dill)

Thus, it appears that participants relied heavily on their prior knowledge and experiences to interpret institute activities. While all but 3 participants stated that their institute experiences with technology had influenced their practice, their

responses indicate that this occurred in varying degrees, ranging from the purchase of new equipment to expansive integration within their practice. The degree of prior knowledge about technology that participants brought with them to the institute appears to be correlated with the degree of detail and specificity participants used in articulating their technology use following the institute. It may also have influenced participants' ability and willingness to share what they had learned with others, as in this representative example:

Because I got this information, I started a parallel path. I mean that whole article about digital immigrants and digital natives, powerful. I sent it to my principal and he was so enthralled by that, I came in and not only gave it to him. . . whenever I go to visit people like administrators, I give them an assignment—read this, and then I'll show you this. He took it to the principal's meeting, and they were really interested! And now that is how we talk all over the district. . . (Field Notes, Lines 153-159, Ginger)

This participant appears to have been deeply impacted by many of her institute experiences. The Prensky (2001) article clearly made an impression on her. She found it valuable enough to remember and to share it with her supervisors during the school year following the institute. Her proactive approach appears to be correlated not only with the diffusion of the ideas through the hierarchy of leadership in her school district, but may also have influenced the changes in language that she reports have occurred throughout her district. Such changes may be interpreted as one piece of evidence that the ideas have taken root in the school community in which she works.

Prior knowledge, fueled by additional information, appears to have guided participants' plans for their future use of technology. It may also be correlated with the degree of success with which participants actually integrated the new

technologies to which they were exposed during the institute into their professional practice. It is also possible that it influenced the degree to which participants were inclined to share what they had learned. This may mean that it professional development providers can influence teachers' future technology use by purposefully eliciting and building on teachers' prior knowledge.

Characteristic Patterns of Technology Use

This study suggests that there are several characteristic patterns of technology use: teacher as consumer, teacher as creator, teacher as collaborator. As participants' technological pedagogical content knowledge grew, it appears that their patterns of technology use also changed. Each of these patterns is discussed briefly below.

Teacher as Consumer

Although the majority of participants indicated that they had substantive access to technology at home and at school, their pre-institute technology use seemed to be limited to the applications in the Microsoft Office suite. Only two applications that were not part of MS Office were mentioned (Dreamweaver and iMovie). Three or fewer participants noted cell phones, fax machines, or televisions as technology. This may be because they have accepted them as a natural part of their daily lives, but are "othering" computers. This may have some implications for their receptiveness as learners in the sense that technology may seem extraneous to the daily demands of their work. This means that it is also possible that they view it as something that requires a great

deal of “extra work” to incorporate into an already busy work day and full curriculum.

The fact that only one participant mentioned podcasts and not even one participant mentioned using web 2.0 tools suggests that world language educators’ awareness of available technology (especially web 2.0 technology) may be limited. In conjunction with their other survey responses, it also demonstrates that they are using technology in relatively passive ways—as consumers and presenters of information rather than as producers of novel content for consumption by others.

For these teachers, students appear to play the role of information consumers rather than knowledge producers. It is the teachers who seem to be the primary users of the technology, and that use appears to be primarily focused on professional productivity rather than for content creation or student engagement. One factor that may influence this is a lack of access to interactive technologies that would facilitate this kind of collaborative creation. Other included a lack of time to experiment with the technology and lack of support during experimentation.

Teacher as Creator

Comments that focused on students, technology integration, and the use of technology for creative purposes permeated participants’ responses to post-institute and Follow-up Surveys. Conversations about students seemed particularly meaningful and relevant to teachers and may have increased their conceptual engagement with this segment of institute content. It also appears

that the opportunity to creatively use technology to produce a variety of products may have supported the development of some teachers' ability to notice conceptual relationships.

Prior to the institute, many participants' definitions of technology were not particularly discriminating. They did not seem to draw clear distinctions between hardware and software, nor between specific tools and their uses. It is unclear as to whether this lack of differentiation indicates that their understanding of technology was limited, was a result of the way the survey questions were framed, or was attributable to some other factor. However, participants' comments suggest that as their comfort level with various tools increased, they were more likely to use technological tools across multiple contexts in less "functionally fixed" ways. It appears that as this occurred, their thinking about the technological tools they were using may have been reorganized in terms of criteria intrinsic to their daily workflow (i.e., the contexts, purposes, or tasks for which it is used) rather than by extrinsic criteria (such as the name, external features, or intended functions of the tool). Pea suggests, "Tools do not merely enhance cognition; in some cases they transform it. That is, the use of tools can result in qualitative as well as quantitative changes in thinking" (cited in Putnam & Borko, 1997, p. 1268). These changes seem to have moved teachers away from more passive consumption of technology as a matter of professional productivity or necessity toward actively appropriating it for their own goals and purposes.

In spite of this apparent shift in thinking, the activities that many participants described creating to "engage" students still consisted primarily of

materials the teacher could use to “show” or “explain” something. For teachers in this category, functional fixedness may constrain the degree to which they perceive certain technologies as being relevant to their curricular goals and may limit their ability to perceive the pedagogical possibilities inherent in many of the tools that are freely available. Thus, although these teachers are using technology for more than solely professional productivity, it may still serve more of an enrichment function rather than as a purposefully selected pedagogical tool for mediating students’ thinking.

Teacher as Collaborator

Other participants stated that hands-on experimentation with new technologies provided them with an increased sense of confidence and self-efficacy. This appears to be correlated with a transfer of technology knowledge and skills to their classroom practice. Unlike other teachers who were using technology primarily for “show and tell,” these educators reported using technology to solve common problems creatively. They commented on the ways they had used it to empower colleagues and facilitate articulation across languages and levels. They also assigned students a variety of collaborative projects that invited creative language practice. These teachers mentioned that they learned from students and indicated that they purposefully considered the goals and purposes of the task and then selected the technology accordingly. Also, participants with more technological expertise evidenced more goal-driven behavior and purposeful task selection in relation to the technology than their colleagues with more limited expertise.

In the remainder of this chapter, I outline some of the primary contributions that findings from this chapter make to the literature, after which I consider the value of using transliteracy as an analytic tool for research.

Reflective Deliberation

In the reflective deliberation that follows, I examine how findings from this chapter expand our understanding of transliteracy in world language education. Following this discussion, I briefly explore what the lens of transliteracy contributed to the analysis of data in this chapter, along with its limitations as an analytic tool in this study.

Contributions from the Data

Data from this study not only affirms the need for technology-related professional development in world language education, but also highlights that it may be a potent means of leveraging change in professional practice. Participants noted that exploring relationships among technology, students, and learning was one of four institute experiences that had the greatest impact on their professional responsibilities in the year following the institute. Data from follow-up surveys indicated that technology influenced the practice of over half of the participants, who sought additional funding to obtain it, began using technology for new purposes and in new contexts, used it with greater frequency, or experimented with particular technologies. Findings from this chapter offer insight about how experiences with technology may have influenced participants' transliteracy skills, pedagogical practice, and technology integration.

Transliteracy & prior knowledge. One major theme that emerged from the data is that while world language educators may have access to technology, this does not necessarily correlate with proficient use, much less transliteracy. Although participants had significant access to a variety of technologies at home (and even more access at work), most used them for a limited number of purposes and in functionally fixed ways. They did not “read, write and interact across a range of platforms, tools and media” or in “digital social networks” (Thomas, et. al, 2007). That is, most participants did not demonstrate well-developed transliteracy skills, and few gave their students opportunities to do so.

Patterns in the data revealed that although “engaging” students with content through technology was a high priority for many participants, 80% used technology primarily for “show and tell” when working with others in their professional contexts. In fact, only 28% of participants even mentioned involving students in creating with technology. This finding is of special concern because if K-12 students’ use of technology is limited to listening and watching, with no real provision made for creative interaction or participation in their world language classes, their ability to develop the transliteracy skills they need to communicate successfully across languages and cultures is likely to be strongly curtailed. The refinement of their critical thinking, decision-making, and evaluation skills is also likely to suffer.

Data from this study point toward several factors that provide at least partial explanations for participants’ limited transliteracy skills, including a lack of uninterrupted time to develop skill in using technology, and a lack of *convenient*

access to technology—especially technologies that would facilitate student use in the classroom (such as clusters of computers, laptop carts, mp3 players, smart boards, and wireless connectivity). Additionally, it should not be overlooked that even though participants in this study are leaders in the profession, the majority (70%) were unfamiliar with web 2.0 technologies that are closely linked with creation, customization, and active participation in online communities. From this, it may be inferred that the colleagues and organizations that constitute their professional communities of practice may lack these skills as well. The fact that more participants gave themselves low self-ratings on the pre-institute survey regarding the topic of 21st Century learners than they did for 21st Century literacies or technologies suggests that they may have been unaware of the scope of what they did not know. It should also be noted that these gaps in participants' knowledge were only visible in pre-institute survey data when participants were asked specific questions about particular technologies and their uses (as opposed to more open-ended questions about the topic of technology in general).

This cluster of findings is significant because they indicate that most participants did not demonstrate high levels of transliteracy prior to attending the institute, may have experienced few supports or sanctions within their professional communities of practice regarding their skill levels, and were operating from pedagogical paradigms that also limited their students' opportunities to develop these skills. Nonetheless, 70% of the participants who reported that their institute experiences with technology had influenced their

classroom practice also reported having experimented with 21st Century technologies prior to the institute. In other words, even limited prior knowledge may play critical role in participants' ability to absorb, articulate, and apply technology-related information and tools in their classroom practice. Other data suggests that participants' technology-related institute experiences may have actually helped them to *build* prior knowledge that then prepared them to request funding; improve their transliteracy skills; experiment with technology in their professional responsibilities; and pursue additional, technology-related learning following the institute.

Transliteracy & pedagogical practice. Several characteristic patterns of technology use emerged among world language educators in this study which I labeled consumption, creation, and collaboration. These patterns appear to be correlated with the development of participants' transliteracy skills, and fall on a continuum that ranges from passive consumption of information to active participation in professional communities of practice. These patterns of technology use were manifested in the kinds of learning opportunities participants said they made available to their students and are congruent with findings from a study by Becker & Riel (2000) that found correlations among teachers' technology skills, constructivist approaches to teaching and technology use with students, and their engagement in professional communities of practice. In addition, the organization of participants' mental schemata seemed to differ in conjunction with these use patterns.

Findings from this study suggest that as participants' knowledge, skills, and comfort level with technology increases, their attention may shift from a focus on specific technologies to the overarching tasks those technologies allow them to accomplish. For instance, participants who rated themselves as being more familiar with technology seemed to have a greater tendency to use technological tools across multiple contexts in more creative, less "functionally fixed" ways than their colleagues. They also seemed to organize their thinking about those tools according to the contexts, purposes, or tasks that determined their use, rather than by extrinsic criteria inherent in the tool. In addition, they exhibited more goal-driven behavior and purposeful task selection by comparison with their colleagues who demonstrated more limited expertise. Matching particular technologies with specific curricular goals, professional projects, or student needs requires substantive technological pedagogical content knowledge and nuanced understanding. Hence, these findings are congruent with the kind of well-developed schema that the literature on expertise and technology integration would lead one to expect in transliterate individuals. This would also help to explain why less tech-savvy participants who approached technology in more functionally fixed ways may have had difficulty perceiving the pedagogical possibilities and curricular relevance of the new technologies they encountered.

Transliteracy & technology integration. Three other key factors emerged from the data that may help to explain why participants were so strongly affected by their work with technology during the institute. First, participants commented on the fact that the institute focused their attention on the

relationship between 21st Century technologies, literacies, and students. This may have allowed participants to tap into their prior knowledge and concerns about student engagement and learning, making the topic seem highly relevant to their current professional situations. Second, unlike text (which is often interpreted as material for consumption) multimedia appears to invite dialogic engagement in ways that may activate emotional and intellectual awareness. This heightened engagement, in conjunction with the complexity and incongruence that often accompanies multimedia materials, appears to foster “grappling,” “reflection,” “re-evaluation” of beliefs, and other forms of sustained mental engagement. Furthermore, this ongoing processing may stimulate increased connections between new information and participants’ prior knowledge that evoke new understandings. The space that multimedia appears to create for interpretation may facilitate personal meaning making, and thus, may catalyze deeper integration of the material and stronger commitment to applying it. Third, supported reflection and skill building may contribute to increases in personal confidence and professional motivation to engage with technology. In other words, the influence of participants’ technology-related institute experiences may be attributable to the quality of engagement and kind of thinking they stimulated, rather than to work with specific technologies.

Nonetheless, most participants who offered explanations for their decision to incorporate more technology into their practice cited affective reasons for doing so. Only three participants gave rationales for incorporating technology into their practice that were primarily instructional or pedagogical in nature, and

even those were paired with affective components. Their responses suggest that while participants may not always notice the cognitive effects of their engagement with technology, they are keenly aware of how technology makes them “feel,” and this is a crucial factor in encouraging experimentation, adoption, and dissemination of new technologies and their accompanying literacies. This highlights the importance of orchestrating technology-related experiences for participants that strengthen their sense of confidence and self-efficacy. Other, related findings indicate that carefully framing the introduction of technological tools and transliteracy skills in ways that tap prior knowledge and highlight professional relevance may alter the degree to which participants are able to envision specific, pedagogical possibilities for incorporating technology into their professional practice. These findings are significant because they draw attention to the dual influence of cognition and emotion on learning, and illuminate the dual role that framing may play in activating prior knowledge and in facilitating transfer to classroom practice.

Affordances of the Lenses

Transliteracy raises issues of how interaction with media and technology may influence attention, cognition, and perception. It also considers the ways in which the ability to fluently move between various frames and perspectives may be linked to creativity, innovation, and expertise. Specifically, transliteracy theory illuminates the fact that technologies are more than just tools—they embody specific epistemologies. In this study, the concept of transliteracy offered practical criteria for distinguishing between novice and expert technology users.

It also served as a particularly useful analytic frame by guiding my attention toward aspects of participants' experiences with technology that were likely to be closely linked to their degree of ability to transfer their learning from the summer institute into their pedagogical decision-making and classroom practice. Thus, in exploring participants' transliteracy skills, I was also able to more fully understand the epistemologies that may be influencing their technology integration and their pedagogy in the world language classroom. The lens revealed the importance of prior knowledge in mediating cognition. In doing so, it also raised questions about whether it might be possible to accelerate technology integration by simultaneously approaching it from multiple perspectives (thus increasing participants' ability to access key information through their existing prior knowledge).

Limitations of the Lenses

In spite of the manner in which transliteracy acknowledges and encompasses traditional literacies, it represents a sharp departure from common definitions of literacy and standard approaches to literacy development. Implementing it also requires extensive, well-connected understanding and tremendous cognitive flexibility. The complex nuances and multiplicities endogenous to this lens may blur, rather than clarify theoretical interpretations made when using it as an analytic tool. For example, although the concept of transliteracy certainly invokes the relationship between cognition and various forms of representation, it does not clearly articulate or adequately explain the relationship. Transliteracy theory helps researchers to identify skill sets that

might serve as evidence of literacy development and technological fluency, but it does not offer much insight into the conditions, pedagogies, or perspectives that support the development of that fluency. Hence, findings from this chapter raise questions such as:

- *How might professional development be differentiated to systematically activate and build the prior knowledge of participants with limited transliteracy skills while simultaneously ensuring that other participants do not disengage?*
- *How might professional developers mediate the heavy cognitive load that the development of transliteracies may impose on participants—especially those who are not very familiar or skilled in using technology?*
- *What are the characteristics of technology-related activities that support deep emotional and intellectual engagement, foster ongoing reflection, and strengthen participants' confidence in using technology?*
- *What kinds of pedagogical strategies might help to move participants beyond functional fixedness to experiment with the possibilities inherent in technologies, and not just the obvious features of the tools themselves?*
- *To what degree are world language educators able to make deep connections between new technologies and their practice immediately following exposure to them?*
- *To what degree might technology-related activities be used to help world language educators think more deeply about the pedagogical purposes*

and long-term effects of the lessons and activities they employ in their teaching?

In the next chapter, I extend this discussion by exploring how creating representations may influence transfer. I draw on the lenses of play and motivation as tools for extending my understanding of the pedagogical strategies to which participants attributed their learning.

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AN ECLECTIC DELIBERATION ON ONE PROFESSIONAL DEVELOPMENT
INSTITUTE: A DESIGNER REFLECTS

VOLUME III

By

Cherice Michelle Montgomery

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CHAPTER 8

PEDAGOGICAL PROCESSES

Some scholars insist that engaging learners with multiple representations is not sufficient to evoke long-term transformations in their thinking. Instead, they note that playfully creating one's own representations of content is essential to developing the transliteracy skills necessary for solving complex problems (Csikszentmihalyi, 1996; Livingstone, 2003; Jonassen, 2005; McLoughlin & Krakowski, 2001; Wilhelm, 2000). In this chapter, I examine research on play, motivation, and creativity to identify some of the pedagogical processes that have the potential to support this kind of creative representation. I then explain how I used the concept of play to guide the design of the institute, and employ the lenses of motivation and creativity as analytic tools for interpreting findings related to Research Question 4, *"How did world language educators explain their learning with regard to this professional development experience?"*

The Role of Play in Pedagogy

When learners create their own representations of content, it involves them in particular kinds of perceiving, responding, and evaluating that are qualitatively different from those evoked by viewing a representation someone else has constructed. Specifically, arts-based representation focuses attention on particular qualities of experience—sensitizing learners to context and conditioning them to awareness of their emotional responses to it. Meanwhile, the design-centered processes of creation actively engage learners in dynamic relationships with the content that encourage participation and personal

meaning-making. Each iterative layer of editing and reflection provides additional feedback that can result in deeper levels of attention, awareness, and understanding. By doing so, arts-based approaches to education may cultivate “slowed perception” (Eisner, 2002, p. 24). That is, the manner in which they focus and guide attention may help learners to notice and perceive attention-dependent knowledge more clearly. This kind of engagement with the arts can equip learners with the clinical judgment to more accurately evaluate their own work, and because of the way they guide and maintain attention, arts-based approaches to education may be particularly powerful tools for stimulating an intrinsic desire to pursue additional learning. Thus, engagement with the arts may ultimately empower both personal and social transformation.

These ideas are congruent with Vygotsky's (1978) thoughts on the contributions that play makes to the development of children and adolescents. He notes that play allows its participants to bring objects, ideas, and actions into new relations that influence their awareness, perception, and cognition. The meaning making this provokes can lead to deeper integration of new information and understandings. This may be due, in part, to the fact that well-designed play environments offer sufficient challenge and stimulate enough curiosity that learners are willing to risk participating. They also offer enough scaffolding and control to minimize the risks involved with doing so. Play that includes these components provides structured opportunities for learners to explore potential resolutions to “epistemic conflict” and numerous opportunities for

"self-reflection and self-regulation" (Rieber, 1996, p. 47), qualities that are also key components of learning. However, the idea of play as a path to learning is seldom a comfortable one for teachers:

When one believes that what the learner needs to know has already been identified, the obvious course of action is to teach the learner this content as effectively and efficiently as possible. Play may be tolerated or even encouraged for short periods of time, perhaps in the belief that it will act as a "motivating strategy." However, play can quickly be viewed as a threat to instructional design efforts when it leads to learning sequences or learning outcomes other than those already determined or anticipated by the designer. (Rieber, 1996, p. 46)

Nonetheless, the characteristics of effective play environments also closely parallel many of the factors that scholarship indicates are influential in motivation. Such environments seem to foment several important motivational supports which tend to foster behaviors that accompany success, including concentration and persistence. For instance, a strong balance between challenge and skills is a critical component of motivation that encourages perseverance in the face of a difficult task (Ryan & Deci, 2000). When a strong imbalance exists between the challenge of a task and the skills a person can employ in the service of that challenge, people commonly abandon the task. However, when the degree of challenge inherent in a task is well-matched with the skills of the person attempting it, sustained attention and deep concentration becomes possible. This balance between challenge and skills also increases the likelihood that the person will continue to expend effort in spite of the difficulty of the task, while sustained engagement with the task may improve the person's potential success with it.

Clear goals, ongoing feedback, and adequate levels of social support make it possible for learners to evaluate and adjust their own performance, often producing a sense of autonomy or control over the task that may further increase their expectation for success (Ryan & Deci, 2000; Malone, 1980). An augmented sense of control could also help account for the loss of self-consciousness noted in Csikzentmihalyi's (1996) work. As a person feels a greater degree of control over the task and the circumstances in which they find themselves, feelings of inadequacy may recede, thus reducing the affective filtering and self-monitoring that frequently accompany self-consciousness. Theories of motivation and andragogy also emphasize the need for learners to feel they have control over their own learning. In a recent interview with Gaedke & Shaughnessy (2003), Brophy notes that the degree to which learners value a task is also an important component of this process. He and other motivation researchers suggest that intrinsic motivation can be fostered and scaffolded by providing sufficient and appropriate levels of challenge, choice, and cognitively engaging tasks. This is reinforced in work by Deci, Koestner, & Ryan (2001), who also encourage connecting content with learners' identities, needs, and interests.

Gaming environments are a particularly good example of effective play environments that attend to these motivational issues (DiPietro, Ferdig, Boyer, & Black, 2007). Their layers of complexity make it possible for even novice learners to experience success, while providing enough

challenge to keep expert players engaged. Although failure is an inherent part of the game, participants receive enough support to make them feel that such failure is only short-term, to help them believe that it is possible for them to succeed, and to motivate them to try again. At each level of play, carefully scaffolded feedback, pop-up hints, and other supports “teach” participants how to move to the next level (Malone, 1980). It is no surprise, then, that those who spend time in gaming environments often report experiencing many of the characteristics that Csikszentmihalyi (1996) reports are common to flow experiences. Yet, when teachers and professional developers plan “lessons,” they typically think in terms of organizing content or designing curriculum instead of creating learning conditions and environments that are so inviting learners naturally immerse themselves in playful exploration of content.

In other words, the pleasurable, active, intrinsically motivating, high quality of experience that play provides has much to offer learning (Rieber, 1996). Playful exploration appears to play a central role in the development of cognitive flexibility—a key element of transfer. Within the context of research on attention and motivation, Csikszentmihalyi’s (1990) assertion that flow experiences—a term he associates with an increased complexity of the self—often seem to be correlated with personal growth is especially convincing. Consequently, play must become one of the central goals of learning rather than a potential means to an end (Rieber, 1996) or a serendipitous outcome.

In the remainder of this chapter I explore how the idea of play guided the design of the institute. I then describe why I selected the lenses of play, motivation, and creativity as analytic tools for examining the data that are presented in the findings that follow. Following the presentation of the findings, I outline the contributions these findings make to the literature on both play and professional development, and conclude with an examination of the affordances and constraints of the analytic tools I used during this iteration of the study.

How the Lenses Guided the Design of the Institute

Our decision to include opportunities for participants to “play” with institute content in a variety of ways was shaped by the belief that hands-on interaction with content fosters participation and stimulates personal integration of learning. This belief was reinforced by post-institute evaluations from a similar, summer institute I co-facilitated in 2003 in which participants commented on the value of these kinds of activities. My co-facilitators and I were particularly committed to the idea that hands-on experiences support world language educators in using technology in pedagogically sound ways, and help them to develop the technological pedagogical content knowledge required to do so. We also believed that such experiences would assist them in acquiring institute content.

Rationale for Selection of the Lenses as Analytic Tools

The content and format of the summer institute that serves as the context for this study was rather atypical by comparison with common professional development sessions that encourage teachers to incorporate specific curricular materials or instructional strategies into their practice. Consequently, I selected

the lenses of play, motivation, and creativity as tools for making sense of the data in this chapter. The concept of play seemed especially congruent with the unconventional types of institute activities participants stated had enhanced their learning. I chose the lens of motivation because it helped me to generate hypotheses about why the particular activities and instructional strategies to which participants attributed their learning may have been influential, while also helping me to better understand breakdowns in participants' learning. Apparent connections within the literature between motivation and well-designed play environments made this combination of lenses an especially logical one. The additional lens of creativity seemed useful for three reasons. First, it provided me with a heuristic for better understanding the processes involved in participants' attempts to collaboratively create various products during the institute. Second, the characteristics of creativity outlined by Csikszentmihalyi (1996) very closely parallel key concepts from the field of motivation. Creativity is also exercised in play. Hence, it seemed that the lens of creativity might potentially help me to synthesize ideas from these two different lenses. In the next section, I explore the contributions that findings from this study made to my understanding of these concepts.

Pedagogical Processes

When asked what teachers needed to do in order to be effective, one participant commented:

*I think that **for a teacher to have effective pedagogy**, for them to be able to deliver instruction effectively, **they need to have a tool box of strategies**, of resources that they can use and that **they need to have the ability to evaluate a need in a classroom and then choose the appropriate tool to meet that need.** (Semi-structured Interview, Lines 246-251, Cinnamon)*

Immediately following the institute, participants completed a follow-up survey in which they were asked to identify the processes or instructional strategies that were most helpful to them in understanding the concepts that had been presented during the institute. Participants mentioned a wide variety of strategies, but most can be grouped into eight categories: 1) discussion and group work, 2) experiential/hands-on learning, 3) frames, 4) modeling/examples, 5) monitoring and adjusting institute content and processes, 6) planning and progression of activities, 7) time, and 8) variety of methods. Most of these strategies involved active, hands-on involvement with ideas and materials, promoted reflection, or provided scaffolding—all key components of play. This chapter explores this toolbox of strategies used by institute leaders and their ability to use them effectively to respond to participants' needs.

The tag cloud in Figure 8.1 was generated from the 150 words that participants used most frequently in response to Post-institute Survey Question 10. Words are arranged alphabetically, with the size of the word corresponding to the frequency of its use in participants' responses. In other words, the largest words are those that were repeated with the highest frequency. The varying colors of the words are only used to help the reader distinguish among them more easily, and are not representative of any particular aspect of the data.

The figure highlights the important role that concepts, design, emotional engagement (represented in words such as “enjoyed,” “liked,” and “loved”), play, needs, novelty (“different,” “new”), time, and visual examples played in participants’ learning. According to Vygotsky (1978), many of these elements are key components of play, which foregrounds conceptual relationships, engages participants in creative and emotionally satisfying ways, and fulfills needs. He also emphasizes the foundational role of visual perception in making meaning, which might help to account for participants’ comments about the importance of visual examples. Figure 8.1 also demonstrates, in a more subdued way, the influence of institute processes through words such as “explore,” “interrelated,” “jigsaw,” “layered,” “mixed,” “model,” “processes,” “stations,” and “strategies.”

In the Post-institute Survey, several participants also provided information about the ways in which they felt these strategies had supported their learning (see Table 8.1). The first column of Table 8.1 lists the strategies and processes that participants felt most influenced their learning during the institute. The second column contains the total number of *different* participants who contributed to the responses listed in Column 1. The third column contains a list of the individual strategies mentioned by participants that comprised the more general category noted in Column 1. The fourth column contains representative comments from participants about how they believe these strategies and processes supported their learning. The strategies and processes are underlined, while the ways they supported learning are emphasized in bold font.

The quantities in parentheses next to each of these individual strategies represent the number of participants who commented on each one. Sometimes a participant commented on more than one strategy, so the numbers in the third column do not always add up to those in the first column. The data included in this table is also based on just one survey question. The categories noted in the table become even more apparent when participants' comments from other questions are added to them. (For example, multiple people commented on the idea of modeling across survey questions and not just in response to the Post-institute Survey Question 10, yet only participants' responses to Question 10 are included in the table.)

Table 8.1: Pedagogical Processes & Strategies Participants Say Supported Their Learning

Instructional Process or Strategy	# of Different People Who Gave Related Responses to Question 10	Representative Content From This Category	Representative Participant Comment(s) About How the Process or Strategy Supported Learning
<i>Discussion & group work</i>	7	This category included comments about: - o Classroom discussion (1) - o Collaboration (1) - o Jigsaw (1) - o Mixed groups (2) - o Share and discuss products (1) - o Small group discussions	<i>I also liked how you <u>mixed the groups</u> up so we were not always working with the same people. I was able to work with most of the participants during our time there and that was helpful (Post-institute Survey, Question 10, Nutmeg)</i>
<i>Experiential/hands-on learning</i>	6	This category included comments about: - o Experiential learning (2) - o Field trips (1) - o Hands-on learning (1) - o Learning stations³⁷ (2) - o Mini-projects (2)	<i>I also appreciated the opportunity to "explore" that you put in place in the last two days when you had done a "read" on the participants' needs. The <u>stations allowed me to explore areas where I had more questions</u> and the extended time made me feel like I had enough time to process the new information (Post-institute Survey, Question 10, Coriander)</i> <i>having the <u>mini-projects</u> to do to apply the ideas (Post-institute Survey, Question 10, Turmeric)</i>
<i>Frames</i>	6	This category included comments about: - o Compelling frames (1) - o Concepts from outside the field of education (2) - o Conceptualization and contextualization of topics (1) - o Design as frames for concepts (1) - o Frames to look at cognitive processes (1)	<i>I enjoyed looking at <u>design, architecture, etc outside the field</u>. It gave me a broader perspective (Post-institute Survey, Question 10, Tarragon)</i> <i>For me, presenting the <u>elements of design as frames for concepts</u> was very engaging. It helped me see how different areas can impact our field and how we design instruction, etc. (Post-institute Survey, Question 10, Cinnamon)</i>

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The learning centers to which participants refer here are described in more detail in Chapter

4.

Table 8.1 (cont'd).

Instructional Process or Strategy	# of Different Participants Who Gave Related Responses to Question 10	Representative Content From This Category	Participants' Comments About How the Process or Strategy Supported Learning
Modeling / examples	6	This category included comments about: ○ Modeling—of concepts (1), of teaching strategies for group work (1) ○ Multimedia examples such as audio clips (1), music clips (1), podcasts (2), PowerPoints™ (1), teenage technology use (1), video clips (2), websites (1) ○ Visual examples such as diagrams on the board (1), graphic organizers (1), triangles (2), and other visual examples (2)	Cherice and Cindy's modeling of the concepts they were teaching. As I said in #9, I have a GREAT appreciation for the what you all undertook. Working to <u>model the teaching and practices you are asking us to think about</u> was powerful. (Post-institute Survey, Question 10, Nutmeg) <i>An amazing number of teaching strategies for group work were modeled. I took note and will use these</i>. (Post-institute Survey, Question 10, Caraway) <i>I loved the visual and audio examples. It engages me more when I get to watch or listen to something, rather than simply reading or listening to a talking head.</i> (Post-institute Survey, Question 10, Thyme) <i>Loved the triangle graphic—it's amazing how many concepts could be mapped within that frame.</i> (Post-institute Survey, Question 10, Marjoram)

Table 8.1 (cont'd).

Instructional Process or Strategy	# of Different Participants Who Gave Related Responses	Representative Content From This Category	Participants' Comments About How the Process or Strategy Supported Learning
Monitoring & adjusting institute content and processes	3	This category included comments about the ways in which institute leaders monitored participants' needs and adjusted institute content and processes in response to them. Representative comments included: - o I also appreciated the opportunity to 'explore' that you put in place in the last two days when you had done a 'read' on the participants' needs. (Post-institute Survey, Question 10, Conander) - o The facilitators were sure to consider our needs throughout the Institute, and modified their plans to reflect our changing needs. (Post-institute Survey, Question 10, Caraway)	You two were incredibly <u>responsive to our learning</u> and that was apparent and that made a big difference in that we were all in it for the ride and <u>made me feel willing to commit to this experience in ways you were</u>. (Post-institute Survey, Question 10, Nutmeg)
Time	6	This category included comments that specifically mentioned time for specific kinds of activities, including: - o Collaboration (1) - o Exploration (1) - o Play (1) - o Processing (1) - o Pushing thinking (1) - o Reflection (1)	The stations allowed me to explore areas where I had more questions and the extended time <u>made me feel like I had enough time to process the new information</u>. (Post-institute Survey, Q. 10, Coriander) I really enjoyed class time. It was a <u>time</u> that I <u>was able to play with ideas and push my thinking</u>. (Post-institute Survey, Q. 10, Nutmeg) ... It was <u>time</u> that was <u>away physically [sic] from the problems and people</u>, but <u>intensely useful to me to center and focus my thoughts and plan actions</u>. (Post-Survey, Q. 5, Rosemary)

Table 8.1 (cont'd).

Instructional Process or Strategy	# of Different Participants Who Gave Related Responses to Question 10	Representative Content From This Category	Participants' Comments About How the Process or Strategy Supported Learning
<i>Planning and progression of activities</i>	4	This category included comments about the ways in which institute leaders planned and organized the sequence and progression of activities during the institute. It included comments about: - o Layering (3) - o Repetition (1) - o Progression of activities (4)	<i>Repeating the same visual with layers of new concepts that were inter-related really helped me to get a handle on the material.</i> (Post-institute Survey, Question 10, Caraway) <i>... Process of starting with a product and moving it forward and adapting it to meet different goals & needs ...</i> (Post-institute Survey, Question 10, Majoram) <i>... Progression of "design" activities which were asking us to observe in a layered manner ...</i> (Post-institute Survey, Question 10, Conander)
<i>Variety of methods</i>	7	This category included 2 comments regarding the variety of activities used during the institute, as well as other instructional methods or strategies that were mentioned by at least one participant but were not already part of another category: - o Smoosh books (1) - o Synthesis tasks (1)	<i>I loved the variety of methods and mixes -- from smooch books pattern to jigsaw to experiential learning. Variety and timing -- still the keys to success, in my opinion.</i> (Post-institute Survey, Question 10, Rosemary)

The rationales participants provided suggest that these activities and strategies engaged them, as well as offered them opportunities to explore, process, and apply the things they were learning. Several also commented on the ways these strategies influenced what they saw, felt, or thought—ultimately resulting in shifts in perspectives. The importance of these instructional processes and strategies in supporting participants' learning is also corroborated by their descriptions of institute experiences they found compelling (see Chapter 5). In the remainder of this chapter, we will discuss in greater depth the role that some of these strategies may have played in participants' learning³⁸.

Modeling

Several participants commented on the manner in which we attempted to model for them many of the strategies we advocated that they use in their classrooms.

*Watching Cindy and Cherice in action was compelling. I observed how they were **modelling being a good leader, mentor, and facilitator by being flexible and constantly checking in with participants and altering activities based on the needs of the participants.** The constant modelling of good design, using compelling music, art, quotes, relevant and practical material, motivated me to revise my curriculum and how I function as department head and president of my state organization.*
(Post-institute Survey, Question 5, Thyme)

Modeling leadership. Thyme refers to two different kinds of modeling in this response. The first is the modeling of "good" professional practice. She highlights flexibility, continuous monitoring of participants' needs, and the adjustment of plans in response to those needs as defining features of "good"

³⁸ Discussion and group work will be addressed at length in Chapter 9 and experiential learning will be explored in detail in Chapter 7.

leaders, mentors, and facilitators. She notes that this modeling has motivated her to alter her own professional practice with regard to the leadership roles she holds.

Modeling design and practical strategies. The second kind of modeling Thyme mentions is the modeling of good design and practical strategies. She elaborates by citing specific examples of what she means by “good design”—art, music, and quotes. She also indicates that these materials felt relevant and practical to her. She explains that this modeling motivated her to alter the content of her curriculum. It appears that the strategies we modeled during the institute also transferred into the practice of other participants.

... all those strategies and stations that you had us doing with the technology really had an impact. I really remember that one game where you had the sticky notes and you had to put things in categories. We would go around and try to categorize them. I don't remember what it was called. . . . I call it category pile. I've used that one in my class. Then you could have a dialogue on these things. (Field Notes, Lines 117-126, Ginger)

Ginger's comments refer to the affinity diagram activity previously described in Chapter 4. Her use of the word “game” to describe it implies that the activity may have felt more like “play” than “work” to her. It is also possible that because the activity did not follow the format of more traditional paper/pencil activities, she did not know how else to categorize it except to call it a game. The fact that she does not remember the name of the strategy, but does remember participating in it is also noteworthy. It implies that what “stuck” with her was the participatory experience.

It is possible that experiencing activities and strategies during a professional development session helps facilitate teachers' vision. The hands-on experience with the techniques may give educators a chance to "try them on" both physically and conceptually. As they "play" with new strategies, it may be easier for them to imagine how they might work in their own classrooms.

Another participant explains,

*... I think that they see those things oftentimes in isolation. And I think it goes back to **if you model it in your professional development and you point those things out and they've worked with it themselves, then they are better equipped to go back and implement it and to make students recognize those things and structure activities for students to come to that understanding on their own in their classrooms.** (Semi-structured Interview, Lines 556-563, Cinnamon)*

Cinnamon's comments highlight that modeling alone may not be sufficient to ensure that these strategies transfer to classroom practice. She notes that it is also important to guide participants' attention and awareness so that they can, in turn, "make students recognize those things [the relationship between products, practices, and perspectives]."

Modeling with examples. In addition to modeling practical strategies and professional practice, participants also commented on the examples we showed.

***I now have access to more websites that are useful (ones that I would not have had the time or foresight to have looked for myself).** I check the wiki every week, and I also am now checking Woot every day (Thanks Cindy!!!) :-) **I am in the process of looking for grants so that I can get a laptop and an LCD projector in my class** - I really enjoyed the movie and commercial clips that you both tied into the presentations - they "hooked" me, and I know that they would do the same for my students (who tend to be even more ADD than I am!) (Post-institute Survey, Question 3, Thyme)*

Thyme notes that the websites we used as examples during the institute affected her in multiple ways. First, they made it possible for her to use materials she would not otherwise have had the time or the awareness to locate on her own. Second, they changed her work flow—prompting her to seek out additional information each day. Third, they motivated her to seek out additional funding so that she could use such materials more easily in her classes. Fourth, they captured her attention. Fifth, she noted that they are likely to have a positive impact on her students. In response to another survey question, Thyme also mentioned that her ability to use the example websites was facilitated by the fact that they were gathered and organized in one place (i.e., the wiki). Another participant notes that she plans to incorporate technology that was modeled during the institute, as well as specific websites.

I would like to incorporate the use of "podcasts" as another tool to add to my 9-12 Methods of Foreign Language Education course. I would also like to use some of the websites that were modeled during the institute (i.e. Ice Age Website). I enjoyed the approach during the institute of "layering" technologies (visual, audio, video, text). (Post-institute Survey, Question 3, Oregano)

Oregano indicates that she plans to add podcasts as a “tool” to the course she is currently teaching. However, she has not yet connected doing so to any particular pedagogical purposes (or at least she does not make them explicit here if she does). Nonetheless, the fact that she names a particular website indicates that she may be planning to imitate some of the activities modeled during the institute.

Modeling application and decision-making. This has important implications for the pedagogy of professional development, in that modeling may

have the effect of “conditionalizing knowledge” for participants (Bransford, Brown, & Cocking, 1999). In other words, when participants have opportunities to use the things they are learning in physical and social contexts similar to those in which they will eventually be called upon to apply their understanding, they may be more likely to pair their tacit knowledge with accompanying mental models for action (Bransford, Brown, & Cocking, 1999). This may facilitate professional assessment, action, and decision-making in the future. Another participant explains it this way,

It was compelling for me to look at samples of student work/projects with another teacher and share ideas. It was compelling because it not only was inspiring, but it brought principles of the Institute to my level - that of the classroom and my everyday professional life. (Post-institute Survey, Question 5, Caraway)

Thus, one way to increase the number of participants who transfer institute concepts into their practice may be to engage participants in experiencing those practices during the professional development session. Turneric explains how such experiences have influenced her thinking about multimedia materials.

I hope to make better use of audio and video materials, now that I begin to see how I can customize and publish them. (Post-institute Survey, Question 3, Turneric)

Turneric's response reinforces that awareness of possibilities is a critical first step in catalyzing changes in classroom practices (“now that I begin to see how”). It also demonstrates the need for professional developers to help participants adapt the content and processes modeled during professional development to suit their own unique goals and professional contexts. When this occurs, it may facilitate the transfer of these strategies into participants' practice.

In summary, participants commented on four kinds of modeling they observed during the institute: modeling of leadership, modeling of design-based practical strategies, modeling with examples, and the modeling of application and decision-making strategies. This modeling appeared to capture their attention (in the sense that they noticed the strategies and the materials), mediate their thinking, deepen their understanding, and influence their practice. Although many participants had used technology for personal productivity, few were aware of the existence of web 2.0 technologies or had explored their pedagogical possibilities. This may be one reason why multimedia examples were so helpful in encouraging participants to adopt some of the practices modeled in the institute. Another pedagogical approach that seemed support this kind of transfer was the use of a wide variety of frames during the institute.

Frames

Ten different participants commented that the design frames used to contextualize their institute experiences had helped them to understand new things about planning learning opportunities for others. The idea that instructional planning was analogous to other intentional, creative acts of design seemed to influence participants' understanding of their professional work in important ways.

I have a more thorough understanding of the value of the intentional design and architecture of profesesional [sic] experiences that I create for my teachers, colleagues, and community members. . . . (Post-institute Survey, Question 8, Tarragon)

For this participant, the idea of planning a learning experience for others from the perspective of a designer appears to make it possible for her to see more clearly the design choices that are available to her, as well as their potential effects on those she serves. It seems that design frames in general, and the architecture frame in particular, helped participants to see their practice in new ways.

Novelty & Shifts in Perspective

A number of additional participants also commented on the ways in which the novelty of the design frames helped to expand their perspective.

It [architecture] was the biggest new piece because the music part of it, I incorporate it already, it's a major part of what I do with my students—it wasn't something that was as new to me, it was something that I could see pretty clearly before going to Iowa, but the architecture . . . it's such a different way of looking at lesson design, you know, it put us in a place where we were taking our craft of teaching and turning it upside down and looking at it from different angles and trying to under in this new frame of reference. (Field Notes, Lines 130-138, Sage)

This comment has three important facets. First, it appears that there was a certain amount of novelty involved in considering instructional design through the frame of architecture, particularly when contrasted with the participant's statement that music "was something that I could see pretty clearly before going to Iowa." This indicates that novelty may not only affect attention, but also that it may influence perspective. The second is that the work with architecture seemed to reposition this participant in relation to her professional work. It was not just that architecture provided a new way of looking at things, but that looking at professional practice through that lens seems to have altered what the

participant understood about her practice. (This becomes even clearer after an examination of this participant's responses across institute surveys and field notes.) The third important facet of this response is that this repositioning appears to have yielded new perspectives. In turn, these perspectives seem to have provoked the participant's attempts to make meaning from what she saw through the new lens. This same pattern appears in the comments of several other participants as well.

I think that teachers so often put themselves in a box and they put themselves in their classroom and they don't see how . . . anything outside of education can influence them or how anything outside of education can help them be a better teacher But those different lenses and those different frames made you see and made you reflect on the fact that you really can, there's a tremendous amount that you can learn. And that, it's not that you're gonna take principles of architecture and apply them exactly to what you're doing, but it gives you the idea that we need to scaffold, we need to build, we need to plan ahead of time, and that you need to consider all of the pieces. (Field Notes, Lines 361-373, Cinnamon)

Although this participant does not specifically mention novelty, she does speak of the ways in which educators' habits of viewing their practice through educational lenses put them "in a box," that prevents them from seeing. She underscores that the various design frames functioned as new lenses for her that compelled both perception and reflection. She clarifies that the direct transfer of architectural principles to language teaching is not the ultimate goal, but rather, that such principles foreground certain habits of thinking and particular kinds of practices that might otherwise be overlooked. Another participant offered insight into the kinds of questions about lesson planning that the architecture frame evoked for her.

... it's an interesting perspective to think from. Lesson development to architecture—something that has a form and a function, how can I design my lesson similarly so that it's more or less transparent in the sense that it has a form and a function? And, in an ideal world my lessons would, in a similar way, would have a form and a purpose and everything I did in those lessons would contribute to meeting that form and that purpose rather than hindering students. (Field Notes, Lines 117-124, Sage)

Sage's use of the word "*interesting*" suggests that the novelty of thinking about lesson planning through the lenses provided by another discipline is intriguing or intellectually stimulating. The architectural lens seems to reposition her, catalyzing an accompanying change in the questions she asks to guide and evaluate her lesson planning process. This shift in perspective appears to move her to continued reflection.

Cycle of Professional Development

Another participant summarizes these ideas as follows:

... I now better understand how a cycle of planning/execution/evaluation/revision can be part of any experience that truly matters, and that by stepping outside of our perceived task we can gain perspective and insight from seemingly unrelated fields. (Post-institute Survey, Question 8, Basil)

Basil, too, emphasizes the importance of repositioning, alluding to the ways in which "*stepping outside of our perceived task*" and into fields outside of education can yield additional insight. He notes that there is a cycle associated with this that is common across frames—"planning/execution/evaluation/revision." Two other participants also explicitly mentioned a similar cycle as being a key component of professional development.

. . . you need to have **short chunks of information and some kind of processing time and a chance for participants to work with the materials and then debrief** . . . and that was true in Iowa. (Field Notes, Lines 156-164, Sage)

. . . you have to structure PD so that you **present information to teachers, you give them time to talk about it, you structure a way for them to be able to use it and apply it, and then you give them time to reflect on it, which leads right back into giving them more information, or giving them better information, or giving them different information that leads back into what their needs were so that cycle continues.** (Semi-structured Interview, Lines 74-80, Cinnamon)

The parallels between the two processes that are described in these comments are striking. Both Sage and Cinnamon state there is a cycle that undergirds effective professional development which consists of presentation of “short chunks” of information, followed by processing time (which may include discussion), structured opportunities to apply the ideas or materials, and then a chance to reflect on the experience (such as in a debriefing exercise). Cinnamon also makes clear that this “cycle” is part of a feedback loop between participants and the facilitator. She explains that this cycle is mediated by participants’ needs and the way the facilitator continually adjusts and responds to them (see Figure 8.2).

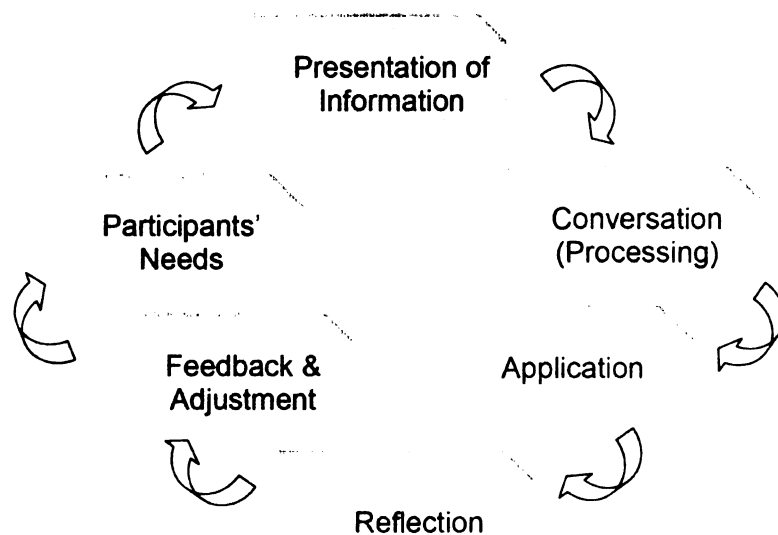


Figure 8.2: Professional development feedback loop.

One participant explains how this cycle functioned in the context of a field trip participants took during the institute. Their task was to consider how the architectural structures and design elements inherent in various local businesses influenced the activities and behaviors that took place in those spaces.

The only reason the trip worked was because of the crash course [in key principles of architectural theory] that preceded it. If you sent kids out and said randomly pick 3 buildings and then tell us what you thought of the design of them and how the design served its function, when we got back, we would not have had nearly as much to say. It was because of that lesson we'd had in which we thought about how architects view how they're going to design a space that we could go have a more critical eye (Field Notes, Lines 179-185, Sage)

In this explanation, the participant seems to be commenting on the presentation of information stage of the cycle. What is important to notice here is not that information was presented, but rather, that the participant is focusing on the way it guided her attention during subsequent portions of the activity. Although Sage does not comment on it here, it seems useful to recall that she and several other

participants remarked on the ways in which the structure of this particular experience fostered conversations with others in Chapter 5. Thus, it is possible (and likely, given participants' comments in other chapters) that these conversations provided the processing opportunities participants noted as the second stage of the professional development cycle.

. . . and then going into community to see if form and function were really serving the purpose (or the form was serving the function would probably be closer) whether the form the buildings took were the best ones for the purpose of the business. (Field Notes, Lines 185-188, Sage)

This portion of Sage's comments are aligned with the third stage of the cycle in that the field trip appears to have provided at her with the opportunity to apply the theoretical principles presented during Stage 1 to a task in a real life context.

*In order for us get out of it what you'd hoped, there had to be that first. While the field trip may have stood out, **they may not have metacognitively realized it, but the reason it stood out is because they knew what they were looking for . . . because the whole series of events was sequenced and how that information was delivered in that first part.** (Field Notes, Lines 190-194, Sage)*

In these remarks, Sage refers to the fact that several other participants also mentioned the "architecture field trip day" as an institute experience that was particularly compelling. Of special interest here is her statement which implies that the reason the experience was compelling was not necessarily the result of the "active, hands-on" nature of the activity. From Sage's perspective, the presentation of information and subsequent structure of the activity set participants' expectations, guided their attention, and shaped their thinking. She seems to feel this positioned participants to experience success with (and

perhaps even to gain insight from) the activity. Thus, it may be the feedback from these “ahas” that made the experience compelling, rather than the experience itself. In either case, it certainly appears that a number of participants valued the experience and were able to relate it to their professional contexts in personally meaningful and relevant ways.

Alignment of PD Cycle with Components of Compelling Experiences

Another important thing to note about the cycle these participants believe underlies successful professional development is that its components are very well aligned with the characteristics of compelling experiences identified by participants in Chapter 5. Information that stimulates attention, evokes emotion, and is personally relevant or motivating appears to heighten engagement with the experience. Additionally, experiences which provoked ongoing reflection seemed to reposition participants in ways that help them to perceive new features of their circumstances.

I think it has to focus on big ideas. You have to figure out what is the enduring understanding that you want people to leave with, and give them opportunities to discover that for themselves, to make those aha connections and for them to be able to see that through a variety of situations and a variety of different experiences. (Field Notes, 579-584, Cinnamon)

These characteristics are also well-aligned with research and scholarship on play (Malone, 1980; Rieber, 1996; Vygotsky, 1978) and the role of “reflective cycles” noted in literature on professional development (Howey, 1985; Lind, 2007; Penuel, et. al, 2007; Smith & Gillespie, 2007). Information that guides attention, together with activities that immerse participants in meaningful experiences

which foster engagement and reflective conversations, may provide participants with the feedback they need to adjust their own perspectives in order to better meet the changing needs of their professional circumstances. These processes also parallel the five key components of the creativity that Csikszentmihalyi (1996) mentions: preparation, incubation, insight, evaluation, and elaboration. In the sections that follow, I elaborate on the common features of each of these components and discuss how participants' experiences during the institute relate to each one.

Preparation. This stage of the creativity process appears to be well-aligned with the *Presentation of Information* stage mentioned by participants in the professional development cycle outlined earlier in this chapter. In the preparation phase of the creativity process, three things happen. First, while immersed in a particular domain, problems within the domain capture the learner's interest and attention. Second, the learner dedicates time to learning more about these problems. Third, the learner gains access to pertinent, sometimes privileged information within that domain relevant to the problems—often from leaders in the field.

In the case of the institute, participants were professionally engaged leaders who were already deeply immersed in the problems of world language education. However, findings suggest that a number of facets of institute content captured participants' interest and attention. It also appears that the institute provided participants with "privileged" access to other leaders in the field with whom they had previously been unacquainted. The new information and ideas

that resulted from participants' interactions with one another may have strengthened their understanding and influenced their professional vision. Additionally, the "protected" time away from family and professional responsibilities seems to have allowed some participants to immerse themselves in thinking about problems in world language education more deeply than their daily circumstances may normally allow. As a result, it seems that some were able to more tightly connect disparate pieces of what they knew, and that this may have influenced their ability to access, articulate, and apply their knowledge. A prominent theme in findings from this study is that ongoing reflection may facilitate this kind of connection. Csikszentmihalyi (1996) emphasizes that this kind of reflection, or "incubation," is a critical component of creativity.

Incubation. In the incubation phase of creativity, learners reflect on problems in the domain in light of the new information and novel stimulation they have experienced. Findings from this study suggest that as learners do so, their minds make a variety of new connections between concepts, ideas, and contexts that they did not previously perceive as being related. These connections seem to create new epistemological pathways that lead the learner to new insights, thus deepening their understanding.

One important contribution from this study is that because it is quite difficult to capture all important facets of a complex concept in a single representation, representing conceptual content in multiple ways may be especially effective in helping learners to perceive conceptual connections. Hofstadter (1985) explains:

The more different manifestations you observe of one phenomenon, the more deeply you understand that phenomenon, and therefore the more clearly you can see the vein of sameness running through all those different Things. Or put another way, experience with a wide variety of things refines your category system and allows you to make incisive, abstract connections based on deep shared qualities. (p. 253)

As noted in Chapter 6, there are other affordances to employing representations with substantive visual content that may also assist learners in forging stronger conceptual networks. For instance, visual representations appear to serve as objects onto which complex conceptual content can be offloaded, thus freeing cognitive processing power that can be diverted to making sense of unfamiliar information. Such representations may also facilitate the simultaneous processing of discrete bits of information, thus making it easier for learners to perceive new connections. According to findings from Chapters 6 and 7, it appears that representations that engaged participants in making conceptual comparisons and contrasts may have been particularly powerful in generating connections that led to new insights.

Providing participants with time to talk with other participants about what they have been learning may support incubation by giving them opportunities to summarize their learning, reflect on it, connect it to their professional experience, and identify possibilities for extending it into their professional practice. Several participants noted the insight that often emerges from this kind of processing, labeling it as one of the key components of effective professional development. Csikszentmihalyi's (1996) work suggests that such reflection can be very non-

linear in nature and emphasizes that, like insight, it is not necessarily a conscious process.

Insight. An important component that supports the unconscious processes involved in creative insight seems to be down time—time to relax, time to play with ideas, and serendipitous opportunities to juxtapose unrelated ideas in ways that produce new understandings (Csikszentmihalyi, 1996). According to participants in this study, these conditions were present in some of the application tasks they were asked to complete during the institute (such as the “architecture field trip” and technology-related tasks). Such tasks took participants out of the classroom setting, gave them time away from focused attention to information, facilitated informal conversations, and included the directive to “have fun.” Experiential learning tasks like these, particularly those comprised of multisensory input, may contextualize learning in ways that help participants make sense and meaning of information more easily and see connections more readily. They may also offer participants opportunities to consolidate information from multiple sources in personally meaningful ways that foster long-term memory storage, integration into mental models, and internalization into the self.

However, it should be emphasized that participants commented explicitly on pedagogical features of these activities, noting at least in one case that had these exact same activities been structured differently, it is unlikely that the results would have been the same. In other words, what seemed to matter most about these learning experiences is not that they were “extracurricular

experiences," per se, but that they orchestrated conditions and engaged participants in ways that facilitated personally relevant meaning-making and fostered the insight phase of the creativity process.

Design Frames as Cognitive Tools for Constructing Understanding

Other findings from this study make additional contributions to these ideas. The first is that immersion alone, even in a rich learning environment, is unlikely to produce creativity or professional transformation. In order to learn, participants must be "moved"—physically, mentally, and emotionally. As Peter Block (2003) explains,

I have to go outside my job territory to change my mind. It is hard to learn when we think we know something. Our expertise becomes a defense against the innocence and not-knowing that learning requires. (p. 98)

Findings from this study support Block's assertions. On the pre-institute survey from MLC 2006, nearly every description participants gave of an experience that was compelling involved spending time in a "foreign" context (typically a country other than the United States) and subsequent ongoing reflection. However, one participant clarified that the important part of such comments may be the idea of a "foreign context" rather than "a foreign country" per se.

A "compelling experience" is one that actually transforms the teacher/learner and changes them in a significant way. In other words, a compelling learning experience becomes part of the teacher/learner's "frame of reference" for future learning experiences in rich, meaningful contexts. For many foreign language teachers/students, an example of a "compelling experience" is a study abroad experience in the target culture. (Post-institute Survey, Question 4, Oregano)

Inherent in this explanation is the idea that reframing may help participants to make the connections that constitute learning. Indeed, according to some studies, reframing is an essential component of reflection (Villegas-Reimers, 2003).

Data from this study suggests that although there are a number of different ways to “move” participants—physically, emotionally, and conceptually—they are not always easily implemented in professional development settings. For example, changing locations through community-based experiences like field trips is one way to physically “move” participants. However, the logistics involved in doing so (planning, safety, time, transportation) make this difficult to accomplish during professional development sessions in which available resources, budgets, and time are generally rather limited. Cooperative learning structures and multisensory methods and materials provide alternative methods of accomplishing this that may be more readily adapted to professional development settings.

A second approach to “moving” participants may be to expose them to “foreign” theoretical concepts from other contexts. Abbott (2004) explains, “Changing context is a powerful heuristic because it brings together things we have carefully set apart or it rearranges the way we connect social things . . . rearranging what is in our focus of attention and what is outside” (Abbott, 2004, p. 64). It appears that the conceptual frames from other domains used during the institute, as well as technology-infused experiences, may have provided participants with novel stimulation that helped to reposition them as learners by

reframing the focus of their attention. This shift in attention may have freed them from some of the preconceptions of their prior knowledge, helping them to recontextualize, and subsequently, reconceptualize their understanding of teaching and learning in world language education.

Additionally, findings from this study suggest that experiential learning and multimedia presentations are another strategy that may be used to move participants attitudinally and emotionally. However, organizing these kinds of learning activities for participants may also require access to technology, time, and a degree of confidence and flexibility that many professional developers do not possess.

Nonetheless, in all of these cases, when substantive connections to prior knowledge and adequate scaffolding are not present, the result may be the equivalent of “culture shock” for participants. If this occurs, participants are likely to experience negative emotional reactions that filter their learning experiences. Some participants may simply shut down, closing themselves to the learning opportunities inherent in the experience. Others may actively resist the experience. One of the institute leaders elaborates:

*'06 I think was totally different in the sense that by adding the layer of the design, the architecture, and whatnot, not only were they in their groups, but they had to add a different frame to how they considered things. And **because the frame was not world language, that really**—if we were to think about the triangle—for some of them, it **put a lot of pressure on the side, and they liked it, and for some of them, it put so much pressure on the side, it broke the side and they're thinking, "I don't see how this fits! My triangle is not working. My triangle is not complete. I, I'm feeling a little lost."** And so, that was interesting to see how people put their triangles back together as the week went on. (Field Notes, Lines 294-303, Cindy)*

Findings from Chapter 9 further illuminate this leader's comments, indicating that how teachers see and interpret the professional roles and responsibilities associated with their work determines not only what they are able to understand, but also what they are likely to be willing to receive. As C.S. Lewis puts it, "For what you see and hear depends a good deal on where you are standing: it also depends on what sort of person you are" (Lewis, 1983/1955). In other words, relevance guides attention. Without purposeful mediation that helps participants to identify and focus on the features of an experience that are most relevant to their own professional contexts, the balance between participants' existing knowledge and skills and the challenges presented by the learning environment may be too overwhelming. It is likely that accommodating these new ways of looking at their professional roles and responsibilities required all participants to reorganize their existing mental models to some degree. This involves Evaluation—the 4th stage of Csikszentmihalyi's (1996) process.

Evaluation. In the evaluation phase of the creative process, learners recursively reflect on their experience, drawing on information made available to them through additional experiences and conversations with others. Findings from this study suggest that this recursive reflection may provide learners with feedback regarding their insights, thus confirming or disconfirming their validity. Learners may then compare the outcomes of their reflection against the criteria from the domain that they have internalized and use that feedback to make decisions about what is relevant, meaningful, and worth incorporating into their approach to professional practice. In the cycle of effective professional

development outlined by participants, this reflection leads to *Feedback and Adjustment*, evoking new questions which provide momentum for the pursuit of the needs related to those questions, and so the cycle begins again.

Elaboration. During the elaboration phase of the creative process, learners organize, extend, and refine their insights, connecting them more intentionally to existing conceptual understandings and their accompanying mental models. As a result of this increasingly interconnected network of understanding, learners are better positioned to act on their new ideas. Irrespective of whether participants represent their understandings in words or in other ways, what is important is the manner in which the representation supports them in playing with the conceptual content and in exploring dynamic relationships between concepts. By giving participants opportunities to take their understanding apart over and over again, and analyze and reassemble it in many different ways, the likelihood that they will be able to transfer the experiences and understandings to other contexts may be increased. However, “play” is seldom a primary consideration in the design of professional development experiences.

Transformation. Findings from this study suggest that opportunities to create products can engage participants in playful exploration of content. As they do so, the design-based feedback loops inherent in the process help participants to internalize the content—essentially making them part of the experience, and the experience part of themselves. The act of creation may help link action and reflection. As Peter Block (2003) explains, “Whatever we create in the world is also recreated inside of us . . .” (p. 146). In other words,

participants must ultimately be equipped and empowered to use their new understandings to create artifacts and design experiences that are personally meaningful and relevant to their contexts. In this regard, design-based pedagogies have the potential to strike a useful balance between theory and practice.

Findings from Chapters 5 and 8 of this study suggest that as participants do this, they see themselves in new ways, and that their understanding of themselves, their circumstances, and their professional roles and responsibilities also changes. This often expands their professional visions of what is possible for themselves and their students. I speculate that this changes the ways in which they frame the professional problems they encounter, expands their repertoire of potential options for thought and action, and positions them to consider a wider range of alternative solutions. It is likely that this improves their professional decision-making, and as a result, may influence the quality of their instruction. A variety of participants in this study indicated that the institute influenced their perception, increased their awareness, and guided their attention in ways that influenced their pedagogy when they returned to their professional contexts.

It was okay when I was doing some of these strategy kinds of things . . . but I have to say, because I added this other dimension, more of this artistic, creative thing I can do with technology, that's why I'm probably going to teach a few more years. I was having fun, but I was getting kind of burned out. You've revitalized me. This will keep me going for awhile. I'm too intrigued! (Field Notes, Ginger, Lines 202-209)

This participant's reflections highlight several important points. The first is that her reference to "*some of these strategy kinds of things*" seems congruent with the "explain, train, and maintain" pedagogies that are commonly used in professional development sessions. The primary content of these sessions consists of specific instructional strategies or curricular materials that teachers are encouraged to incorporate into their practice, rather than more conceptual or creative activities. The second key point she makes is that part of what has transformed her is a more holistic, dimensionalized approach to professional development—one that frames her not just as an educator, but also as a creative artist. While technology happens to be the tool through which that creativity is evidently finding expression, the third key aspect of her response is her statement, "*I'm too intrigued!*" This is consistent with participants' comments in Chapter 5, which indicated that the stimulation of intellectual curiosity, emotional engagement, and personal relevance were among the elements that comprise a compelling experience.

What is not evident in Ginger's remarks is how much substantive attention to participants' prior knowledge and experiences, thinking, and skill levels crafting such an experience appears to require. Cinnamon explains,

I think the group was probably pretty well split between those that saw connections between different frames that we were using to look at things and those that didn't see the connections. Um, it was interesting to see that we had maybe a couple of people, some of them who really were big global thinkers who saw immediately, "I see that application of it. Oh wow, I'd never really thought about it that way but now that I do process that information, I understand a little bit better how that works" and there was still a group of them, I think, that kind of looked at it and thought, "Well, that's all well and good, but I don't think

that's something that I'm going to be able to do, or I really don't see that, a strong connection between that frame and what I do with French 2 students on a regular basis." (Semi-structured Interview, Lines 792-805, Cinnamon)

Attention to issues of prior knowledge and personal relevance is one way

to ensure that sufficient scaffolding, feedback, and social supports mediate opportunities to learn. In this way, professional developers can foster meaningful, relevant, and intrinsically motivating "flow" experiences. It is likely that participants who have less experience with the use of multiple representations and conceptual thinking, or who do not have extensive background knowledge in the topic areas they are expected to explore, will require significantly more time and supportive scaffolding in order to experience success with these activities. If either the content or the processes involved in the activity are particularly unfamiliar, there may be such a gap between the demands of the task and participants' skills that they refuse to participate. (Breakdowns of this nature will be discussed in Chapter 9.) Thus, finding ways to promote continued engagement with the task may become critical. By contrast, the more knowledge and time available to participants, the more personally meaningful the professional development activities, and the more emotionally invested participants are in the activities, the more likely participants may be to implement reforms in transformative, innovative ways as opposed to merely adapting them to their existing mental models.

Solid alignment between the content and the pedagogy of an institute, pedagogies that support participants in setting aside the expectation that they be "knowers," and collaboration among participants may also help mediate the

"culture shock" that recontextualization can produce because they have the potential to help recalibrate the balance between the challenges inherent in the tasks and the skills required to complete them. This was a prominent theme in transcripts from an informal, tape-recorded conversation that occurred between institute leaders two years following the institute during which they were comparing and contrasting *Mentoring, Leadership, & Change 2003* with *Mentoring, Leadership, and Change 2006*.

*I think for me one of the big pieces was the recognition that **as long as they think they know about what you're talking about, or have prior experience with it, your ability to influence their frames is gonna be much smaller and much weaker than if you take them completely outside of their topic area.** (Field Notes, Lines 832-836, Cherice)*

In this portion of the conversation, we were using magnetic rods from which we had created several triangles as physical metaphors for participants' perspectives (see Figure 8.3).



Figure 8.3: Magnetic rods used to create triangles representing participants' perspectives.

During the course of the conversation, we manipulated these rods, in conjunction with other triangles, to help us visualize how various actions we had taken during

the summer institutes affected participants' perspectives. A substantial portion of the conversation revolved around what determined the sizes of participants' "triangles" (a.k.a. perspectives) and how a professional development session might influence the size, shape, and stability of those triangles. The conversation also considered the ways in which participants' prior knowledge, professional experience, and tendency toward cognitive flexibility may have impacted how they experienced the enactment of our designs for the institute.

Because since they were recognized as expert, I think that makes their triangle less influenceable, less able to push on that particular part on their triangle because we've told them that they are an expert and what they know must be good for that part of the triangle. So, I think that part is both a blessing and a curse, because it gave them confidence to interact with others on those topics, but at the same time it made it very hard for us to push their buttons. And I think in 2006, we were successfully able to push their buttons by adding the other layer of the frame which put them all at their, a novice or learner in trying to make sense of something. So that was kind of the fun part, watching them struggle with that. (Field Notes, Lines 471-481, Cindy)

The tensions surrounding participants' expertise to which this institute leader alludes will be discussed in greater depth in Chapter 9. For now, it is sufficient to note that institute leaders and many participants valued the design frames for a variety of different reasons, including the way they repositioned participants both conceptually and in terms of their sense of expertise. It is possible that one reason these frames worked so well for some participants is because of the manner in which we progressively layered their introduction and use during the institute.

Progressively Layering Institute Activities

The concept of layers was raised by participants in response to six of ten Post-institute Survey questions. Participants mentioned four different types of layers—layers of concepts, layers of instruction, layers of media/technology, and layers of understanding.

*I hope to create compelling experiences for students and/or colleagues with the use of the technology of podcasts. **I enjoyed learning about the effectiveness of "layering" instruction with a "multi-media" approach to enhance learning. PowerPoint is an effective tool that can also be used to "layer" instruction.** However, podcasts allow for a richer use of multi media that would be enjoyable for students and colleagues. (Post-institute Survey, Question 6, Oregano)*

The focus of each of these responses varied, ranging from comments about participants' feelings about the layering approach (both positive and negative) to comments about the processes involved in layering. Participants' remarks also discussed the effects of layering. Five comments explained that the approach had challenged their thinking and deepened their understanding. Two articulated the belief that layering was a way of empowering students and helping them to internalize concepts. Eleven remarks noted how the iterative, repetitive use of layers had enhanced their learning. Four participants mentioned that this was the result of increased personal connections to the material and the broader contexts in which it was situated. In the Follow-up Institute Survey, four participants also referred to layers and at least one commented that she had experimented with the approach in her classes.

*Giving the students an opportunity to create a digital story from among the songs we used to learn about Québec and the life, history and culture. I layered the information about Quebec, I let the student [sic] discover new things through the internet, I added relevance by having student [sic] research the seal hunt and then create a debate. Most of all I used music. **There [sic] digital stories were complex and creative. They were anxious to share.** (Follow-up Institute Survey, Question 16, Ginger)*

Participants' Follow-up Survey responses indicate that many of them applied the things they had learned in their classroom contexts following the institute.

Changes in Practice

Participants used the strategies modeled in the institute in a number of different ways. (The strategies are underlined and their effects are highlighted in bold font.)

*Establishing connections between concepts; music, readings, cooperative [sic] learning, [sic] group work, video clips.
Students were engaged and took requirements to a higher level - exceeded expectations. (Follow-up Institute Survey, Question 16, Oregano)*

Oregano believes the pedagogical strategies of creating conceptual connections, engaging students in cooperative learning and group work, and infusing more multimedia into her classes increased student engagement and performance. Dill reported similar results.

I've begun to make movies for my staff, and I think I've been able to engage them at a different level than before. (Follow-up Institute Survey, Question 16, Dill)

Dill notes that the strategy of incorporating more multimedia improved his ability to engage adults with more success. Other participants reported that their institute experiences were likely to influence their colleagues outside the context of world languages.

*I just had a very fruitful meeting with the principal of the new high school which will open in 2009. I know my experiences, insights, and vision for world language education, which I was able to view largely and digest well in Iowa, **will impact that high school -- and more than for world languages**. . . . (Post-institute Survey, Question 3, Rosemary)*

Cinnamon explained how modeling influenced her entire school district.

*When our FLAP grant ran out in 06, our board had to say whether or not they were willing to refund our elementary program. We had a work session for our board at my elementary school and I had our 4th graders in pairs teach 3 vocab. words they were learning to our board members in context. . . they asked, "What would it cost to put this in every elementary school?" **Last June, they approved putting language in every elementary school in our district**, so we had one additional school add last year, and then this year, well when school started in August, we had 8 additional schools come into our program, so we now have an elementary staff of 10 teachers serving 12 schools and my position is .6 teaching at my elem. School and .4 as FL specialist to support elem. teachers and PD for all FL teachers in district—both middle school and high school. (Field Notes, Lines 35-46, Cinnamon)*

In summary, the modeling of design principles from other disciplines to frame targeted content, and the focus on 21st Century learners, literacies, and technologies appeared to impact participants' practice following the institute. Two participants offer explanations which may help to explain this.

Big things can only be seen from a distance (Follow-up Institute Survey, Question 17, Saffron)

This pithy statement encapsulates an important finding that spans Chapters 6, 7, and 8. The opportunities that participants had to step outside the daily context of education and to view their professional work from a new "location" (e.g., through the eyes of craftspeople in other fields), as well as through a new "lens" (i.e., from the perspectives of their students) may have enabled them to perceive

critical facets of their work about which they were previously unaware. A second participant elaborates,

All of them have a relationship. **If you think of everything as separate, you don't see [sic] he [sic] whole picture.** . . . (Post-institute Survey, Question 8, *Fennel*)

Putnam & Borko (2000) explain that both physical and conceptual recontextualization—getting outside of their domains—may be critical for teachers to experience “powerful learning” (p. 6). It may be that the “foreign contexts” were important contributors to participants’ learning because of the connections, attention, reflection, and perception they evoked. It is also likely that the pedagogical attention given to connections among them enabled participants to see relevance to their professional circumstances. Yet, as Cayenne indicates, without sufficient time, opportunity, and metacognitive space for reflection, it appears unlikely that these realizations will have any lasting impact on practice due to the fact that there are so “. . . many layers of learning” (*Follow-up Institute Survey, Question 17, Mint*).

Metacognitive meddling – the importance of stepping back for them (kids) to have space to think about it for awhile (Field Notes, Lines 74-75, Cayenne)

A lack of time for processing and practice may leave these layers fragmented and disconnected, making it difficult for deep understanding to develop. In fact, a number of participants commented on the value of having time to collaborate, explore, play, process, and reflect on their learning as another important pedagogical strategy.

The Role of Time

The issue of time was raised across a number of different participants' responses in the post-institute survey, the follow-up survey, and field notes.

On an even more personal level, on the last day [Leader 1] played "I Hope You Dance" and showed accompanying visuals; [Leader 1] discussed the importance of balance and down time in our own lives in order to truly tap into our creativity. It hit me like a ton of bricks because of my own furious pace. I haven't been able to cry in years, and I had a difficult time holding back tears. I realized too that the luxury of having a chunk of time to participate in this Institute, to function on a higher plane than I am able to do in everyday [sic] life, to be surrounded by (mostly) like-minded and very intelligent interesting folks, to push the limits of my understanding with some fascinating connections between design, advertising, [sic] art, architecture, music, and our focus topics - this all was coming to an end. I would have a jolt back to reality when I returned home. I feared (and still do) losing the tenuous hold I have on these new ideas that were just starting to become mine. I feared losing my momentum because of everyday tedium. I wanted to cry because I was losing the only time I have had truly for myself and my intellectual growth in years. My greatest challenge will be not to lose what I have learned, but to put it all into action. (Post-institute Survey, Question 5, Caraway)

For some participants, including this one, having eight full days offered a "chunk" of uninterrupted time during which they could fully immerse themselves in the content without worrying about the typical demands of their families and professional responsibilities was critical to their learning.

This participant notes that this kind of time is a "luxury" which the nature of her responsibilities make difficult for her to "afford" on a regular basis. She implies that she does not have sufficient down time and notes that this has implications for the degree to which she is likely to be able to tap into her own creativity for professional purposes. Her comments also include the majority of

the elements participants' mentioned in their cycle of effective professional development.

Caraway commented on the impact of the visual and multimedia examples in terms of both their attention and engagement (as did many other participants). She noted that this prepared her to receive information about balance and downtime as critical components of effective leadership. She then highlights the personal relevance and emotional impact of the experience, explaining that it caused her to reflect on a number of aspects of the institute which were powerful for her. These included time, design frames, and professional conversations with others. Perhaps the statement of most importance, however, is *"I feared (and still do) losing the tenuous hold I have on these new ideas that were just starting to become mine."* This sentence suggests that she had passed through the stages of presentation of information, processing, application, and reflection (or in Csikszentmihalyi's (1996) terms—preparation, incubation, insight, and evaluation) and felt she was just beginning to internalize these ideas in enduring ways.

Caraway's statements about her tenuous grasp on these ideas also implies that professional development evaluations that take place too soon may capture learning that is not yet fully consolidated. As a result, they may overestimate the effectiveness of the session and the degree to which the content of the session is likely to transfer into teachers' classroom practice. By the same token, evaluations that take place too late may not provide a complete picture of all that participants began to absorb or were eager to integrate

immediately following the professional development experience, but which dim with time.

Caraway's statement also provides at least one potential explanation for the findings from research on professional development which emphasize that one-shot professional development sessions frequently do not have long-lasting impacts. It may be that adequate follow-up promotes the continuation of the cycle of processing, application, and reflection begun at the institute which appears to be necessary for consolidating new learning and supporting innovation in practice. In other words, adequate time may be an essential condition of the cognitive processing that results in transformations in practice.

The Role of Motivation

Although many participants commented on the value of these design-based strategies in facilitating their understanding, some also characterized these strategies as being "difficult" and "frustrating" at first. One of the group facilitators explains the pedagogical implications of this:

*And so, I think you have to, **at some point you have to push people to be a little bit uncomfortable with what they're doing, and while they may not see that that was effective for them and that it was helpful at the time, I think that as they reflect on it after the fact, that they'll realize that it was an important piece to the growth process and to the learning process.** (Semi-structured Interview, Lines 67-73, Yellow Group, Cinnamon)*

Cinnamon's comments highlight the important role that challenge plays in supporting participants' growth. She also notes that participants may not always be able to immediately recognize the value of such challenge or the discomfort that it often produces. This has valuable implications for the way in which professional development is evaluated. Evaluations which occur immediately

following a professional development session are unlikely to capture the full extent of participants' growth or an accurate picture of participants' feelings about their experiences because both are likely to change with time.

Cinnamon goes on to note the critical role that balancing the degree of challenge with participants' existing level of skills is likely to play in their motivation to change their professional practice.

*. . . I think if you push people, push people to frustration, that you've gone too far. Because **if they get frustrated, then they're, they are more likely to just give up and to go back to doing what they've always done.** So you have to be very aware of how uncomfortable are they, because you don't want to make them so uncomfortable that they shut down—that the affective filter just flies up and that they shut down and they think, this is just too overwhelming for me and I can't handle it. It has to be just, I mean, **it has to be just right just like Goldilocks. It can't be too much, it can't be not enough, it has to be just right.** (Semi-structured Interview, Lines 80-88, Yellow Group, Cinnamon)*

Cinnamon explains that maintaining an adequate balance is difficult because frequently those who provide professional development for teachers are outside experts who are unfamiliar with the audience and the specifics of the contexts in which they are working.

***And that is a very difficult thing to do because, so many times going into PD there is so much that you don't know about your audience that you have to generalize,** so you have to be aware then as you're delivering whatever PD it is, of your audience. And you know, looking at okay well, it seems like this group or these couple of people are really struggling, they're really going over the edge—I need to pull back for them. And this group here doesn't seem to be really challenged enough, and so you have to be able to find a way to push them. **It's differentiation.** (Semi-structured Interview, Lines 89-97, Yellow Group, Cinnamon)*

Literature regarding professional development in world language education has made similar calls for differentiating the professional development of novice

versus experienced teachers (Ariogul, 2007; Bernhardt, 2000). However, Cinnamon adds an additional layer to this idea when she concludes that a professional developer's ability to differentiate the professional development in order to adapt it to the *changing* needs of individual learners during the session is essential to its success. One of the institute leaders explained that another key element in helping institute participants "*put their triangles back together*" was the emotional, intellectual, and social support participants were able to obtain from one another.

You know, I think it happened because they talked with each other. Because, for those who were less comfortable with what was happening because they couldn't necessarily see it, only by talking with the other people that were there did they start to put the pieces together as to how some of this could actually fit and help them think about things in different ways. (Field Notes, Lines 307-312, Cindy)

Self-determination Theory (Ryan & Deci, 2000) is congruent with Cindy's explanation. It suggests that "relatedness" (i.e., adequate social interaction and support) can mediate the balance between the challenge of a task and participants' existing skills. When this occurs, participants experience a sense of autonomy, or control, over the task. This explanation also aligns with Vygotsky's (1978) theory regarding the Zone of Proximal Development. He explains that while a person is learning to do something, their ability to accomplish a task that exceeds their level of skill can be increased when they have the support of another knowledgeable person.

This chapter suggests that a number of pedagogical strategies are especially likely to support participants in transferring institute content into their

own practice. Strategies that facilitate playful exploration of content and attend to issues of motivation are among the most successful of these strategies. It is also noteworthy that the cycle of professional development described by participants loosely parallels key components of play and the stages of the creative process outlined by Csikszentmihalyi (1996). These ideas identify not only how an effective professional development experience might be structured in order to have a stronger impact (at least according to these participants), but also what seems to happen to participants on an individual level during the course of a transformative experience.

Reflective Deliberation

The reflective deliberation that follows discusses some of the contributions that these findings make to the literature on professional development. Following this discussion, the chapter explores the affordances and limitations of using the lenses of motivation, play, and creativity as analytic tools within the context of this study.

Contributions from the Data

Data from this chapter indicate that the strategies that were most supportive of participants learning had several things in common. First, many of them were multisensory in nature. That is, they involved participants in seeing, hearing, talking, moving, and doing. Second, they were often social in nature, providing participants with frequent opportunities to collaborate, converse, and connect with colleagues. Third, they engaged participants with conceptual

aspects of the content. These qualities are congruent with common characteristics of well-designed play environments.

The role of imagination in play. Hence, what constitutes “play” may come in many forms, and specific play activities may not be as important as conditions which promote imaginative exploration of possibilities. These possibilities may encompass social interactions, personal roles and behaviors, instructional strategies, or tools and materials. Findings from this study indicate that “playing” with new tools and strategies during institute activities may have given participants the chance to “try them on.” Experimentation appears to have facilitated participants’ vision of the possibilities inherent in these strategies, as several reported having “imitated” them in their own professional contexts. This is also consistent with literature on play, which suggests that this kind of engagement may “conditionalize” participants’ knowledge (Bransford, Brown, & Cocking, 1999), and may help to explain participants’ reports that they applied many of these strategies in their own professional contexts following the institute. Thus, one of the most important features of play in professional development settings may be the manner in which opportunities to “play” assist participants in perceiving new options and possibilities in their professional tools, roles, and responsibilities. Participants’ ability to re-imagine themselves in relation to their professional activities may be a pre-requisite to both transfer and change.

Reflection as a form of play. Findings from this study also imply that hands-on activities are not the only ways to engage participants in “play” in professional development settings. According to some participants, educators’

habits of thinking about their practice through educational lenses actually constrain their ability to see alternative options for thought and action. Opportunities to spend time in “foreign” contexts (both physical and conceptual) seemed to be a common characteristic of compelling experiences that was especially potent in provoking sensitivity to context, positioning participants to see new relationships among ideas and information, and fostering ongoing reflection. All of these features appeared to engage participants in the creative process, opening them to new insights. Put another way, it appears that the opportunity to mentally explore different concepts and perspectives may affect participants in ways that are similar to more physical forms of play. Numerous participants commented that “playing” with the idea of instructional planning as analogous to other intentional, creative acts of design helped them to perceive new possibilities for the design and implementation of lessons and pedagogical materials. Such reflection appeared to be an essential component of professional transformation across data chapters. This may be because learning of any kind requires participants to reorganize their existing mental models in various ways to accommodate new information, new connections and relationships, and new ways of seeing things.

The role of creation in learning. Although physical participation and mental reflection are clearly important components of play, findings from this study highlight that the influence of both is magnified by opportunities to create. Producing and adapting materials seems to “prime” schemata in ways that promote deeper understanding and aid effective recall (Boland, et. al, 2001, p.

397; Eisner, 2002; Howey, 1985; McLoughlin & Krakowski, 2001). Additionally, the design-centered processes of creation actively entangle learners in personal meaning-making. Applying new concepts and skills in the creation of a product seems to provide participants with opportunities to try them out, and to try them “on” as potential contributions to their professional roles, responsibilities, and identities. The conceptual and physical feedback that arises from this creative engagement with content seems to guide participants in refining their schema, and to ask new questions that lead them to pursue additional learning and discovery.

In an article entitled *Knowledge Representations and Knowledge Transfer*, Boland, et. al (2001) assert that cognitive development is essentially a process of continuously “redescribing” knowledge structures (p. 395). They explain that “. . . representational redescription constitutes personal theorizing” (Boland, et. al, 2001, p. 396), or in other words, that representing knowledge in multiple ways may be considered an act of analysis and learning. This perspective helps to explain why generating new materials appears to have fostered personal integration and, for some participants, to have catalyzed professional transformation. Allowing adequate time and providing sufficient follow-up also contribute to these processes.

The role of motivation in play. Scholarship on motivation, play, and teacher learning suggests that adequate challenge is a necessary component for learning. However, large gaps between the demands of institute tasks and participants’ skills seem to increase their perception of the risks of participating in

institute activities and diminish their willingness to do so. Although it is common for even challenge that are well-matched with participants' skills to produce some level of discomfort, participants note that they were not always be able to see the value of being challenged until some time had passed. It also appears that participants may experience negative feedback when they attempt tasks without success. This may affect their motivation to continue participating. When motivation breaks down, it seems to interrupt their attention, which is often manifested through disengagement from the task, negative affective expressions, or even overt refusals to participate. In such cases, finding ways to help participants' apply their prior knowledge to the task, and providing them with sufficient scaffolding and social supports become essential to their learning. Such supports may improve participants' sense of control over the tasks, as well as their expectation for success with them—two key components of both motivation and flow experiences. This appears to be especially true of some of the more unconventional professional development activities.

Processes involved in professional transformation. Perhaps one of the most important findings of this study is that multiple participants identified a cycle that they believe is foundational to effective professional development. It consists of the introduction of “short chunks” of material, followed by processing time (which seems especially effective when it includes conversation with colleagues), structured opportunities to apply the information to a specific task, and then a chance to reflect on the experience following the task. The components of this cycle are consistent with literature on the transformational

role that reflection seems to play in professional development and teacher change (Howey, 1985; Lind, 2007; Penuel, et. al, 2007; Smith & Gillespie, 2007).

According to participants, facilitating involvement with this cycle requires continual attention and responsiveness to participants' needs, including differentiation and appropriate instructional adjustments.

Affordances of the Lenses

Although much of the literature on professional development notes that a primary purpose of professional development is to support teacher learning, very few studies examine what happens in professional development settings through a lens which focuses on teachers as learners. Failure to take into account the role of motivation in teacher learning obscures the influence of agency, personal interest, psychology, and self-efficacy on the learning process. The application of a motivational lens to the data from this chapter reveals that, as is true of learners in other contexts, particular kinds of pedagogical strategies appear to reinforce world language educators' intrinsic motivation to learn while others seem to suffocate it. Theories of motivation also helped me to notice relationships within the data, and to generate hypotheses about questions such as:

- *How might one explain contradictory responses from participants about the degree to which particular institute activities supported or constrained their learning?*
- *How might one explain the influence that different pedagogical approaches to the same activity appear to have on teacher learning?*

One of the other affordances of bringing the lens of motivation into relation with the lenses of play and creativity is the manner in which they collectively address the affective, cognitive, and social dimensions of learning. This combination of lenses fosters a more holistic, dimensionalized approach to professional development—one that views participants as learners with personal needs, interests, and talents. The lens of play also reframes learning—pushing researchers away from interpretations of learners as passive recipients of content and toward models that embrace learning as a process of active exploration, meaning-making, and interpretation. It foregrounds the role of imagination and the cognitive flexibility that enables learners to notice possibilities and seize opportunities for transfer. Additionally, the concept of play highlights that learning is social in nature. It emphasizes that learning arises out of the interaction of people with one another and with their environments. It also reminds researchers that as learners move developmentally from initial exposure to expertise, many of the most important facets of their learning are invisible—occurring in the “zone of proximal development” (Vygotsky, 1978)—the space between initial exposure and independent evidence of understanding.

The lens of creativity helped me to recognize the connection between the cycle of professional development outlined by participants and the major components of creativity outlined in Csikszentmihalyi’s (1996) work: preparation (which involves access, immersion, and information), incubation, insight, evaluation, and elaboration. It emphasizes the links between engagement, reflection, and transformation and illuminates the fact that both teaching and

learning are, inherently, acts of creation and transformation. Shulman (1987)

elaborates,

The key to distinguishing the knowledge base of teaching lies at the intersection of content and pedagogy, in the capacity of a teacher to transform the content he or she possesses into forms that are pedagogically powerful and yet adaptive to the variations in ability and background presented by the students. (p. 15)

However, in one sense, this is not enough. In order for information to affect practice, a transformation must also take place within the learner. As teachers seek to understand professional developers' representations of content, they must reorganize their existing schemata and the perspectives that accompany them. Finally, in order for teachers to change their practice, they must do things differently from the way they were doing them before. The lens of creativity is helpful in pointing researchers' attention to some of the factors that may influence this process.

Each of the lenses I drew on in this chapter are especially useful in helping to articulate some of the features of materials, tasks, and processes that may support learning. Nonetheless, they do have some limitations.

Limitations of the Lenses

The lenses of play, motivation, and creativity are problematic in several ways. They do not completely explain how imagination is catalyzed or how participants determine whether to abandon or incorporate into their practice what they "try on" through experimentation during professional development. In addition, these lenses do not account very well for participants who may initially choose to discard particular elements of institute content, only to pick them up

again following the conclusion of the institute. Another problematic aspect of these lenses is that they fail to resolve tensions between the critical importance of prior knowledge in facilitating learning and transfer, and the utility of “foreign” content and contexts in helping participants to step outside their existing paradigms. Furthermore, while ideas about creativity, play, and motivation highlight characteristics of materials, tasks, and environments that may support learning, they give inadequate attention to the role of pedagogy in ensuring the ultimate success or transfer of these resources and techniques. Additionally, concepts of play and creativity do not fully describe the strain that can arise when personal motivation and social interaction conflict. They also only partially address the effects breakdowns in participants’ motivation and learning may have on their self-perception and participation in professional communities of practice.

Chapter 9 addresses the social contexts in which professional development occurs. It attempts to historicize some of the breakdowns in participants’ learning within the larger context of the professionalization of teaching and the professional isolation that is typical in world language education. It considers breakdowns in participants’ learning, the discomfort that those breakdowns produced, and the ensuing social and emotional consequences of those breakdowns for participants. The chapter concludes by exploring the impact that representing teachers as “knowers” may have had on participants’ learning, self-perception, and professional interactions with their colleagues.

CHAPTER 9

BREAKDOWNS IN PARTICIPANT LEARNING

Teachers as Knowers

. . . Our society/culture and the teaching profession are ambivalent about Mentoring, Leadership and Change. We both value and devalue leaders within our profession. . . . (Post-institute Survey, Question 8, Red Group, Oregano)

Historically, educators in the United States have not enjoyed the elevated status of other professionals such as accountants, doctors, and lawyers. This is rooted in the beginnings of the American educational system, the “feminization” of the profession, the lack of financial resources for education, and the public belief that anyone who had attended school was, therefore, qualified to teach it. Several organizations have attempted to combat these images by working to “professionalize” teaching—some from within (such as teachers’ unions), and others from without³⁹. It is likely that this struggle to implant a more professional image of teaching in the minds of the American public has also impacted the struggle of individual teachers to make sense of their own professional contexts. This struggle is complicated by common representations of teachers, which position them as “knowers.”

Classroom practices remain largely teacher-centered, with lectures predominating. Subject content is taken as more or less given, and questions about how to teach Peggy Sue are answered in terms of ‘the guidelines.’ This pattern of practice follows a logic rooted in a professional culture that casts teacher as expert and student as recipient of knowledge. (McLaughlin & Talbert, 2001, p. 19)

³⁹ External reform efforts have included standardized achievement testing, certification and licensure reforms, professional skills examinations such as the *Pre-professional Skills Test (PPST)* and the *Praxis*, and federal legislation such as *No Child Left Behind*.

This image of teachers as “knowers” whose primary responsibility is to convey their knowledge to others carries with it a set of assumptions that lead to certain, pre-defined cultural scripts. These scripts shape teachers’ perceptions of their professional roles and responsibilities, as well as their behavior in professional settings. They may be particularly strong for teacher-leaders who hold positions of authority. In the case of the institute, participants may have been influenced by competing cultural scripts—that of the devalued teacher on the one hand and the all-knowing teacher-leader on the other, or that of the expert in their professional settings while simultaneously the novice or student in terms of some institute content. Because the structure of institute required participants to engage each of these competing roles at different times, participants may have experienced ambiguity and uncertainty regarding the boundaries of these roles. Some may have even felt forced to assume particular roles, which may have resulted in conflict and strain for some participants (Danna-Lynch, 2005). These conflicting sets of pre-defined roles and templates for behavior may have also influenced participants’ openness to institute content, their relationships with other participants, their interactions with group facilitators, and their expectations of themselves.

This chapter explores these issues, building on insights from Chapter 6 which addressed how participants explained their learning with regard to their institute experience. It focuses primarily on findings related to the second part of Research Question 4, *“How do world language educators explain breakdowns in their learning with regard to this professional development experience?”* The

chapter begins with a brief description of how the lenses guided the design of the institute, followed by a rationale for using them as tools for analyzing four different factors that participants felt constrained their learning during the institute. The chapter continues with an in-depth examination of what participants said about their interactions with other participants during and following the institute, and concludes with some possible interpretations regarding these breakdowns in participants' learning.

How the Lenses Guided the Design of the Institute

Providing participants with opportunities to expand their expertise through exposure to the knowledge and skills of their colleagues was one of the explicit purposes of the institute. Consequently as we organized participants into focus topic groups based on the interests they had expressed in their institute applications, as well as on the professional skills evident in their CVs, we did so with the express intent of tapping their professional expertise. We knew that teachers liked to share what they know. We were also keenly aware of the professional isolation that many world language educators experience by virtue of the fact that as the sole language teachers in their buildings or districts, they frequently lack opportunities to collaborate with colleagues. This awareness, in addition to our previous experience in facilitating summer institutes for world language teachers, reinforced our belief that participants would benefit from extensive opportunities to interact with their colleagues during the institute. However, we did not purposefully apply ideas from the literature regarding the

professionalization of teaching, representations of teachers as knowers, or professional isolation to the institute's design.

Rationale for the Selection of the Lenses as Analytic Tools

I chose to consider how the teaching profession has been perceived historically as a means of better understanding common themes that recurred in the data. Ideas regarding the professionalization of teaching helped to contextualize the self-doubt that many participants expressed as an issue that affects the teaching profession at large, rather than one that is endemic to world language professionals in particular. However, the lens of professional isolation proved especially helpful in drawing my attention to characteristics and conditions typical of world language education that might exacerbate the problem of self-doubt among world language educators in particular. Similarly, common representations of teachers as “knowers” offered a useful lens for interpreting many of the phenomena revealed in the findings from this chapter. The assumptions and action scripts that often accompany the perspective that teachers are “knowers” offered insight into the beliefs that may have influenced participants’ presuppositions about the role of leaders, their expectations of group facilitators, and their professional insecurities. The lens of teachers as knowers, in conjunction with the lens of professional isolation, helped me to better understand why some world language educators use comparisons of themselves to their colleagues as measures of their professional effectiveness rather than relying on more product-based measures. The combined use of

these lenses revealed a number of findings that make additional contributions to understanding these issues. It is to these findings that we now turn.

Breakdowns in Learning

When asked to discuss the least valuable portion of the institute, at least four different participants indicated that they had no complaints, or commented that everything about the institute was valuable or important to them in some way.

n/a (Post-institute Survey, Question 9, Blue Group, Cayenne)

None (Post-institute Survey, Question 9, Green Group, Saffron)

*It's hard for me to really identify anything that wasn't important.
(Post-institute Survey, Question 9, Blue Group, Basil)*

I don't think there was a "least valuable" part. there might be some pieces that I might not find relevant or applicable right now, but as they sit in my brain and I am able to think about them more and process them further, I'm sure that they will come into focus and I will find ways to make them more relevant. (Post-institute Survey, Question 9, Yellow Group, Cinnamon)

It is unclear whether the responses above refer to institute content, pedagogical processes, or both. It is also noteworthy that three of these four participants were group facilitators. It is possible that those who served as group facilitators experienced less discomfort as a result of the reinforcement of "authority" that their "position" as group facilitators may have provided them. Their previous experience with NFLRC institutes may have also equipped them with a more realistic sense of what to expect, as well as schema and strategies for managing any cognitive disequilibrium they might have experienced. Their responsibilities as facilitators may have positioned them to view institute content and processes

more from the perspective of what they were intended to accomplish (purpose) rather than how they were actually experienced by participants (execution). It is also possible that they felt a greater sense of control than participants who were not designated as group facilitators, making them less likely to find fault with institute content or processes. Their position as group facilitators may also have made some feel awkward about openly criticizing what took place. These group facilitators' comments were in harmony those of all the other participants, whose responses to post-institute and follow-up institute surveys indicated that what they had learned from the institute was of some professional value to them.

Nonetheless, other participants' responses also made clear that a number of content- and process-related features of the institute influenced their learning in adverse ways. These elements appeared in participants' responses to survey questions that asked them which parts of the institute were least valuable to them, which processes and strategies most facilitated their learning, and what questions they had about institute content. Many of these topics also emerged as primary themes across data sources during data analysis. Issues of clarity, closure, time, relevance, and group dynamics featured most prominently in participants' comments.

Clarity

In response to a question that asked participants to comment on the least valuable part of the institute, five participants raised the issue of clarity.

*I did hear a number of participants at this year's institute **complain about the overall value or purpose** of Mentoring, Leadership and Change. (Post-institute Survey, Question 9, Red Group, Oregano)*

This statement could be interpreted in a number of different ways. On the surface, it suggests that the purposes of the institute were not well-aligned with some participants' needs and interests, thus causing them to question its value. However, that interpretation is contradicted by participants' responses to the follow-up survey in which 16 of 18 participants affirmed that the institute was professionally useful and had influenced their teaching. Given that the above participant did not bound her statement with any kind of temporal markers, it is also impossible to determine when during the institute the other participants made the statements to which she refers. It may be that the sentiments she describes were strong during the beginning of the week, but dissipated over the course of the institute. It may also be that these kinds of comments had less to do with participants' feelings about the overall value of the institute and more to do with the anxiety that unclear expectations may have engendered. Several other participants' comments offer additional insights.

I also would have spent 15 minutes outlining where we were headed for the week at the beginning to explain to the participates [sic] when it was all going to come together. I think that MIGHT have reduced some of the anxiety and it wouldn't take a huge amount of time. (Post-institute Survey, Question 9, Red Group, Nutmeg)

This participant's statement hints that the anxiety some participants experienced was the result of uncertainty—not knowing “*where we were headed for the week*” or “*when it was all going to come together.*” Given that institute leaders did review the institute agenda with participants on the first day, it might also imply that participants did not perceive clear connections between the

overarching goals and purposes for the institute and various institute activities. This may have made it difficult for participants to see the “big picture” clearly, resulting in confusion about the relationships among the individual segments of the institute, a sense of fragmentation, and the feelings of anxiety to which participants allude in their responses to this question. Another participant provides more detail, noting specific topics that were unclear.

*The aspects of **leadership and mentoring were vague**
(Follow-up Institute Survey, Question 18, Green Group, Tarragon)*

In response to a post-institute survey question, this same participant elaborated,

*I felt that **we might have drawn more parallels with foreign language instruction, mentoring, and leadership and had indepth [sic] conversations.** (Post-institute Survey, Question 9, Green Group, Tarragon)*

This comment suggests that the vagueness to which the participant referred may have been related to an insufficient number of direct connections to foreign language, as well as a desire for deeper exploration of these topics. This did not appear to be true for all participants, however. At least one participant implied that too much time was spent on these concepts. In response to a post-institute survey question that asked about the least valuable part of the institute, he commented,

***Reviewing concepts of leadership and mentoring with which I was familiar.** . . . (Post-institute Survey, Question 9, Green Group, Dill)⁴⁰*

⁴⁰ Paradoxically, in the Follow-up Survey, this participant noted that he wished we had spent more time on leadership and mentoring and less time on “design.”

Thus, the degree to which participants perceive a topic as being clearly presented or relevant to their own personal circumstances may depend, at least in part, on their prior knowledge and experience with the topic.

Unclear instructions may have further contributed to a sense of uncertainty, and the anxiety that some participants appear to have experienced in conjunction with it.

The assignments for the first two exercises were not clear enough. (Post-institute Survey, Question 9, Orange Group, Ginger)

The fact that this participant limits this criticism to “*the first two exercises*” suggests that clarity may have improved as the institute progressed. For other participants, the lack of clear expectations seems to have been disconcerting on a more personal level.

Not knowing what was truly expected of me. (Post-institute Survey, Question 9, Orange Group, Fennel)

In informal conversations with participants that occurred one year following the institute, several expressed that because they knew they had been invited to participate in the institute as a result of their leadership and expertise, they were anxious to fulfill those roles adequately during the institute. Thus, it makes sense that a lack of clarity regarding what we expected of them as individual participants might have caused significant anxiety for some. A participant who attended both *Mentoring, Leadership, and Change 2003* and *Mentoring, Leadership, & Change 2006* further illuminated this issue by contrasting the two institutes.

... to a certain degree, there was less structure for what the expectations were for each of the groups. So in 2003, you knew what you were going to do because you had done it all before you got there. And in 2006, you really didn't know what you were going to do until almost the last day and how that was going to work out—and, and, and not everybody got it done! (Field Notes, Lines 396-403, Yellow Group, Cinnamon)

Cinnamon is referring to the fact that prior to attending the institute in 2003, each focus topic group worked together to prepare a 3-hour workshop which they then presented to other participants during the 2003 institute. She appears to be contrasting these 3-hour workshops with the mini-tasks focus topic groups worked on during the 2006 institute which were intended to provide scaffolding for the final presentation each group gave at the conclusion of the institute. Cinnamon's explanation suggests that although each mini-task during the institute was designed to lead participants through the creation of the final product one step at a time, some participants may have needed more information about the content, structure, and format of the final performance in order to assuage the anxiety generated by uncertainty about the final product.

In summary, it seems that one of the consequences of a lack of clarity may be feelings of uncertainty and anxiety that may contribute to breakdowns in participant learning. It also appears that participants experienced several different layers of uncertainty and anxiety. A few were uncertain about institute leaders' expectations for them as individuals, others were unsure of the goals and expectations for specific tasks, some may have preferred a sharper focus on connections to foreign language, and several were not clear about the expectations for their group's performance. It is likely that each of these layers of

uncertainty added to participants' anxiety and frustration, and may have made it difficult for them to see the relationships between the overarching purposes of the institute and individual institute activities.

These findings suggest that what is often referred to in the literature as *coherence* (Birman, Desimone, Porter, & Garet, 2000; Garet, Porter, Desimone, Birman, & Yoon, 2001; Guskey, 1986; Newman, King & Youngs, 2000) may be fostered by purposefully stating not only the goals and purposes of professional development, but also explaining how individual institute activities will assist participants in achieving such goals. Participants' ability to perceive coherence as they reflect on institute content, tasks, and processes may be supported by clearly defining tasks, explicitly articulating expectations for the performance of both individual participants and small groups, and making connections between content, task, and the discipline (in this case, world language education) more explicit. Another factor that emerged from the data as one which may influence participants' sense of coherence is closure.

Closure

On the day when filmmaking was discussed, small groups of participants were given digital video cameras and asked to go out onto campus and shoot footage of anything that was interesting to them. The intent of this activity was to help them to develop basic skills with the video camera while giving them an opportunity to explore the campus a bit more. Institute leaders planned to have the participants use the footage to develop basic skills in video editing using iMovie at a later time. However, there was not time to import all the video into

the computers so that participants could do this. Consequently, leaders abandoned this plan, but did not explain this to participants explicitly. Several participants offered comments about this when asked about the least valuable part of the institute in a Post-institute Survey question.

Walking around and shooting with video cameras and never doing anything with that. There wasn't really much that wasn't valuable. I was so thirsty for this kind of immersion into ideas, that it was all pretty wonderful for me. (Post-institute Survey, Question 9, Blue Group, Caraway)

I still don't understand why we practiced using the digital video cameras (we didn't do anything with the footage). The field trip was interesting - but we only touched on our observations briefly - we never got to compare (or look at) the pictures that we took. (Post-institute Survey, Question 9, Yellow Group, Thyme)

These comments highlight several issues. The first is that while process and skill-building may be worthy goals in and of themselves, some participants may need to see a final product in order to feel they have learned from an activity or experience. Some studies suggest that this mindset is particularly common among novices (Meskill, Mossop, DiAngelo, & Pasquale, 2002). Even in the absence of a final product, it seems that debriefing is an important step in helping participants to consolidate their learning. This is congruent with findings from Chapter 6 which indicated that after opportunities to apply a new concept or skill, participants need time for reflection, feedback, and adjustment (see Figure 8.2). A lack of debriefing following hands-on activities may make it difficult for participants to engage in enough reflection or to obtain feedback in sufficient quantities in order to adjust their performance. This lack of closure may also be unsettling to some participants.

A sense of closure may also contribute to the degree to which participants perceive institute activities as being coherent.

*Also, the afternoon in which we worked in learning centers...I felt as though we spent to [sic] much time working and my energy dissipated. **I would have liked to have done something at the end of that afternoon to bring it together. This was interesting to me because I never would have thought of it (I have done the same thing in my classroom) without that experience.** So it is not that it was not valuable (actually I learned a lot), it is just some feedback for you :-)* (Post-institute Survey, Question 9, Red Group, Nutmeg)

The primary breakdowns noted here seem to revolve around the way in which individualized activities were structured. Although participants had the freedom to choose from a variety of activities which they could complete at their own pace, many required similar kinds of skills and intense levels of concentration. Consequently, even movement from one activity to another may not have provided enough of a change of pace to alleviate physical or mental fatigue, making it difficult for participants to maintain momentum and interest in the tasks. In light of this fatigue, it is possible that participants may not have had sufficient energy or mental acuity to extract overarching principles from the work they did at the various stations. A culminating closure activity might have enabled them to make connections between the afternoon's learning activities and their professional contexts in ways that would have increased the sense and meaning they made of the experience.

Nutmeg's comment that she "*never would have thought of it [the need for a structured synthesis activity] . . . without that experience*" is an intriguing one, and suggests that participation in the institute may have offered participants

something against which to compare their own professional practice. These comparisons may have, in essence, served as “feedback” that participants were then able use to adjust their practice. In other words, even the mistakes institute leaders made may have still been of some benefit to participants.

Because the institute was, essentially, a design experiment, opportunities for mistakes were abundant. At least two participants seemed to recognize this, noting the unconventional and ambitious nature of the institute.

*First, I want to complement [sic] all of you for creating, **designing and taking the risk to implement what was a radical concept (particularly in the context of K-12 foreign language education).** That's not nothing and I don't take it for granted.
(Post-institute Survey, Question 9, Red Group, Nutmeg)*

***Your perspectives on how to design compelling lessons for our students were so far beyond anything I'd ever thought about** (Field Notes, Lines 216-218, Yellow Group, Sage)*

Nutmeg's comment is interesting because it highlights that a great deal of risk is inherent in any departure from existing practice (in this case, what educators had come to expect professional development experiences to look like, feel like, and sound like). Participants' sense of competence may have been challenged when confronted with so much new content and unfamiliar pedagogical strategies, creating intense discomfort. This may have been exacerbated by participants' awareness that they had been selected to participate in the institute because of their leadership and expertise. “Not knowing” may have also seemed incongruent with their roles as leaders. Sage's responses across survey questions indicate that she appreciated this “*radical*” departure from typical professional development practices in K-12 foreign language education. She

(and other participants) stated that they enjoyed the opportunities to consider their practice through the new lenses that the institute provided them. Even so, these same participants' responses to other survey questions indicate that at times, institute leaders' plans may have been too ambitious.

*While the nine days were intense and filled with valuable information, it (to me) would almost be **better to spread this information out over a longer period of time**. It was **very difficult to learn the new information** (such as the compelling frames) **and be able to apply it to our topics, or our teaching, in less than 24 hours**. It was **virtually impossible to get practice putting all of the concepts together in the time we had**. (Post-institute Survey, Question 9, Yellow Group, Sage)*

According to Sage, the amount of time devoted to the cycle of professional development (introduce information, process, apply, reflect, adjust) was inadequate. As a result, she felt she did not have sufficient time to process, apply, reflect on, or make adjustments to her understanding. She suggests this influenced both the quality of her learning, and the degree to which what she learned can ultimately become part of her classroom practice.

This may be due, in part, to the cognitive load that the quantity, complexity, and variety of information addressed during the institute placed upon participants. According to participants' self-assessment of their experience with institute topics prior to the institute, most were unfamiliar with or could only list key concepts and principles for 11 of the 19 topics that were addressed by the institute. This suggests that most did not have a great deal of existing prior knowledge or schema on which they could draw in order to make sense and meaning from many of the concepts presented during the institute. It is likely that the wide variety of topics, in conjunction with the novelty of the content and

structure of the institute, significantly increased the cognitive load participants had to manage. In other words, when things did not function as they always have before, participants could no longer confidently rely on the schemas they had typically used to navigate such situations in the past. Therefore, their brains had to devote additional energy to understanding and interpreting what they were experiencing as they tried to make sense and meaning of it in light of what they already knew and understood. Anderson & Woodill (2004) explain that as a result of the cognitive load involved, “. . . learning and performing are ‘incompatible processes’ for novice learners” (p. 236). When we asked participants to do both simultaneously, it may have placed added strain on some participants’ minds, which in some cases, may have raised their affective filters to the point that it was extremely difficult for them to process new information. Hawley and Valli (1999) concur. They state that when the content is novel or complex, familiar instructional strategies should be used and vice versa.

Consequently, participants may have needed extended time and extra supports put in place to help them make sense of the unfamiliar and unconventional content of the institute. Participants’ comments suggest that they might have benefited from short debriefings that summarized the key content of individual institute activities and fostered reflection on its relationships to their professional contexts. This might have been one way institute leaders could have reduced their cognitive load. Instead, it appears that an insufficient number of closure activities may have impeded participants’ opportunities to make connections across individual institute activities and to extract significance from

those connections. This lack of opportunity to consolidate their learning may have made it difficult for them to experience institute content as a coherent whole and to perceive their own learning.

It also appears that participants' ability to analyze and consolidate new information may be a process, rather than an event. This would help to account for participants' comments in Chapter 6 about how the extended time provided during activities like the learning stations contributed to their learning. However, it appears that when sufficient time is available, professional conversations may occur which facilitate ongoing reflection and feedback, supporting some participants with respect to the issues addressed in this section.

Survey responses indicate that as institute leaders, we did not do an adequate job of clearly explaining institute tasks and purposes or of helping participants to consolidate their knowledge and technology skills so they could feel comfortable with assigned tasks. It also seems that we did not provide adequate time for participants to learn what they needed in order to function successfully. Consequently, some participants may have experienced institute content as vague, fragmented, and overwhelming.

Time

Time was an important motif that was present throughout the responses from the previous section. At least six institute participants noted that extended time had supported their learning by giving them opportunities to process new information, while others experienced this extended time as an impediment to their learning. In response to a Follow-up Survey question about what

participants understood about teaching, learning, mentoring, leadership, or change that they did not understand immediately following the institute, one participant said,

Hopw [sic] difficult it is to maintain without ongoing professional dialogue follwoing [sic] up the ideas presented. (Follow-up Institute Survey, Question 17, Blue Group, Caraway)

This suggests that some participants may need continued opportunities to engage with others regarding institute content following the institute in order to truly internalize it or apply it in ways that affect practice in a substantive way. Additionally, even if closure is achieved immediately following an activity or at the conclusion of a professional development session, it may not be sufficient to maintain the momentum participants may have achieved during the institute once they leave it. In the very next survey item which asked, "What questions do you still have about the concepts addressed during the institute?" this same participant stated,

How to find the time to keep reading, learning, exploring, and integrating new concepts into one's teaching when one's plate is already full. (Follow-up Institute Survey, Question 18, Blue Group, Caraway)

This participant recognizes that continuous improvement of her teaching is an ongoing process that requires actively seeking out new information, pondering the significance of that information, and experimenting with its application to her daily work with students. She also indicates that such a process requires time, which for many teachers, is a commodity that is in short supply.

In other words, there may be a strong relationship between time and the degree to which participants are able to assume responsibility for their own

learning by autonomously seeking out and engaging in opportunities for professional growth. Because practicing, applying, and reflecting are all endeavors for which substantial amounts of time are requisite, the time available to educators following a professional development experience may also be a critical variable that determines the degree to which a professional development session has any noticeable effect on their professional practice. In response to a question about what the most valuable experiences she had at the institute were, one participant said,

*The one thing I told people who asked about it when I got back was **there were so many things that I needed to marinate before I could answer that.** (Field Notes, Lines 110-112, Mint)*

The fact that this participant was not able to explain what, if anything, she valued most about her institute experiences affirms that institute content and purposes were probably unclear for more than one participant. Her inability to articulate what she valued also makes it unlikely that it affected her classroom practice in any significant way immediately following the institutes. Another participant (who attended both the 2003 and 2006 institutes) explained,

*And I know that that was one of the goals of the 2003 institute, was to try to give those participants a deeper understanding of some of those, give people a deeper understanding of those topics that they probably just had some familiarity with I probably did come away with a deeper understanding, but . . . it wasn't an understanding that I was immediately able to say, "Oh yes, now I know." **I know more about those things now, four years later because I've pursued them on my own or because I've been to sessions or offerings that talked about them,** or because I've had opportunities to work with them personally. (Semi-structured Interview, Lines 132-143, Yellow Group, Cinnamon)*

These comments are interesting because they suggest that it is unlikely that institute content had any immediate effect on participants' thinking or practice—at least not in ways that were evident to participants. They may also mean that what may have been most important about the *Mentoring, Leadership, and Change* institutes is that they helped some participants to begin constructing a foundation of prior knowledge that could provide schema for their future learning. Had participants been given sufficient time to experiment with those newly acquired skills, it is possible that they might have also helped participants to consolidate their new understanding and attach it to the theoretical concepts to which they had been introduced. However, it appears that participants did not have sufficient time to ponder and process institute content, nor enough support from institute leaders in doing so. Consequently, it is unlikely that they were able to integrate this understanding into their professional work in any substantive way. However, although the impact of the institutes on participants' classroom practice may have been quite limited immediately following the institutes, the foundation of understanding they developed during the institute may have then played a key role in facilitating their future learning. It is this future learning which may eventually help to support changes to their practice over time. One factor that may provide additional insight into the issues mentioned above is relevance.

Relevance

Relevance may determine the degree to which participants attend to and engage with institute content. It may also foster willingness to engage in professional conversations that can spur and support the ongoing reflection

necessary for participants to reorganize their existing schema in order to accommodate new learning. The degree to which participants viewed institute content as relevant appears to be correlated with the degree to which they perceived it as being connected to their professional contexts, feasible in those contexts, and “real” or “practical” (as opposed to theoretical and idealized). In the following paragraphs, each of these elements of relevance will be addressed in turn.

Relevance of institute content. In response to a question that asked, “What processes or strategies used during the institute were most useful in helping you understand the concepts that were presented?” one participant noted,

*Loved the triangle graphic--it's amazing how many concepts could be mapped within that frame. **I got that every day was set up to present a compelling experience for us. Sometimes it just didn't work for me. Our (the class') visions of 'compellingness' were sometimes different.** I liked the process of starting with a product and moving it forward and adapting it to meet different goals & needs. I understand the process of process, and that part was the most appealing to me.*

(Post-institute Survey, Question 10, Orange Group, Marjoram)

Marjoram indicates that although some of the materials and instructional strategies institute leaders used to scaffold participants' involvement with institute content worked well for her (such as the triangle graphic or iteratively developing a product by progressively adding new layers to it), sometimes the targeted content did not. Although she recognized that institute leaders were attempting to orchestrate compelling experiences for participants each day, she notes that their perspectives regarding what constitutes a “compelling experience” were not

always well-aligned with participants' perceptions. It is likely that what participants considered meaningful and relevant depended, to some degree, on their prior knowledge, experience, and the concerns they were currently facing in their professional contexts. If participants lacked sufficient schema for the content that was presented, or if they did not perceive solid connections between each day's "compelling experiences" and the foreign language contexts in which they were working (as indicated in the previous section), it would make sense that they might not perceive the experiences as particularly compelling, meaningful, or relevant. This interpretation is consistent with participants' comments about their technology learning in Chapter 7.

Nonetheless, Marjoram seems able to separate the design and intent of the institute from how it affected her personally. Breakdowns in the relevance of the institute content did not affect the degree to which she valued the processes used to engage participants with that content. Her comment about *"starting with a product and moving it forward and adapting it to meet different goals & needs"* implies that she noted the pedagogical processes used to involve participants. Her statement about understanding *"the process of process"* suggests that she devoted time to metacognitive reflection about the pedagogical processes used during the institute. In light of these comments, professional development sessions that focus on the delivery of content without also carefully considering the pedagogical processes used to do so may be missing an important opportunity to influence participants' thinking.

Feasibility of institute content, strategies, and techniques. Another facet of this issue may be the degree to which participants perceived what was presented as being feasible in their own classroom contexts.

. . . Nothing in my school district is or will be Apple. To be practical, I will need to take ideas and make them PC do-able. That may be work, or may be play -- happily, our HS students are very creative in all of this, so I'll have help. (Post-institute Survey, Question 9, Red Group, Rosemary)

The fact that participants were working with Mac computers appears to have created barriers to transfer for Rosemary. She indicates that applying institute ideas to her classroom practice will require additional effort on her part because she will have to “translate” what she was taught in order for it to function on the platform available to her at her school. Nonetheless, she seems willing to apply the technology things she learned to her own context, even though that will require some degree of adaptation and modification. She expresses some ambivalence about whether adapting institute context to her current situation will be a pleasurable task or not, but the tone of her final sentence is hopeful—perhaps because she anticipates support from others. For participants who lack such support, applying the things they learned may be more difficult. In either case, her comment suggests that it is important for professional development providers to explicitly address issues of translation and transfer, and that the institute did not do that well enough for the content to be immediately applied by participants without Macs. Thus, it seems that the more distant from participants’ daily realities the products, practices, and perspectives that a professional

development session espouses are, the more extended support participants are likely to require in order to implement such ideas successfully.

Practical application. The level of abstraction involved in institute content may also be a contributing factor to whether or not participants experience it as relevant.

How to more effectively mentor in a practical realistic environment (Follow-up Survey, Question 18, Orange Group, Marjoram)

This statement suggests that Marjoram may believe that some aspects of institute content were rather idealized and did not take into account the day-to-day realities of the professional context in which she works. It is also possible that because the topic of mentoring is much less concrete than that of technology, next steps were more difficult for her to see. This phenomenon may be especially true for participants who do not have a lot of prior knowledge or experience with such topics.

Prior knowledge and experience. Two participants offered somewhat elusive responses to the Post-institute Survey question regarding what about the institute was least valuable to them.

getting [sic] stuck in the chicago [sic] airport for 24 hours on the return trip (Post-institute Survey, Question 9, Yellow Group, Turmeric)

This response may reflect that this participant's most recent memory related to the institute experience happened to be her trip home. It is also possible that she wanted to avoid commenting on the aspects of the institute that were not valuable to her, or that the institute was so valuable to her that she did not have

anything negative to say about it. On the other hand, her response could indicate that even factors external to a professional development experience may affect participants' feelings about the experience.

Another participant's response to a question asking for a description of a compelling experience that occurred during the institute indicates that participants' interpretations of a professional development experience may also be affected by external factors that are not physical, such as the personal experience they bring to it.

*I was on a bus in NYC when I decided I would fly to Minneapolis to be with a woman [sic] with whom I had fallen in love. I still remember where I was on Fifth Av. **The bus ride was nothing excpetion, [sic] but it was the experience I brought to it.** (Post-institute Survey, Question 5, Green Group, Dill)*

This remark is rather cryptic, making it difficult to interpret the meaning the participant intended to convey. However, it does raise a number of interesting possibilities. It may be that instead of describing something he had experienced at the institute, the participant was simply answering a different question—whether or not he had ever had a compelling experience. In any case, his response affirms the idea that prior knowledge and experience probably play a critical role in how participants perceive, experience, internalize, and make meaning from a professional development experience. In another regard, it also completely sidesteps the question by focusing on an experience that was not physically related to the institute in any way. From a metaphoric standpoint, however, it suggests that although nothing about the institute itself was particularly compelling for this participant, he may still take something of value

away from it because of the ways in which the prior knowledge and experience he brought to it helped him to frame, interpret, and learn from it. His comments in post-institute and follow-up institute surveys further illuminate this response.

I feel like I've made a lot of friends from my time at the institute. Almost to a person, none of us would have attended if we had known who [sic] much we would dislike the experience, but there is nothing like a really bad experience to bond a team. (Follow-up Institute Survey, Question 18, Green Group, Dill)

Dill does not indicate what, specifically, he disliked about the experience or why he felt it was “bad.” His declaration that he made a lot of friends at the institute and his mention of the bonding that he felt occurred imply that his feelings about the experience were not the result of interpersonal conflicts among group members. It may be that institute content was too basic for his current level of understanding and skill. It is also possible that it seemed irrelevant to his professional responsibilities as an administrator, that the structure or purposes of the institute did not make sense to him, or that the pedagogical processes employed during the institute were not a good fit for his learning style. It could be that he disagreed with the approach taken by institute leaders, did not see clear opportunities to contribute in a meaningful manner, or that the institute challenged him in ways that made him feel uncomfortable. It is likely that each of these alternative possibilities would be heavily influenced by his prior knowledge and experience. In response to a Post-institute Survey question about the least valuable part of the institute, Dill offered additional information that affirms this.

Reviewing concepts of leadership and mentoring with which I was familiar. Working on one computer with other participants [sic] on a project. (Post-institute Survey, Question 9, Green Group, Dill)

This suggests that Dill may have been bored with the mentoring and leadership content addressed during the institute as a result of his expertise in these topics.

This survey is really the first message I've recieved [sic] from the institute in the last year. I asked to be added to the electronic newsletter (a couple of times) and still haven't been. The two leaders have had no contact with the group since the conference. I would have liked to have seen more time spent on mentoring and leadership and not so much on "design." What happened to us all gething [sic] together in summer 2007? (Follow-up Institute Survey, Question 18, Green Group, Dill)

The majority of issues Dill raises here revolve around communication with institute leaders following the institute, opportunities to convene with other participants, and concern regarding the proportion of time that was spent on particular institute topics. It appears that he feels institute leaders did not follow up with participants in the ways he expected once the institute concluded. It also seems that he valued the interpersonal interaction with other participants (and perhaps the exchange of social capital this made possible), and was disappointed by the fact that it did not continue in an organized way following the institute.

His statement about the amount of time spent on design as opposed to mentoring and leadership suggests that the content of the institute was not well-aligned with his interests, needs, or expectations. His self-ratings on the Pre-institute Survey indicate that he had either experimented with or could model and correct misconceptions about all of the institute topics with the exception of those

related to design and 21st Century learners, literacies, and technologies.

Consequently, it is possible that he felt uncomfortable with the design-related topics addressed during the institute because he lacked substantive experience with them. By the same token, these topics may have lacked value to him because they did not focus on his primary area of interest and expertise.

Nonetheless, in another Follow-up Survey question, he noted,

*As an administrator, I used much of what I learned via **technology** in a FL methods class I taught. Also, I also **accepted a position as the founding principal at a virtual high school, something for which the Institute set the stage.** (Follow-up Institute Survey, Question 13, Green Group, Dill)*

Thus, irrespective of the reasons behind Dill's negative reaction to the institute, it appears that he gained at least three things from it: 1) friends, 2) knowledge and skill related to technology that was professionally useful to him following the institute, and 3) access to new professional opportunities.

Participants' comments suggest that their professional roles played a large part in determining what they perceived as professionally relevant. They appear to be most likely to attend to institute content when they perceive it as relevant to the professional contexts in which they work. This means that it must seem related to the tasks, routines, and challenges they typically encounter; feasible given their professional circumstances; and to have clear, practical applications to their daily activities. It also appears that they will perceive content as especially relevant when it is well-aligned with their prior knowledge and experiences. It appears that this was not always the case where this institute is concerned.

Although clarity, closure, time, and relevance were raised as potential impediments to participants' learning, only one or two participants commented on each one. This suggests that while these factors may affect participants' opportunities to learn, their effects may be somewhat idiosyncratic, depending a great deal on the individual participant. By contrast, a high degree of consensus was expressed across data sources and participants about the ways in which tensions within small groups impeded learning.

Participant Interactions

When asked which institute experiences had had the greatest impact on their teaching/professional responsibilities over the year following their participation in the institute, at least four participants mentioned the relationships they had developed with other participants.

*the **contacts I've made with other participants** from around the country. (Follow-up Institute Survey, Question 10, Yellow Group, Turmeric)*

***I still have the contacts I made at that workshop and I'm using them as much as anyone.** "Frankly, I'm trying to impact the whole state." (Field Notes, Lines 14-16, Red Group, Rosemary)*

Although participants were not specific about why they valued these contacts, during informal conversations held with many individual participants one year following the institute provide some clues. At least five mentioned other institute participants by name. These names were typically discussed in the context of exchanges of classroom ideas or professional materials, conversations at professional conferences, and professional collaboration on projects. This suggests that these participants continue to benefit from their professional

interactions with one another. In fact, several participants identified these interactions as being among the most useful and the most influential of their institute experiences.

*I have used all experiences [sic]. I would say **the most has been interaction with other professionals.** (Follow-up Institute Survey, Question 10, Green Group, Saffron)*

In an informal conversation one year following the institute, Saffron made a comment that suggests that the interactions she valued occurred both during and following the institute.

*Our group **got along well . . . met at conferences** (Field Notes, Line 19, Green Group, Saffron)*

Another participant specifically linked her interactions with other participants during the institute to her ability to fulfill her professional responsibilities following the institute.

***The interactions with cooperating teachers during the institute have had the greatest impact** on my teaching/professional responsibilities in the last year. **I gained valuable insight as a university professor into the perspective of the cooperating teacher during the student teaching process.** (Follow-up Institute Survey, Question 10, Red Group, Oregano)*

Oregano implies that her interactions with other participants led her to new insights that have assisted her in working with student teachers and their mentors as a university professor. She clearly values what she now understands about the perspectives of these colleagues as a result of her interactions with other participants during the institute. These ideas are in harmony with some of the literature on professional development that suggests that conversations with colleagues offer participants opportunities to use their prior knowledge and

experiences as tools for critically exploring both professional traditions and their personal paradigms (Lind, 2007).

Paradoxically, although participants listed their interactions with other participants as among the most compelling experiences of the institute, some of these same participants also noted that tensions among the members of their focus topic groups constrained their learning. These tensions were mentioned by participants whose groups worked well together, as well as by participants in groups that experienced a great deal of strain, as these representative comments illustrate.

Our group was wonderful. Everybody worked really well together and we heard about issues with the other groups. . . . (Field Notes, Lines 143-159, Yellow Group, Sage)

The fact that this participant “heard about issues with other groups” in spite of the successful interactions that took place in her own group suggests that interpersonal tensions may have influenced the institute environment as a whole.

There seemed to be quite a lot of tension for some participants at the institute. I am not sure I fully understand the underlying conflicts of some of the participants. Overall, I believe it was a valuable experience. (Follow-up Institute Survey, Question 18, Red Group, Oregano)

Oregano alludes to tension, but does not say whether that tension was related to the content of the institute, the pedagogy, personality clashes among participants, or to some other factor. Another participant's comments suggest that whether interactions took place within the whole group or a small group may help to explain participants' paradoxical statements that their interactions with other participants were among the most and least valuable parts of the institute.

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*During the institute: I considered this holistically. **The whole group activities and samples, varied, flexible, well-planned, I found compelling.** All through the institute I kept my thinking in "what if" mode -- so I could imagine how things might be used to impact all of the levels of people I need to work with -- whether they know it or not. It was time that was away physically [sic] from the problems and people, but intensely useful to me to center and focus my thoughts and plan actions. **The small group projects were a struggle.** (Post-institute Survey, Question 5, Red Group, Rosemary)*

Rosemary makes a clear distinction between whole group activities and small group activities, explaining that whole group activities were “*compelling*,” while small group activities were “*a struggle*.” At least eight different participants representing four different focus topic groups across three different data sources also noted that conflicts arose during small group work. In all but one case, their comments referred to the same two focus topic groups—the Red Group and the Orange⁴¹ Group. The tensions in these two groups are explored in more detail in the following section.

Tensions in the Red & Orange Groups

The “Red” and “Orange” Groups were comprised of very talented, professionally-involved individuals. Each held leadership positions within their respective spheres of professional responsibility. Several were extremely active in their local, regional, and state world language organizations—serving on executive boards, giving presentations, and attending conferences. Others were very involved in community organizations and activities. Most had leveraged these positions (in conjunction with their dynamic personalities) to create changes in their local professional contexts.

⁴¹ The actual names of these groups have been replaced with pseudonyms to protect participants' anonymity.

The educational preparation of the Red Group ranged from Bachelor's degrees to PhDs, while each member of the Orange Group held a Masters degree. Some had extensive K-12 classroom experience, while others were curriculum coordinators in K-12 districts or university faculty members. Still other members of the groups had limited classroom experience, but were working in both K-12 and university contexts. The members of the Red Group had been working in the field of education from 12 to 34 years, with an average of 20.25 years, while the members of the Orange Group had been educators for 9 to 33 years, with an average of 19.25 years. Three of the four members of the Red Group spoke the same target language, while three different languages were represented in the Orange Group. As was true in many groups, several of the members of these groups also had substantive expertise (i.e. degrees) in key institute topics.

Access to Learning Impeded

Participants in both focus topic groups noted that they experienced frustration as a result of the time they spent working with the other members of their groups. While it is difficult to determine from participants' remarks exactly what catalyzed the tensions within each group, the conflicts appear to have impacted participants' access to learning, with accompanying emotional and practical consequences.

My group did not work well together and so the porjects [sic] just left me frustrated. (Post-institute Survey, Question 9, Orange Group, Mint)

Our small group didn't really gell [sic] well. I worried about it for awhile, then just tried to roll with it and to try to heal things. So I don't think I got as much practical practice, for example with podcasting and video use, as I might have liked
(Post-institute Survey, Question 9, Red Group, Rosemary)

Rosemary links tensions within her focus topic group to a lack of “practical practice.” She does not explain how the two are connected, but it may be inferred that the lack of collegiality influenced participants’ ability to collaborate on assigned tasks, to obtain help from one another, and to contribute to a common product. Participating in these group interactions also appears to have required a measure of extra effort which consumed emotional energy—potentially making less available to invest in the actual task. Both participants suggest that the dynamics of their groups diminished their opportunities to practice and apply new information, thus directly impacting their skill development and learning.

Too Much Time Together

A second participant in the Red Group noted that the amount of time participants spent in their focus topic groups seems to have exacerbated the problem.

I enjoyed mixing the groups up in order to meet all of the members of the institute. In the middle days, I began to feel like the focus groups were spending too much time together, and perhaps a brief activity which mixed the members every once in awhile might have alleviated [sic] some tensions. (Post-institute Survey, Question 10, Red Group, Coriander)

Being confined to a group that did not function well for an extended period of time contributes another possible explanation for some of the professional and emotional tension that seems to have arisen in these groups.

However, another participant's comments about what she had learned about mentoring, leadership, and change suggest that the establishment of clear norms for group interaction and the delineation of roles and responsibilities within the group might have helped to assuage some of this tension.

Collaborative teaching/ learning is oftentimes very bumpy before individuals in a partnership/group can agree on even basic rules of discussion and how each will make a contribution to the larger profession. Mentoring, Leadership and Change is first and foremost relational. (Post-institute Survey, Question 8, Red Group, Oregon)

A lack of well-established norms for group interaction, and unpredictable or overly critical professional communication may have made it difficult for participants in these groups to communicate and collaborate well with one another. The need for explicit ground rules was underscored by the verbal interactions that took place in these groups.

Verbal Conflict and Negativity

According to participants from both groups, verbal conflict and negativity was expressed overtly in participants' verbal interactions with one another. A member of the Orange Group elaborates,

The one with the strongest personality in the group made it clear she didn't think much of my contributions . . . (Field Notes, Lines 18-20, Orange Group, Mint)

This participant went on to recount several anecdotes that exemplified this statement. They revolved around times when certain members of her group discounted the questions she asked of institute leaders as unimportant to the group's overall process and the tasks on which they were focused. Mint stated that her group members' actions had diminished her willingness to participate in

whole group institute activities, and described an incident that occurred during the institute to illustrate this. She explained that at one point during the institute, an institute leader commented on the value of something she had produced and invited her to share it with the other groups. She stated that she had refused to do so, commenting to the entire group that she was tired of sharing when nothing she said or did was appreciated.

It is possible that critical comments like those described by Mint contributed to an overall atmosphere of negativity in some of the groups. This negative undercurrent may have permeated the experience as a whole for some participants. One of the participants from the Red Group explains,

*I also heard a number of **comments outside the classroom that were extremely critical of other members participating in the Institute.** In my professional opinion, these comments were out of place. (Post-institute Survey, Question 9, Red Group, Oregano)*

This remark affirms that the tensions that occurred during the institute were reflected in participants' language, and suggests that they may have also spilled over into participants' informal associations in the evenings after the institute had officially concluded each day. One participant explained this as follows.

***If you don't know anything else, if 1 little thing is wrong, it seems a problem.** I'd really like to study it. **It is a distinct culture that spreads** and fascinates me. (Field Notes, Lines 46-48, Green Group, Tarragon)*

For this participant, the tensions during the institute may have been related to some participants' lack of prior knowledge. From her perspective, this lack of knowledge may cause participants to focus their attention on what is not working well. She does not explain why she thinks they might do this. It is possible that

for some, the lack of prior knowledge makes it difficult for them to participate in ongoing institute activities successfully. Consequently, they may turn their attention to less productive pursuits. For others, complaints and criticisms may be a form of self-defense. By drawing attention to less than optimal circumstances external to themselves, they may divert attention from their lack of knowledge and/or subtly attribute their lack of success with institute tasks to external factors. Hence, some participants might have found it difficult to escape the emotional residue of the conflicts that occurred—even during their free time. From one participant's perspective, it is difficult for even “*well designed compelling experiences*” to counterbalance such tensions.

. . . ***Too much negativity*** by individuals in professional educational circles ***can ruin even well designed compelling experiences.***
(Post-institute Survey, Question 8, Red Group, Oregano)

Although the sources of this discord are impossible to determine with any degree of certainty, participants' comments across data sources do hint at several potential contributing factors. These include participants' preconceptions about and expectations of “leaders,” differing epistemological commitments, perceptions of their professional roles, and feelings of self-doubt which may have been exacerbated by comparisons of themselves with others.

Factors Contributing to Group Tensions

Expectations of Leaders

Unfulfilled expectations about the manner in which the Red Group was facilitated seemed to be a major source of the tensions that one participant experienced.

Working in the [Red] group because of the group dynamics. There were three main difficulties for me. First, the group leader did not participate . . . according the schedule that we were sent and that made me feel awkward contributing without her lead on the collaborative pieces given she was designated the leader. . . . This was hard because I planned my life according to the time frame we were given and that was never explicitly renegotiated - which was difficult. The pattern of not acknowledging and honoring (by either living up to them or re-negotiating them) agreements also occurred as we worked during the institute, which I found frustrating. Lastly, I felt as though my group leader constrained my thinking. I had hoped that my thinking would be pushed in all areas and could have easily lived with it having been facilitated. But to have it constrained in this context was incredibly frustrating. (Post-institute Survey, Question 9, Red Group, Nutmeg)

The expectations outlined by this participant seem closely connected to her definition of what a leader is and to her perception of the roles and responsibilities that accompany such a position. She seems to associate a certain degree of authority with being “*designated the leader.*” When the facilitator of her group did not exercise that authority in the ways this participant expected (based on communications from institute leaders), it appears to have left this participant feeling uncertain about her own professional responsibilities. Her comments about schedules and time frames suggest that clear expectations, routines, and procedures may provide a degree of security that helps her to manage the complexities of both her personal and her professional life. She

does not appear to mind adaptations and adjustments, as long as they are explicitly communicated and negotiated. Since she felt that communication from the group facilitator was not sufficiently clear, she may have experienced an ongoing sense of unpredictability and uncertainty that was uncomfortable.

She also seemed to have specific expectations for how a group facilitator ought to interact with group members, and general expectations for the ways in which the facilitator would support her thinking. When these expectations were not met, conflict and frustration seem to have arisen. It is possible that group members may have had prior experiences such as the example below that positioned them to expect group facilitators to behave in a particular fashion.

*A recent compelling experience for me was the opportunity to study in Quebec during the summer of 2004 after receiving the CLTA Quebec Government grant for that year. I spent 5 weeks (July-early August 2004) in Quebec City at the summer FLES program at Universite Laval. I tested into the highest language level which allowed me to choose content courses such as "Arts et Traditions Populaires". This **course was taught by a fabulous ethnographer who made a point of connecting with her class via field trips and invited us to participate** in the rich culture of the area with her. I feel pleased that I **made a new friend** in Lise, but I am also grateful to her for **making Quebec culture come alive for me with her lively anecdotes and her personal interest in what would be interesting to us, especially those of us who were educators**. She **steered me towards culturally authentic music which I use in my classes, and introduced us to a legend writer and artist**. (Pre-institute Survey, Question 8, Red Group, Coriander)*

This participant appears to have connected on both a personal and a professional level with this university professor. The professor's teaching style seems to have been a good match for Coriander's learning style. Additionally, the professor appears to have been able to guide program participants to

information, materials, and other resources that they found professionally interesting, relevant, and meaningful. This experience also seems to have resulted in a personal friendship. As a result of experiences similar to this one, some participants may have had high expectations for the nature and content of their interactions with group facilitators (or other participants). When they did not mesh well, they may have felt a deeper sense of disappointment than might have been the case if they had not had such positive prior experiences with others from similar professional contexts. The extensive experience and expertise that the individual members of the Red Group brought to it made it difficult for them to accept leadership from a single individual. It is also possible that the professional backgrounds of group members varied to the point that it was difficult for them to find common ground.

Differing Epistemological Commitments

Diverse professional perspectives and differing epistemological commitments could account for some of the tensions participants in the Red and Orange groups reported experiencing during the institute.

Working with my group was at times extremely frustrating. I felt that our topic was more black and white in terms of there being a right way and a wrong way to think about [the topic] . . . Because we had a diverse group with different levels of expertise and interest, we often were stymied with our tasks.
(Post-institute Survey, Question 9, Orange Group, Marjoram)

From the participant's remarks above, it appears that when group members are uncertain how to negotiate the epistemological differences that may arise from differing levels of expertise, moving beyond the conflict to act as a unified group in order to produce a single product may be difficult. This may be

especially complicated if group members are not skilled in validating others' contributions while communicating their own perspectives in ways that their colleagues can understand and embrace.

*I don't know what it was, **there was some rivalry going on there, it wasn't just with one person**, you could sense, if there was a little task or people were supposed to be working on something, **people felt it should really be THIS way, it was really hard to get a consensus**. Why is this so difficult to get a consensus? And eventually, we always managed to do it, but **we butted heads and sometimes there were some hurt feelings**. (Field Notes, Lines 97-102, Red Group, Oregon)*

Thus, in both the Red Group and the Orange Group, it appears that the interpersonal strain occurred primarily during tasks and projects completed in focus topic groups. The conflicts that arose seem to have produced strong feelings that were expressed verbally and may have been emotionally damaging. These tensions appear to have negatively impacted participants' ability to achieve consensus and complete group tasks. They also affected participants' opportunities to learn from the hands-on projects they were asked to complete, as well as the degree to which participants from these groups were able to fully engage with and benefit from other institute content, processes, and interactions.

Providing leadership to teams comprised of people who were each accustomed to having others look to them for guidance in their professional contexts may have proved especially challenging for the facilitators of these groups, and the task of facilitation may have been complicated by the diversity of these group members' educational backgrounds and experiences. This may have influenced their willingness to work together. The diverse perspectives the members of Red and Orange groups brought to their focus topic areas may have

made it difficult for them to negotiate how each might make substantive contributions to their groups in ways that were comfortable for everyone else. Additionally, the talents the participants in these groups had in common might have positioned them to feel as though they were competing for such opportunities. The degree to which the common talents and diverse backgrounds of participants in the Red and Orange groups may have affected their interactions with one another is discussed in greater detail in the next section.

Perceptions of “Leaders”

It is important to note that in the Yellow, Green, and Blue focus topic groups, group members all came from similar contexts (in other words, they were all working as classroom teachers in K-12 settings, or they were all serving as program or district-level supervisors). The Red and Orange groups were the only two groups in which participants' responsibilities spanned K-12 classroom teaching and leadership, program and district-level supervision, and university-based instruction.

It seems that some participants' stereotypes regarding work in these different contexts may have influenced the dynamics of the focus topic groups even before institute leaders assigned the first group task.

*. . . there was also a little bit of a structure which, I guess, I wasn't looking at it from other people's perspective. I was aware that I **had been invited to be a coordinator . . . and when people met me, they said, “Oh yes, you're at the university.”** (Field Notes, Lines 84-85, Red Group, Oregon)*

It also appears that the institute leaders' decision to invite specific participants to serve as facilitators of the focus topic groups may have evoked presuppositions about the characteristics, responsibilities, and privileges commonly associated with "leaders." Participants' comments suggest that some interactions between participants were probably guided by their expectations about the roles these facilitators "should" play, as well as by preconceptions some may have held about the differing roles and responsibilities associated with K-12 and university contexts. If facilitators thought of themselves as "knowers" because of their leadership roles, they may have expected to provide guidance, direction, and expertise to their group members in rather didactic ways. Having to negotiate how their groups would function with other participants who were equally capable, experienced, and who had their own ideas about how things should work may have been frustrating for some group facilitators.

In an informal telephone conversation one year following the institute, a participant from another focus topic group described her interactions with several different state supervisors of foreign language. She explained that new directives and policies that were being implemented in her state demonstrated a lack of basic knowledge regarding the organizational contexts in which most teachers in her state work. She noted that this lack of understanding was likely to severely impede the degree to which these new initiatives would impact classroom teachers. She also expressed disappointment in the fact that although her new state supervisor held a PhD in a foreign language, she had no K-12 experience and very little teaching experience at the university level. She

stated that her new supervisor has “*no heart for teachers*” and lamented that she does not participate in classes or meetings when she visits, but sits in the back and works on other things instead. Her comments suggest that at least some K-12 teachers expect their supervisors to understand the institutional contexts in which they work and to implement policies that are congruent with the perspectives of those working in classrooms. They also seem to expect their supervisors to demonstrate support for and investment in teachers, their efforts to serve students, and their attempts to improve the systems in which they work. It appears that these qualities are more important to some participants than the educational qualifications of their supervisors, and that when participants do not see evidence of these things, they begin to associate those qualifications with a lack of professional credibility and commitment.

A participant from a different geographical region of the country offered additional, unsolicited commentary that might help to explain some of the divisions that surfaced during the institute in groups with participants from widely varied professional contexts. This participant stated that she was working on a world language-related project in her state that was attempting to ensure teachers had access to research-based professional development. She pointed out that she was serving as part of the leadership team for this project, but was not considered a “*subject matter expert*” because,

. . . you have to have university people in charge of that . . .
(*Field Notes, Lines 66-76, Yellow Group, Sage*)

When asked for more information about this, she explained that state guidelines prohibited classroom teachers from serving as subject matter experts and noted

that others holding high level, supervisory positions in the project agreed with the policy of:

. . . university people who had to be called the subject matter experts because apparently teachers cannot be subject matter experts. (*Field Notes, Lines 66-76, Yellow Group, Sage*)

This participant's tone of voice indicated that she did not completely agree with the position that her state and her supervisors had taken on this issue.

The tensions exemplified by this anecdote are not uncommon in the profession and appear to revolve around the fact "subject matter expertise" means different things to different people. Varying interpretations of the term "subject matter expertise" may, in part, derive from physical and cultural differences in professional contexts, the professional values and concerns inherent in those contexts, and the ways in which those concerns influence how the demands of a given task are perceived by those involved in it. We now turn to an exploration of some contextual factors that may help to account for differing definitions of "subject matter expertise" in K-12 and university contexts. We will then consider how the beliefs, expectations, and behaviors that flow from the perspectives represented by these definitions may help to account for some of the tensions outlined above.

Although educators working in secondary schools are considered subject matter experts by the colleagues working in other disciplines in their buildings, their expertise is viewed (and valued) differently by many community organizations, educational institutions, and government funding agencies. For such institutions, a successful project outcome is more likely if those involved

possess a high level of disciplinary expertise. These organizations frequently define such expertise based on academic credentials.

Yet according to some scholars, the successful application of content knowledge requires a solid understanding of the contexts in which it is situated and to which it will be applied (Lampert, 2001). Both a deep understanding of how underlying disciplinary concepts connect and an ability to package and convey that content to others in meaningful ways is necessary (Ma, 1999; Putnam & Borko, 1997; Shulman, 1987). This is frequently referred to as pedagogical content knowledge, a term coined by Lee Shulman (1987). In the case of professional development, professional developers who possess strong pedagogical content knowledge may be better positioned to help participants see the relevance of new information to their professional contexts than those without it. This may also enable institute leaders to respond to participants' pragmatic concerns in ways that feel more satisfying to them.

Those who spend a substantive amount of time interfacing with K-12 contexts may be especially sensitive to the critical role that pedagogical content knowledge plays in successful teaching, and may thus value it over pure content-area expertise. These discrepant perspectives are especially apparent when K-12 teachers are working side-by-side with university faculty members on projects designed to improve K-12 education in some way. In these situations, advocacy for a particular point of view may be viewed as a hostile attempt to "instill the use of a particular cognitive schema" (Schopieray, 2007, p. 25). When that schema contradicts the values and traditions of the community with which these

educators identify, they may view it as a direct threat to their professional sense of self. Beijaard, Verloop, & Vermunt (2000) explain that when a person is faced with changes that force them to perceive themselves in a way that contradicts their existing self-image, they may feel compelled to resort to defensive measures. The lack of a shared perspective may mean there is no shared intellectual or social fabric that can function as a safety net when such conflicts occur (Schopieray, 2007). One participant expressed especially strong feelings about the impact such situations is likely to have on K-12 students.

I guess as mentors and role models in whatever, whatever institution we're working for . . . whether we're at the university level or elementary level or high school level, we're trying to model relationships, and that was an important part of the institute—how much of teaching is relational. . . . so as adults in these settings, if we don't do that, what do the young people see? I feel very strongly about that . . . so if we're very rivalrous and we can't come to a consensus because it's going to be our way or no way, then what is THAT teaching people? (Field Notes, Lines 104-112, Red Group, Oregano)

The practicalities of the daily tasks and responsibilities that the members of each of these professional communities must fulfill may help to account for their differing values and perspectives. These anecdotes, in conjunction with the way teachers have historically been viewed in the United States, may also help to explain the influence that many participants who were classroom teachers reported the institute had on their self perceptions.

Shifts in Self Perception

Positive Effects of Participation

At least three participants from the Blue and Yellow groups commented on the emotional and psychological impact of being selected to participate in the institute.

*Teachers just want to feel chosen/special. **It was an honor to be chosen.*** (Field Notes, Line 33, Blue Group, Cayenne)

During the remainder of the conversation, this participant went on to describe how flattered she was to be selected. She explained that the invitation to participate in the institute provided her with an added measure of confidence and a sense of professional worth, as though she were being told,

*You're chosen, **we think you're worthy.*** (Field Notes, Line 39, Blue Group, Cayenne)

A second participant described similar sentiments,

*Yeah, for me, part of it was just this **overwhelming feeling that, "Oh my gosh, somebody thinks I'm special and I'm here with these other 20 people, or 19 other people."*** (Semi-structured Interview, Lines 569-571, Yellow Group, Cinnamon)

For Cinnamon, the impact of being invited to participate was augmented by the fact that the group selected consisted of only 20 other people. For a third participant, the invitation to participate was especially meaningful because of the responsibilities and caliber of the other participants who were also selected.

It was humbling. . . . There were a lot of people who weren't just teachers, they were their district language coordinators, because in California we don't have that . . . It was humbling . . . really, really neat to go and meet people from all over the country who are working three times harder than we are and listening to what kinds of things they're working on and you really come back both inspired and motivated when you get back from a place like Iowa. (Field Notes, Lines 208-214, Yellow Group, Sage)

Sage repeatedly emphasized how humbling the experience was because of the quality of the participants involved. She also implied that as she compared her professional circumstances with those of the other participants, she understood her own situation differently. She identified these interactions as the source of professional inspiration and motivation. Other participants affirmed the substance of these comments.

The conversations were compelling because of the caliber of the people who were participating; these were very bright, articulate, and energetic folks. I was inspired by everyone in the room. (Post-institute Survey, Question 5, Blue Group, Caraway)

Caraway focused on the influence that the quality of the other participants had on how she experienced the conversations that occurred during the institute. Her description of the other participants highlights characteristics that probably contributed to their professional success prior to the institute. Like Sage, she also noted that her interactions with other participants were a source of professional inspiration.

These participants appear to have doubted their own experience, expertise, and professional value. Several of these same participants described other summer institutes in which they had participated to illustrate and explain

some of the comments they made about *Mentoring, Leadership, and Change 2006*. Their comments underscore that the selection, treatment, professional conversations, and encouragement participants experience in conjunction with a summer institute have the potential to contradict the negative messages about the value of their professional contributions that many teachers commonly experience, deeply influencing their perception of themselves as leaders.

*the very first week at [name of another summer professional development program for teachers] for me was one such experience. For starters, **everything was paid for**, the flight, hotel, everything. In addition to that, **the hotel was NICE! I felt very honored to be taking part.** I can't say exactly when I realized this, but **the fact that so many great minds in FL thought that I, a teacher from small town [name of state], had great potential and they believed in me. It was a very empowering experience for me, and it is always with me.** Kind of like a movie scene where all the 'ancestors' are celestial beings all around me providing calm, inspiration, motivation, encouragement [sic] and **strength when I feel tired or overwhelmed.** (Pre-institute Survey, Question 7, Blue Group, Cayenne)*

Cayenne raises issues in her remarks which highlight a contrast between the way she was treated in conjunction with the summer institute she describes and the treatment it appears that she may typically experience in her role as a teacher. In an informal follow-up conversation, she also commented that in addition to paying for her hotel and food, the grant also paid for “*training and attention*” from three, nationally well-known leaders in the field of world language education. Her comments suggest that she interpreted the funding she received, the quality of the accommodations, and the notoriety of the institute leaders as a message about the degree to which she was professionally valued. She states that this, in conjunction with the caliber of the other participants, influenced her

perception of herself. It appears that these experiences (and the way they made her feel) have become a resource to which she turns in times of professional challenge or difficulty.

Participants' comments suggest that even professionally active teacher-leaders are often unaccustomed to having their work noticed and appreciated. As a result of these factors, it appears that the quality of accommodations and the treatment participants receive during an institute may reinforce and amplify the effects of verbal affirmations of their professional efforts. For at least some participants, the invitation to participate in the institute as one of a small, select group had a concrete psychological and emotional impact. It appears that it influenced their perceptions of themselves, moving some to value their professional contributions to a greater degree. It also seems to have strengthened their confidence and motivated them to continued involvement with the profession. However, for other participants these same factors were the source of a great deal of anxiety.

Negative Effects Participation: Self Doubt

It appears that being treated so professionally while surrounded by colleagues of such high caliber may have simultaneously exacerbated feelings of self-doubt for some of these same participants.

I had been in public education for ten years, but I was very isolated for most of those 10 years and I had seen names of people on listserves and you know, who had given presentations, and all of a sudden I'm in the same group with them! And it's not a hundred people, it's 20! And, so that very first day of 2003 for me was just, almost overwhelming in that, "Oh my gosh! There's [well-known person #1]. Oh my gosh! There's [well-known person #2]. I've seen him post on FLTEACH all the time and he has such incredible ideas. How can I, you know, have anything to contribute in the same way? I think that by the end of the institute, I was a little bit more comfortable in feeling that I was a colleague and that I saw some of my own leadership potential in myself as an individual that I didn't necessarily see in the beginning. (Semi-structured Interview, Lines 400-413, Yellow Group, Cinnamon)

Several components of this response merit additional exploration. Note the similarities between Cinnamon's response and Cayenne's response from the previous section. Both participants stated that they had been teaching in situations that made them feel professionally isolated (i.e., in rural or distance learning contexts). Each commented on how honored she felt to be taking part in the institute, and reflected on the impact that the invitation to associate with a relatively small, select group of educators had on her perception of her professional potential. Both referred to the effect that their interactions with other institute participants during the course of these institutes had on their own belief in the value of their professional contributions. A similar pattern was apparent in an anecdote related by another participant when asked to describe a compelling experience she had prior to attending the institute.

*A less dramatic compelling experience was in Angers, France in 1998. **A University French professor** and I hung around together throughout [sic] the course we were taking. **She was an expert** in a certain genre of French literature. We were headed to the train station to buy return tickets to Paris, and we became lost. We stopped a gentleman on the street; this woman could neither understand the man nor make herself understood. **I had previously been intimidated by this woman's flawless knowledge of advanced grammatical structures and lacked self-confidence.** I was able to carry on a conversation with this man without any problem. This was a compelling experience because as a young teacher I had mostly "gone by the book." **After this experience, I highly valued making things real and practical for my students in their foreign language learning.** (Pre-institute Survey, Question 8, Blue Group, Caraway)*

This participant emphasizes the credentials and expertise of the professor in this anecdote. She notes that she lacked self confidence, presumably as a result of her observations regarding what this woman knew, and her assumptions about what that meant the woman was probably able to do with that knowledge. She also implies that she may have judged her own knowledge and skills to be inadequate by comparison with those of this professor. As in the previous two examples, her interactions with this person whom she perceived as an expert altered her perceptions of her professional skills. (In this case, because she was able to accomplish something that this "expert" was not.) She notes that this experience led her to the realization that there was value in "*making things real and practical*" for her students as opposed to just going "*by the book*." It may be inferred that it has since influenced her classroom practice.

The shifts in self-perception that three participants described seem to have occurred over time. At the beginning of the institutes or programs in which

they were participating, they appear to have devalued their professional knowledge and skills, as in this representative example.

*I had done some leadership things, but I was still fairly, things, they had all been very local, and **so I felt very insecure about how relevant the things that I had to say were to people outside of my own state.** And so by the end of the institute, I saw that, I **discovered that the things that I had to say were, indeed, relevant and not beneficial only to the people in my state, but to teachers anywhere.** (Semi-structured Interview, Lines 419-425, Yellow Group, Cinnamon)*

Nonetheless, by the conclusion of these professional development experiences, each reported that they saw themselves differently. By the end of MLC 2003, Cinnamon's view of the value of her contributions had extended beyond her experiences with the other participants in the room to include people in her state as well as colleagues from elsewhere. When interviewed following her participation in MLC 2006, her view of her contributions had progressed even further, moving beyond “*relevant*” and “*beneficial*” to actually impacting those she attempted to serve.

*I look back and see that **I really do have an impact sometimes when I don't think I do** (Field Notes, Lines 26-27, Yellow Group, Cinnamon)*

This suggests that individual professional development experiences may make cumulative contributions that are apparent to participants only over time. Hence, it is not surprising that some participants felt uncertain about the value of their professional contributions during the institute, in spite of substantial professional achievement in some cases.

Expertise & Uncertainty

Several other participants made comments that suggested that being labeled an “expert” left them feeling somewhat anxious and uncertain about what they were “supposed” to know and be able to do in the context of their relationships with institute leaders and other participants. In response to a survey question that asked participants what the least valuable part of the institute was, one replied,

Not knowing what was truly expected of me. (Post-institute Survey, Question 9, Orange Group, Fennel)

This question elicited at least five similar answers. This may have been spurred, in part, by the fact that participants’ institute expenses were paid by the NFLRC using grant money. Consequently, some participants may have been concerned about making sure they met any obligations associated with the receipt of those funds. However, it also appears that at least some participants were worried about how their colleagues and institute leaders might perceive them.

*The “projects” which were supposedly building upon one another (instructions did not highlight that fact) and which **felt like we were supposed to incorporate a bunch of technology that we didn’t know or have experience with.** . . . In my group, I felt like we were needing the time to work through what the message would be and didn’t have enough time to do that before we had to try to tackle technology that was unfamiliar (even though it may have been very intriguing). **I also felt a lot of anxiety about not knowing that technology, as though that somehow reflected badly on me.*** (Post-institute Survey, Question 9, Red Group, Coriander)

The first part of this participant’s response makes it clear that she did not feel like “a knower” in the context of the small group tasks that required technology use. In the middle portion of her response, she expresses concern about organizing

and packaging the content her group was responsible for presenting. The final portion of her response highlights how uncomfortable she was about “*not knowing that technology,*” and emphasizes that she feared it would “*reflect badly*” on her.

Other participants’ Post-institute Survey responses also hint that they experienced an underlying sense that they should be able to contribute in particular ways.

*This question has been my stumbling block to completing this survey. It is a big synthesizing question, and **I so wanted to say something really profound.** . . . (Post-institute Survey, Question 8, Blue Group, Caraway)*

In light of the previous analysis, Caraway’s concern for saying “*something profound*” could be interpreted to mean that she was anxious to “perform well” in the eyes of the institute leaders. She seemed to want to say something that we would value and respect—something that would perhaps demonstrate all she knew and had learned. When viewed within the context of her other survey responses, it is also possible that she simply valued the institute and wanted her response to “do justice” to what she felt she experienced.

Caraway’s comment is particularly instructive when viewed in conjunction with the conclusions another MLC 2006 participant drew about the first *Mentoring, Leadership, & Change* institute she attended in 2003.

*I think that **there was this underlying feeling among a lot of participants that I'm here to give information to other people, but not necessarily to get information myself. I think that part of it was the nomenclature of the groups. You are experts in your field. And I think that when you pull those people together and you say, "Yeah, you're the Curriculum Design Expert, and you're the FLES Expert, and you're the Advocacy Expert, and you're the Technology Expert," that you, that **you send people into a mode of, "Oh! Expert. I present. I give information. . . .***** (Semi-structured Interview, Lines 629-642, Yellow Group, Cinnamon)

Cinnamon's remarks lend credibility to the interpretations outlined above, and foreground the idea that for many people, the word "expert" connotes the giving or presenting of information. Her discussion of the influence that *"the nomenclature of the groups"* had on participants' perceptions of their roles and what was expected of them suggests that if institute leaders had verbally framed participants' roles differently, it might have been possible to avoid some of the tensions that arose.

A participant from MLC 2006 came to similar conclusions about participants' interactions with group leaders during the 2006 institute.

*. . . **sometimes, they were a little bit put off when the group leaders were asked to do a certain thing.** Sometimes I tried to make light of it, "Yeah, you know, there's a lot of salary." **People felt that they were an expert in their own way,** which they all were, obviously. That was a very talented group, so **maybe they felt that someone who had been invited as a leader was unnecessary. Maybe we all should have come in as equals and there wouldn't have been any rivalry.*** (Field Notes, Lines 85-92, Red Group, Oregon)

It may be that when group facilitators were given responsibilities that were different from those of other participants, they were perceived as receiving special treatment or privileges. This may have seemed unjust to the other

participants, or may have moved them to question their own expertise and value. Self doubt might have positioned them to need to prove their expertise to themselves, the other participants, and the institute leaders. It is also possible that those who disagreed with the manner in which their group facilitators approached their assigned tasks believed they might have done a better job, and thus felt somewhat rebuffed because they were not selected to contribute in the “official” capacity of a group facilitator.

At least one participant stated that she would like to have had more opportunities to hear from the other participants.

. . . The participants had a wealth of knowledge to share and I felt that we did not always benefit as much as we could have from their experiences. (Post-institute Survey, Question 9, Green Group, Tarragon)

Tarragon’s response suggests she may have felt institute leaders did not sufficiently honor participants’ knowledge or tap their expertise. It is also possible that because two of the institute leaders did not have PhDs, but several participants did, she may have felt the group would have benefited more if they had been given more opportunities to learn from those who possessed such credentials.

It seems, then, that many participants experienced some degree of self doubt in conjunction with their participation in the institute. For some, the professional isolation inherent in their teaching contexts, combined with the caliber of other participants, may have moved them to question the degree to which any contributions they might make would be perceived as relevant or of value by other participants. For others, the fact that they had been selected to

participate in the institute because of their leadership and expertise raised significant concerns about what institute leaders and their fellow participants might be expecting of them.

According to some participants, institute leaders' expectations for behavior and performance were not always clear. Consequently, it may be that the rivalries they described arose, in part, from participants' attempts to navigate their self-doubts in the midst of these unclear expectations. Some participants may have sought to prove to themselves and others that they truly merited recognition as leaders and as experts. Others, accustomed to being deferred to as leaders and experts, may have been uncomfortable when suddenly surrounded by so many other equally capable people all competing for opportunities to contribute in meaningful ways. Still others may have been surprised by the ways in which the content and processes of the institute diverged from that which is common in professional development sessions in world language education. They may also have been challenged by the amount of institute content that was unfamiliar to them or experienced uncertainty about the adequacy of their technology knowledge and skills. Those who did not receive adequate assistance from institute leaders in confronting these challenges may have even felt overwhelmed, experiencing them as threats that compelled vigorous defenses of their epistemological positions. Comments that some of these participants made in informal conversations held a year following the institute indicate that some of the professional insecurity they experienced

during the institute may have been rooted in comparisons they made between themselves and their colleagues.

Professional Comparisons

Some of the professional insecurity experienced by participants in the previous section seems rooted in comparisons they made between themselves and their colleagues. In the Post-institute Survey, a participant from the Orange Group stated,

B) Before coming I was focused on how I don't measure up to the current president of my state organization and frustrated that he wasn't mentoring me. . . . (Post-institute Survey, Question 8, Orange Group, Mint)

Her comment indicates that she may have struggled with self doubt even prior to her participation in the institute. Her response appears grounded in the belief that her professional contributions were inadequate by comparison with those of her colleague. From her perspective, the level of support she was receiving from this colleague was insufficient to mediate the gap she perceived between the challenges of her professional tasks and her current level of professional knowledge and skill.

During an informal telephone conversation one year following the institute, this same participant explained that she did not think she contributed much to her group during the institute. She noted that other participants had ordered more books online than she did and had studied every night. She lamented that she did not think she had “*pulled [her] fair share*” (*Field Notes, Lines 49-50, Orange Group, Mint*) and stated that she felt this was hypocritical since she had expressed to other participants that she did not like people who behave in that

fashion. The conclusions this participant draws are not product-based, but rather, focus on comparisons between what she noticed about other participants' actions during the institute and her own. Her evaluation of her professional contributions during the institute appears to be based almost exclusively on these comparative observations.

Scholarship on expertise suggests that experts attend to different contextual features than novices, and that this influences the ways in which they frame problems and evaluate and pursue potential solutions (Klein, 2003; Jonassen, 2003; Meskill, Mossop, DiAngelo, Pasquale, 2002). In other words, they perceive, attend to, and interpret the data with which they are presented differently than those who do not possess a similar degree of expertise. It is possible that a similar phenomenon may be at work with respect to the comparisons participants made between themselves and their colleagues. When comparing themselves to colleagues, some participants may attend to surface features of a specific situation or task that, while readily visible, are actually quite irrelevant to strong performance. Their selection of these features as the criteria for comparison may lead them to frame their professional evaluations of themselves very narrowly, ignoring what is most relevant to a holistic assessment of their professional contributions over time. This failure to perceive what matters most may lead them to erroneous conclusions about the quality and value of their professional contributions. It may also diminish their self-assessment of their professional potential.

Nonetheless, some of Mint's negative self-perceptions appear to have been reshaped by her interactions with other participants during the institute. She explained that her interactions with other participants during the institute had been instrumental in helping her to feel more supported in her leadership role.

At the institute I have built a network of support from across the country. Some of us can learn together, and others will provide support (Post-institute Survey, Question 8, Orange Group, Mint)

Her comments also imply that she believes the professional network she was able to construct as a result of her participation in the institute will serve her as a source of ongoing professional development.

It feels good to know [name of another participant] becomes President this year and that I have a network of people to help (Field Notes, Lines 22-23, Orange Group, Mint)

Mint mentioned this “personal learning network” ([Siemens, 2008b](#)) again in an informal conversation we had one year following the institute, suggesting that it continued to be an important means of support and that its impact was ongoing. Ryan and Deci's ([2000](#)) work on motivation may help to explain some of this impact. They note that relatedness, or the sense of support that can come from social interactions with others, helps to mediate the balance between challenging tasks and participants' developing skill levels in important ways.

Mint's comments at the beginning of this section imply that there may have been a less than optimal balance between the challenges of her organizational responsibilities and her ability to accomplish them at that time. She expressed a desire for mentoring—assistance from others that would help her to complete what she may not at that moment have been able to do alone.

The “zone of proximal development” is the phrase Vygotsky (1978) used to describe this circumstance. Participants’ remarks earlier in this chapter affirmed that opportunities to receive assistance, support, and mentoring from others may have helped them to persist with institute tasks. Such mentoring also appears to have been an important component in fostering their professional confidence and sustaining their motivation. Yet, their comments also provided some evidence that this mentoring may be more easily received when it comes from “peers”—colleagues with similar status, roles, and responsibilities who are working in parallel professional contexts. This has important implications for world language teachers, many of whom lack daily contact with a professional community of peers.

Professional Isolation

Professional isolation is a phenomenon that is a common part of many teachers’ daily lives. Lortie (2002/1975) emphasizes the negative effects that the organizational structures common to schools have on teachers’ practice. He uses the metaphor of an “egg crate” (p. 14) to represent the isolating effects of the ways in which teachers’ work in schools is typically organized. Such circumstances translate into an absence of opportunity for teachers to receive “informed assistance” (p. 150) or “authoritative assurance” (p. 149) from colleagues and superordinates. However, because teaching is a profession filled with constant ambiguity and uncertainty, teachers “crave reassurance” (p. 149) from their colleagues. In the ongoing absence of outside feedback regarding their professional efforts, many experience severe self-doubt.

The issue of professional isolation is one of particular concern in the field of world language education. Some world language educators are physically isolated from their colleagues because they teach in rural schools or via distance networks. Others lack opportunities to collaborate with other language educators because they are the sole teachers of their target language in their districts, or the only language teachers in their schools (Johnston & Janus, 2003). Still others experience isolation by virtue of the fact that there is no group of colleagues who are engaged in similar leadership tasks.

As a supervisor, that ready-made community isn't there. It's kind of lonely. Grants and presentations—having that camaraderie and learning from each other is really important for me. (Field Notes, Lines 56-58, Green Group, Tarragon)

This participant's comments intimate that she experiences a degree of professional isolation, even bordering at times on loneliness, because a natural professional community of "peers" working on similar problems and projects does not generally accompany the responsibilities and routines commonly associated with her leadership position. This may constrain her ability to obtain feedback from colleagues regarding the quality or value of her professional work.

Teachers in such a position may compare themselves to others as their only source of feedback. The absence of alternatives to their current practice, as well as feedback on that practice from other peers, may leave them feeling somewhat adrift and at the mercy of the next wave of educational innovation. This may help to explain the self-doubt that pervaded so many participants' comments earlier in this chapter. Such isolation appears to be particularly pronounced for teachers who do not have strong technology skills. Riel & Becker (2000) report strong and

consistent differences between the computer use of teachers who are not very professionally active and that of their more professionally engaged colleagues. They indicate that the computer use of teachers who are less professionally active tends to be much more limited and infrequent than their more professionally engaged colleagues. This appears to be directly related to their more transmission-focused, textbook-oriented approaches to practice. According to the findings of the study, the infrequent technology use of these teachers also intensifies the effects of the physical isolation common to many of them by limiting their access to intellectual resources and leaving them intellectually isolated.

The definition of professional learning as “. . . increasing participation in communities of practice” (Lave & Wenger, 1991, p. 49) has important implications for the many world language teachers who are professionally isolated. It means that the lack of access to frequent opportunities to participate in professional communities of practice severely limits these educators’ professional growth by constraining their opportunities to learn. Over time, it may also eventually lead to professional stagnation for some. It is possible that this lack of access may have exacerbated the self doubt many participants reported experiencing. The isolation and loneliness experienced by some of these leaders may also amplify both the satisfaction and the impact of opportunities to interact with colleagues who share similar responsibilities. For some participants, breakdowns in their social interactions may have prevented them from experiencing the institute as valuable or worthwhile. Hence, it is important for

institute leaders to consider not only the potential cognitive effects of the activities they plan for participants, but also social and emotional ones.

Reflective Analysis

Contributions from the Data

The findings outlined above make a number of contributions to our understanding of the analytic lenses used in this chapter. These contributions are outlined below.

The relationship between professional roles, responsibilities, and receptiveness to institute content. One of the primary contributions of data from this study is that participants' reception of institute content was closely tied to their perceptions of their professional roles and responsibilities. When participants were forced to juggle competing roles, and experienced uncertainty about the boundaries of those roles, their learning suffered. Additionally, the degree to which participants perceived institute content as relevant appeared to be highly correlated with how familiar, feasible, and functional (i.e., practical) the application of that content seemed to them in light of their current professional roles and responsibilities. Thus, participants appeared to be most resistant to new ideas when they lacked schema for the new content or when institute leaders did not explicitly address how differences in participants' professional contexts might alter their ability to implement these new ideas. In these cases, participants appeared to require additional support in order to see clear connections to their current responsibilities.

The influence of professional context on participant interaction. A

second, related, finding is that breakdowns in participants' learning appeared to revolve around unfulfilled expectations that arose, at least in part, from discrepancies in their professional perspectives and epistemological commitments. This was especially true of groups comprised of both participants whose primary responsibilities were grounded in K-12 institutions and of participants working in university settings. Findings from this study suggest that what participants valued and prioritized varied, depending on the professional contexts in which they worked. It appears that this influenced how they perceive one another's professional credibility and commitment. Additionally, these variances in priorities seemed to foster different motivations for professional action, often creating divisions during small group work that were difficult to overcome due to a lack of shared perspective. Differing perspectives also seemed to influence participants' expectations regarding the institute. What participants know, how they expect to demonstrate that knowledge, and the ways in which that shapes their expectations of their colleagues also appears closely related to the contexts in which they work.

The influence of professional roles and responsibilities on participant expectations. It seems that tensions arising from differences in professional context were further complicated by how participants' professional roles and responsibilities shaped their expectations for the institute. For some participants, the words "expert" and "leader" seemed to engender certain expectations about the nature of their participation during the institute and how

their expertise would be demonstrated. Specifically, these words seem to have connoted “giving information” and “providing direction” for several participants. For other participants, the idea of leadership seemed associated with privilege and competition for scarce resources. When these participants were asked to function collaboratively rather than directly, some appeared to experience frustration. Other participants expressed dissatisfaction with their group facilitators. Their discontent seems to have been influenced by their preconceptions about what leaders should know and how they should implement that knowledge. Some participants noted that knowing they had been selected to participate in the institute because of their expertise worried them. These participants experienced strong anxiety about institute leaders’ expectations for them, whether or not they actually knew enough to fulfill those expectations, and how they might be expected to demonstrate their leadership and expertise. Still other participants expressed concern about how their lack of knowledge regarding certain institute topics (especially technology) might influence their colleagues’ perceptions of their professional competence and leadership abilities. These concerns may have been exacerbated for participants who doubted their own experience, expertise, and professional value.

The influence of self-perception. Another especially useful finding from this study is that the tendency of some participants to compare themselves to others may be due, in part, to professional isolation. That is, the professional isolation that often accompanies the work of language teachers due to the fact that they are the sole language teacher in several buildings or even in their

district may mean that they have very few opportunities to receive feedback on their professional performance. As a result, when they have the opportunity to spend time with colleagues from other places, they may compare themselves as a means of evaluating their own performance. Unfortunately, it appears that their isolation may also make it difficult for them to select criteria for these comparisons that are most relevant to a holistic assessment of their professional contributions over time (as opposed to those aspects that are immediately apparent and easily observed). As a result, they may arrive at erroneous conclusions about the quality and value of their professional contributions. Hence, for world language teachers who lack regular contact with a professional community of peers, mentoring may be more easily received when it comes from “peers”—colleagues with similar status, roles, and responsibilities who are working in parallel professional contexts. So how might professional developers preserve participants’ sense of expertise while still fostering their professional growth?

Encouraging professional growth while preserving participants’ sense of expertise. Findings from this study suggest a number of ways that professional developers might help protect participants’ expertise while simultaneously supporting their professional growth. It should be emphasized that perception appears to play a key role. Consequently, techniques that send implicit messages to participants may be even more effective than explicit ones. Participants commonly mentioned strategies that rewarded their professional efforts and validated their expertise. For example, participants appear to interpret

selective invitations to participate, access to well-known leaders in the field, opportunities to interact with other educators they perceive as being of high caliber, high quality accommodations, and generous funding as evidence of the degree to which they are professionally valued.

The data indicates that another simple approach might be to adjust the language used to frame participants' roles so that it more clearly reflects the belief that every participant brings unique abilities to contribute, and that all participants are expected to collaborate in the completion of institute tasks. Helping participants to reframe teaching and leading as "learning" instead of "knowing" may help alleviate the tensions raised when they encounter situations during the institute that expose what they do not know.

There are also other, less apparent techniques that may help mitigate the sense of risk participants feel when their professional competence is challenged by the novelty or unfamiliarity of the content or instructional strategies used during an institute. These include clearly linking novel content and tasks to institute goals, making explicit connections to foreign language, incorporating activities that progressively build participants' knowledge and skill in preparation for new tasks, providing step-by-step instructions for each activity, and making time for participants to collaboratively synthesize and consolidate their learning. Each of these techniques helps set specific boundaries on both tasks and expectations, helps participants to develop necessary schema, and offers scaffolding to support them in experiencing success with the tasks. Setting clear expectations for participation, consciously crafting space for each participant to

contribute, explicitly honoring participants' knowledge, and purposefully tapping their expertise during institute activities may also help to protect participants' expertise. Data from this study suggests that ensuring participants are able to create a series of finished products may also improve their perception that they have learned something.

Affordances of the Lenses

Ideas about the professionalization of teaching, the common representation of teachers as “knowers,” and professional isolation raise the fact that the social and emotional contexts of the professional development can easily eclipse even carefully planned content. These lenses were also useful in helping me to understand the paradoxical nature of participants' interactions with one another. Specifically, the idea of teachers as “knowers” emphasized how powerful participants' prior assumptions can be in shaping their responses to institute content and processes and guided me toward some of the personal perspectives and social dynamics that may have contributed to the tensions that occurred during small group work. This lens also helped me to identify some of the reasons why world language educators who are accustomed to mentoring others from socially recognized positions of authority and expertise might find it difficult to be mentored. Additionally, the idea of teachers as “knowers” might help to explain why the concept of “pulling information” (as opposed to “pushing” it) in both professional development and K-12 settings seemed to resonate so strongly with so many participants. These lenses also supported me in making sense of the anxiety and negativity that some participants experienced during the

institute. They made it clear that “not knowing” had strong emotional consequences for participants that raised an affective filter that appeared to severely impede their learning.

The lens of isolation assisted me in recognizing absence of professional community that many world language teachers experience—particularly those in leadership positions. The nature of their professional responsibilities does not lend itself to easy access to a community of “peers” who are working on similar problems and projects. This understanding, in conjunction with the image of teachers as “knowers,” also helped to explain why several of these world language educators compared their personal performance as a professional to those of their colleagues in order to determine whether or not they “measured up.” In combination, these lenses also revealed the fact that many world language educators may lack substantive experience with collaboration. As a result, they may need explicit conversations and scaffolding in order to do so successfully. Finally, the concept of professional isolation helped me to account for the overwhelming number of comments participants made about the support and strength participants reported gaining from the interactions they had with other participants both during and after the institute. Lave and Wenger (1991) define professional learning as “. . . increasing participation in communities of practice” (p. 49). Thus, opportunities to learn are severely limited for those participants who are professionally isolated and thus, lack access to the professional communities of practice. It is likely that this isolation is intensified

for teachers who do not have strong technology skills and thus, cannot even connect with colleagues in virtual ways.

Limitations of the Lenses

Although these lenses foreground the role that participants' perceptions of their professional roles, responsibilities, and expertise play in their receptiveness to institute content, there are a number of questions that they do not fully resolve. These include:

- *How might professional developers help participants reframe their perceptions and adjust their expectations so they can be more open to learning during professional development experiences?*
- *How might professional developers help participants with differing epistemological commitments build shared perspectives that allow them collaborate and learn from one another more productively?*
- *How might professional developers build capacity and confidence in participants who doubt the value of their professional contributions and support them in recognizing their unique professional gifts and talents?*
- *How might professional developers support participants in overcoming the negative effects of professional isolation after a professional development experience has concluded?*
- *How might professional developers orchestrate opportunities for participants to receive useful feedback on their professional performance?*

- *What pedagogical strategies are successful in helping participants to reframe teaching and leading as “learning” instead of “knowing?”*
- *How can professional developers honor and utilize all participants’ expertise in spite of constraints on time and funding?*

Additionally, the focus that these lenses place on the social, emotional, and contextual factors that influence participants’ learning makes it easy to overlook their relation to content. The way content is commonly represented in professional development sessions tacitly portrays knowledge as a static entity. This has the tendency to reinforce educators’ conceptions of themselves as “knowers” rather than as learners or knowledge producers. It also undermines a natural rationale for changing professional practice—specifically, that knowledge in the field is continually advancing and that sometimes, new understandings require radical departures from existing practice. These lenses also fail to consider the ways in which outdated approaches to professional development and language education may be fossilized and deeply embedded in the architecture of the profession and the structure of the discipline. Such issues have serious implications for professional development in world language education. In the final chapter of this dissertation, I discuss some of these implications.

CHAPTER 10

DISCUSSION & IMPLICATIONS

Changing policy contexts and paradigm shifts in the field of world language education have generated an acute need for professional development among world language educators who are under pressure to develop the translingual proficiency and transcultural competence of their students. The “explain, train, and maintain” methods commonly used to deliver professional development typically involve very information-oriented approaches to developing teachers’ skill. However, such approaches fail to consider that in order for world language educators to transform their practice, they must think about it critically enough to notice what is not working, generate creative solutions to perennial problems, and be motivated to take the risks involved in doing things in ways they never have before. These approaches also undermine conditions that are essential to supporting adult learning, motivation, and pedagogical reasoning. Consequently, I conducted this study in an attempt to better understand how professional developers might craft more compelling learning environments and experiences for teachers.

In this chapter, I reflect on the advantages of drawing on design-based perspectives to research for this study, as well as on the affordances of combining multiple theoretical lenses. I then outline some of the limitations of these approaches. I dedicate the remainder of this chapter to considering some of the primary theoretical contributions of this study to the field of professional development and the pedagogical implications that arise from them. I conclude

the chapter with suggestions for further research that may better inform professional developers who hope to design more productive learning environments and experiences for world language educators.

Affordances of the Research Approach

Affordances of the Design-based Approach to Research

One of the hallmarks of design-based studies is their situated nature. They inherently invite careful attention to context in ways that enable researchers to consider the dynamic interactions between theory and practice, context and interventions, past experience and future actions (The Design-based Research Collective, 2003). The design-based approach to research that I employed in this study encouraged me as the designer-researcher to flexibly slip back and forth between different phases of design. This was useful for three reasons. First, the design-based focus of the approach is highly congruent with my primary work as a professional developer—that of designing learning experiences for other educators. Second, the recursive nature of design experiments emphasizes that a reciprocal, dialogic relationship exists between research and practice. The ongoing, critical conversations that arose from that relationship during this study drew theory and practice into a collaborative partnership that was well-suited to my ultimate goal as a professional developer of responsively redesigning practice. They enabled me to carefully consider the mutual influence of theory on practice, and practice on theory; the influence of context on the interventions we attempted; and how our successes and failures might be used to improve our future endeavors. Finally, each iteration of analysis produced

new lenses that helped me to see more clearly the relationships between theoretical perspectives and professional practice. This provided me with a constant flow of information and feedback that allowed me to continually deepen my understanding as a researcher and use it to improve my practice as a designer of professional development.

One example of this exploration of relationships emerged as I considered the degree to which the design of the institute was aligned with its enactment (Research Question 1). The designed-based approach I used during this study demanded that I carefully document what actually happened during the institute. Constructing the narrative from institute artifacts sensitized me to the wide variety and range of instructional methods and materials we used during the institute, and highlighted the vast scope of what we had actually undertaken. The process of documentation also enabled me to quickly identify breakdowns in what the literature on professional development calls coherence—the degree to which participants' perceived the goals, processes, and content of the institute as being well-aligned with one another and their professional responsibilities. As I constructed the narrative description, I tried to recount what happened in the institute in a way that was faithful to the chronology captured on the videotapes. However, when I periodically found myself wanting to rearrange the order of events in my description to improve narrative flow, I realized that I was actually encountering evidence of breakdowns in coherence—the chronology in which institute activities were enacted was not always well-aligned with the more organized sequence in which we had originally planned to execute them.

Additionally, the limited number of explicit connections to world languages became painfully apparent, and may help to explain some of the breakdowns in participants' learning that I articulated in Chapter 9.

In spite of these major weaknesses in the summer institute, findings revealed that our conception of the institute was still relatively well-aligned with its enactment. We designed the institute with the intent of expanding participants' thinking, motivating them to try new pedagogical strategies, encouraging them to integrate technology more fully into their practice, and supporting them in the development of mentoring and leadership skills that would equip them to exert more potent influence within the profession. Numerous participants reported that we had been successful in accomplishing some of these goals. Findings suggest that the institute did challenge participants' thinking. Additionally, several participants provided explicit examples of pedagogical strategies we had modeled for them during the institute which they subsequently incorporated into their practice as teachers, mentors, and leaders. Our attempts to encourage technology integration seem to have been especially productive as many participants reported increasing experimentation with technology in their professional contexts following the institute. There is also some evidence that indicates our efforts to assist participants in developing stronger mentoring, leadership, and professional networking skills may have been successful. This evidence includes a flow of reports from participants of continued collaboration with other institute participants; expanded leadership roles and increasing involvement at the state, regional, and national levels; and

the professional recognition they are receiving in conjunction with their work.

One last affordance of the design-based approach that made helpful contributions to this study was the manner in which it accommodated the use of a combination of theoretical lenses.

Affordances of the Use of a Combination of Theoretical Lenses

I believe that at its core, professional development is comprised of teaching and learning—both of which are extremely complex endeavors. The myriad of variables they encompass render them inherently “messy.” Hence, in spite of numerous attempts by teachers, administrators, researchers, and policymakers, to impose order on these processes, they remain essentially “ill-structured” (Spiro, et. al, 1991) and are thus, not easily understood. Although approaches to qualitative research that rely on a single theoretical lens may produce a more streamlined, uncomplicated way of making sense of data, the use of a single theory necessarily limits the researcher’s focus to such an extent that it may obscure the attention-dependent knowledge that is only available from alternative perspectives. From my perspective, to attempt to explain the complex messiness of teaching and learning from only one perspective is, in some ways, to advocate epistemological colonization. I concur with Spiro, et. al (1991), who state:

Our constructivist position, as it applies to complex and ill-structured domains, rejects any view that says either that there is no objective reality, or that there is a an objective reality that can be “captured” in any single and absolute way. Rather, one of our principal tenets is that the phenomena of ill-structured domains are best thought of as evincing multiple truths: single perspectives are not false, they are inadequate. That is why multiple knowledge representations are so central to Cognitive Flexibility Theory. And it

is why the multidimensional and nonlinear "criss-crossing" of conceptual and case landscapes, to demonstrate the context-dependent diversity of warranted and valid understandings . . . is so important a feature In an ill-structured knowledge domain, individual cases can be reasonably interpreted from different conceptual perspectives, each adding something useful that the others miss. . . . one must have available a diverse repertoire of ways of constructing situation-sensitive understandings (again, with appropriate justification required). [Emphasis in original]

My decision to use a combination of lenses as analytic tools enabled me to remain faithful to my beliefs about these ideas, as well as to the design-based approach I had chosen. Specifically, each layer of the analysis generated new questions that motivated me to seek more information from the literature about specific aspects of the data. In keeping with the character of design experiments, these explorations were iterative and very organic. As evidenced by the reflective deliberations that conclude each of the findings chapters in this study, each new findings chapter highlighted relationships among the data that I had not been able to see previously. As I considered the contributions that the data in each chapter made to my understanding of professional development, I was able to see the affordances and constraints of each lens more clearly. Limitations in each lens generated a series of new questions that plunged me back into the data from new angles, and often called for incursions into topics I had not previously explored in the literature. This, in turn, provided additional theoretical lenses.

As I used the theoretical lenses to interpret the findings, tensions arose among them that sensitized me to issues I might otherwise have overlooked. For example, findings indicated that although immersing participants in "foreign"

contexts may help them to reframe their understandings in ways that support their professional growth, doing so may also increase their cognitive load to the point that it negatively affects their learning. This raised the question, *“How might professional developers adequately attend to the role of prior knowledge and schema while simultaneously providing sufficient novelty and recontextualization to stimulate learning?”* Similarly, findings suggested that tensions in participants’ perceptions of their professional roles, responsibilities, and contributions may have made it difficult for them to reconcile their dual roles as leaders and experts on the one hand, and learners/novices on the other. This tension pushed me to explore more deeply how social, emotional, and motivational issues might amplify the understanding I had gained from the more cognitive lens of transfer.

As these examples indicate, the theoretical lenses were continually reframed when put in relationship to one another, causing me to look at the data in new ways. Although this process was somewhat “messy” and felt unsystematic at times, it forced me to “criss-cross conceptual landscapes” (Spiro, et. al, 1991). In doing so, it provided me with a much richer understanding of participants’ comments about their learning and the degree to which the summer institute accomplished its purposes than would have been available had I simply generated a summary of the positive and negative comments participants provided on the institute evaluations they completed at the end of the institute. The use of multiple lenses allowed me to consider aspects of the summer institute that appear to have influenced participants’ learning, but that would have

been easy to miss had I not been reframing my analysis with a variety of lenses. These aspects included affective components of the learning environment, the influence of pedagogy on participants' experiences, and the manner in which the social dynamics among participants seems to have impacted their learning. Combining multiple theoretical lenses also helped me to understand the paradoxical nature of some of participants' comments, such as those that indicated their social interactions with other participants were extremely supportive of their learning, while simultaneously noting that they impacted their learning in very negative ways.

In summary, the design-based approach I took to this study, in conjunction with the use of multiple theoretical lenses as analytic tools was fruitful in guiding me toward a more holistic, dimensionalized understanding of professional growth and development—one that views participants as learners with cognitive, social, and emotional needs, interests, and talents. However, the approach was also limited by a number of factors that are outlined below.

Limitations of the Research Approach

Limitations of Design-based Approach to Research

There are also a number of limitations to the design-based approach that I used during this study. These include issues of generalizability, reliability, and objectivity—each of which are explored in more detail below.

Generalizability

Clearly, the small scale of this design experiment creates a number of concerns regarding generalizability. This inquiry is based on a very limited

sampling of data from one small, isolated, and rather atypical professional development experience within the very specific context of world language education. Participants were professionally active world language educators serving in leadership roles who are, in many cases, heavily involved in shaping national policy and offering professional development to others. Consequently, it is unlikely that they are representative of language teachers in general.

In addition, I have attempted to clearly articulate the methodology I used in this study to help readers evaluate the applicability of these findings to their own contexts and to situate my analyses in larger theoretical frameworks. However, the complexity of the research context, my unconventional approach to the research, and the variety of analytic lenses I used are likely to diminish the visibility of which affordances and constraints of this study are relevant to their own professional contexts. I explore the limitations of combining multiple theoretical lenses more fully in later sections.

Reliability

I attempted to generate rigorous, empirically grounded claims that were reliable by triangulating data from various sources, performing recursive analyses, and drawing on multiple perspectives. However, many of my claims are based on limited data. Findings are based primarily on brief answers that small subsets of a sample size of only 21 participants provided in response to survey questions, without substantive follow-up opportunities for clarification. Additionally, statements made by participants during informal conversations and interviews are based on self-report in hindsight. As a result, they may not fully or

accurately represent what actually occurred during the summer institute, or participants' collective perspectives on those events which might have emerged had I used focus group interviews or other similar research methods. It is also likely that statements made by participants may not represent their current perspectives.

Furthermore, while working with comments participants made across three different surveys, I discovered several occasions in which I discovered that I had misinterpreted comments as a result of looking at individual chunks of data in isolation. This changed the shape of my analysis. I reanalyzed the data from individual participants across surveys, looking for contradictions within their responses to ensure that I did not misinterpret data or overstate my claims. Even so, issues like these make it nearly impossible to guarantee the reliability of my assertions. This aspect of my study could have been strengthened by working with a second or third coder to increase confidence in the reliability of my coding.

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Objectivity

I took a number of precautions, drawn from the literature on design-based approaches to research, in order to strengthen the objectivity of this study. These included providing a detailed description of the context for the study, carefully outlining my conceptions of professional development in world language education, and drawing on scholarship to interrogate my interpretations. Nonetheless, the fact that I have attempted to play the dual role of researcher

and co-designer of the summer institute I am studying clearly raises concerns about the degree to which I have been able to guard against bias both in my interpretation of the data and in the assertions I have made about it. Although I attempted to mediate this bias by using multiple theoretical lenses as analytic tools, that approach does have a number of limitations. I reflect on these limitations in the section below.

Limitations of the Use of Multiple Theoretical Lenses as Analytic Tools

Sometimes, new understandings require radical departures from existing practice. However, a great deal of risk is inherent in any departure from existing practice, and this amalgamated use of lenses was no exception. In the case of this study, the quantity, variety, and complexity of the analytic lenses I chose created numerous problems.

I drew on an average of three lenses to help me interpret each findings chapter. This required me to frame each chapter with a brief review of related research and scholarship in order to orient the reader to the theoretical perspectives that guided my analysis of data included in the chapter. Had I relied on only one lens in each chapter, I anticipate that this might have worked rather well. However, clearly explaining three different lenses was a difficult task that was further complicated by the need to bring them into solid relation with the lenses that appeared in both the preceding and subsequent chapters (a total of approximately 15 lenses). Guiding the reader through progressively deeper layers of new ideas grew even more complex as I tried to connect each set of concepts back to the literature on professional development, world language

education, and to one another. My use of so many lenses necessarily limited the depth of analysis I was able to perform with each individual lens. It was also a challenge for me to keep track of so many lenses. As a result, I believe there are some rich insights buried within individual chapters that simply got lost as I worked back and forth among the lenses. Additionally, these lenses all drew on different epistemological traditions, ranging from behavioralism to constructivism. Although I do not necessarily view that as a problem (as I mentioned earlier in this chapter), it was a challenge to reconcile tensions between them, much less to work them into a single, coherent framework.

Due to these limitations, the findings of this study cannot and should not be generalized to mean too much. Nonetheless, the implications of findings from this study do offer some theoretical and practical contributions that, although in need of additional investigation, may still be useful to professional developers.

Implications of Findings for Professional Developers

Creativity and Compelling Professional Development Experiences

In this study, I have argued that the processes inherent in professional change overlap those involved in creativity. From my perspective, in order for professional development to change existing practice, it must deviate, to some degree, from existing practice—modeling the student-centered pedagogies we hope teachers will adopt in their own classrooms. I believe one of the primary contributions of this study is that it brings disparate lines of inquiry into relation in ways that illuminate potential components of transformative learning experiences and promising processes that may support teachers in experimenting with them.

A number of patterns continued to resurface throughout the study. Although further research is necessary to determine whether or not these patterns have any predictive value that can be leveraged as professional developers design learning experiences for participants, they do point toward several variables that may influence how and why certain aspects of professional development may (or may not) transfer into participants' professional practice. For example, the compelling experiences participants reported were often grounded in contexts that felt "foreign" in some way and engaged their attention in personally relevant, emotionally meaningful ways. Participants also reported that these experiences challenged their thinking, scaffolded their involvement, and supported their intrinsic motivation in ways that invited continued reflection over time. Some participants seem to have experienced shifts in perception that enabled them to abstract insights from the particulars of their experiences. It appears that these insights often resulted in transformations in self-perception, thought, or action. This pattern serves as the foundation for several potential theoretical contributions to the literature on professional development and their accompanying implications for practice which are elaborated further below. These contributions include reframing transfer as an issue of transliteracy, elaborating the multifaceted nature of *engagement*, and defining what may constitute personal relevance and reflection in the context of professional development in more nuanced ways.

Reframing Transfer as an Issue of Transliteracy

One potentially useful theoretical contribution this study offers to the literature on professional development is that reframing teachers' practice may be a critical part of helping them to reshape it. That is, pedagogical strategies that take participants outside the boundaries of their professional knowledge and daily experiences into "foreign" territory may help catalyze the shifts in perspective described above. By contrast, as this insightful comment from Basil explains, when professional development is approached "head on," participants may not be able to see things that might otherwise provoke them to reconsider their classroom practice.

While helping another institute member learn to use a videocamera my own thoughts about what is compelling in the visual medium congealed, specifically regarding composition. As bilateral creatures with a nose between two eyes, when we want to see something we basically aim our nose at it, and center it in our vision; this is what one sees when one is there. To compel anyone else, we must not imitate what we naturally do, that is, center things. Instead, we must compose an image that is purposefully not-centered, not self-explanatory -- not predigested! If someone approaches, don't follow him, let him walk past the camera. If a cyclist passes, let him ride into, through, and out the scene. (Post-institute Survey, Question 5, Basil)

Repositioning participants in ways that help them to see themselves, their **s**tudents, and their circumstances from new angles appeared to assist them in **n**oticing new "options for thought and action" (Bird, 2004, personal **c**ommunication) which may have subsequently become the substance of their **f**uture professional decisions. In essence, their new vision may have enabled **c**hanges in their actions.

However, “thinking out of the box” may require teachers to creatively repurpose their existing objectives, plans, and tools to bring them in harmony with their new “visions” for themselves and their students. Recognizing that the possibilities presented in a professional development session are relevant to one’s own professional setting appears to involve a measure of cognitive flexibility-- the ability to fluently move between various frames and perspectives. Similarly, translating these possibilities into classroom realities seems to be facilitated by the ability to move comfortably between contexts, genres, media, and tools (or in other words, transliteracy). Indeed, findings from this study suggest that teachers who possess strong transliteracy skills may be better equipped to transfer ideas from professional development into their classroom practice. Implicit in these two potential theoretical contributions are several practical strategies that may assist world language teachers in developing skills that have the potential to facilitate transfer. These strategies include recontextualization, multiple representations, and the playful creation of content.

Practical Pedagogical Strategies That Emerge from Reframing Transfer as an Issue of Transliteracy

Recontextualization, reframing, & representation. Findings from this study indicate that the manner in which content is framed may play a key role in activating prior knowledge and in facilitating transfer to classroom practice. Inviting participants to reframe common educational practices by “stepping outside” of what they know may help them to see and understand what they know more clearly, making rationales for change more convincing. A number of strategies appeared to facilitate the development of participants’ proficiency in

flexible “frame-shifting,” including the use of big ideas and conceptual frames from disciplines outside the field of education that helped them to see their practice in new ways, exposure to multiple representations of institute content, “field trips,” opportunities to network with other participants, and multimedia examples.

Another important pedagogical implication, however, is that some participants were only able to see specific possibilities for integrating institute content into their existing practice when the problem was framed in terms of concepts with which they were already familiar. This suggests the need for balance between novelty and familiarity. The more distant the content of a professional development session is from participants’ daily realities, the more extended support participants might require in order to implement new ideas successfully. It appears that when new concepts are clearly connected back to the specifics of world language education and participants’ previous experiences, they may more easily notice clear applications to their own classroom contexts and feasible pathways they can take in order to implement the new ideas.

Playful pedagogies. It appears that one way to mediate this gap between the simultaneous need for novelty and familiarity may be to involve participants with pedagogies that foster the playful exploration of new ideas from multiple perspectives. Well-designed play environments stimulate curiosity in ways that challenge participants to try on new roles and to explore the possibilities that emerge from bringing objects, ideas, and actions into new relationships. They also offer enough scaffolding and control to help mitigate the risks in doing so.

Findings from this study suggest that playfully exploring new ideas may help participants to develop fluency in viewing their professional contexts from multiple perspectives (a defining characteristic of expertise). The following strategies may facilitate this:

- Progressive exploration of new, increasingly complex, conceptual layers of institute content
- Application of the same graphic organizer or heuristic to different pieces of content
- Immersion in the pedagogies targeted for adoption
- Creation (by participants) of different representations of institute content using a variety of tools and materials
- Involvement in technology-infused learning centers

It is possible that strategies like those outlined above may allow participants to “try ideas on” and evaluate the degree to which they “fit” with participants’ individual circumstances and self-perceptions. In this way, these pedagogies may assist participants in recognizing promising possibilities for integrating institute content into their own professional practice. In some ways, these ideas are not all that surprising given the fact that previous research on professional development has discussed the importance of engaging participants. However, a third theoretical contribution this study offers to the literature is its elaboration of the multifaceted nature of *engagement* and the processes it may involve.

Elaborating the Multifaceted Nature of Engagement

As a result of conducting this study, I have come to understand that engaging participants probably encompasses more than capturing their attention, involving them physically, or stimulating them intellectually. Instead, I posit that engagement is a holistic affair that requires attention to the cognitive, emotional, motivational, and social features of the learning experience. I also hypothesize that the impact of a professional development session does not depend solely on whether or not these various facets of participants are “engaged,” but also on the extent and quality of that engagement.

The role of cognition in engagement. Perhaps one of the most potentially valuable theoretical contributions of this study is its illumination of the role that ongoing reflection may play in the long-term retention and transfer of institute content. Findings from this study suggest that connections among concepts, contexts, and people may be at the heart of what makes a compelling experience transformative. Sustained reflection has the potential to provide participants with opportunities to make connections that may assist in the perception of relevance, facilitate new insights, and support integration into professional practice. Put another way, when professional developers attend to the emotional, motivational, and social facets of engagement, it appears that they may inadvertently support participants’ ability to also remain engaged in ongoing reflection. According to research in the field, this may be an essential condition for transfer. Hence, professional development sessions that focus on the delivery of content without also carefully considering how the pedagogical

processes used to do so might also mediate participants' thinking may be missing an important opportunity to influence participants. In the sections that follow, I more fully elaborate each of these facets of engagement.

The role of affect in engagement. Findings from this study underscore the frequently overlooked role that emotion may play in engagement. They suggest that emotional engagement may help to capture participants' attention and increase the likelihood that they will remember the experience. Throughout this study, there are indications that the affective components of an experience probably factor heavily in teachers' evaluations of that experience. This appears to extend to teachers' decision-making processes as well. Following the institute, very few participants offered rationales for the changes they reported making in their practice that were instructional or pedagogical in nature. Instead, most participants commented almost exclusively on affective issues—the degree to which institute content and processes generated positive emotions, were “fun,” motivating, or seemed personally relevant. It also appears that participants may rely heavily on their own (and students') affective responses to interventions presented during professional development as proof of their pedagogical value. This implies that professional developers who hope to stimulate change in the beliefs or practices of world language educators might be wise to carefully consider how the learning environment and experiences within it may make participants “feel.”

The degree to which participants experienced institute content as relevant to their professional contexts also appeared to influence their feelings about

institute experiences. This study uncovered three specific criteria that participants seemed to use to determine whether or not something was professionally relevant. These criteria were *familiarity*, *functionality*, and *feasibility*.

Familiarity refers to the degree to which new information seemed to fit with participants' existing perceptions of their professional roles and responsibilities. If information did not appear tightly linked to the problems and tasks participants encountered in their professional work on a daily basis, they seemed to be more likely to set it aside as being irrelevant. This finding may enrich our understanding of findings from studies of professional development have encouraged professional development that is "job embedded" by providing one potential explanation for why such embeddedness may matter.

Functionality refers to whether or not participants believed the information or strategy had the potential to solve problems they commonly encounter in their professional contexts in practical ways. This characteristic may help to explain participants' reports that they had adopted some of the pedagogical strategies we modeled for them during the institute. It may be that such modeling enabled them to more accurately assess the functionality of the strategies.

Feasibility addresses the degree to which participants perceived the information or strategy as compatible with their professional contexts. That is, even when it was clearly evident that a strategy could potentially solve some of the problems that participants' frequently encountered, if it seemed too difficult to implement or incompatible with the available resources or contextual factors of

their professional situations, they were still likely to disregard it as irrelevant.

Hence, one possible interpretation of these findings is that personal and professional relevance may spur engagement. These ideas further emphasize the often understated influence of motivational factors may have on teacher learning.

The role of motivation in engagement. Many approaches to professional development focus on changing things that are external to the teacher. In so doing, they fail to take into account the beliefs, values, and understandings about the world that teachers bring to their professional practice. Yet, findings from this study suggest that teachers may draw heavily on their professional perspectives as critical tools for professional decision-making. This means that if professional developers hope to motivate teachers, they would be wise to consider teachers' prior knowledge and experiences when planning professional development. In light of the degree to which affective issues may influence transfer, professional developers may find it helpful to use teachers' prior knowledge and experience as one means of moderating participants' cognitive load. By doing so, professional developers may help participants feel less overwhelmed and may enable them to better focus their attention on the features of input that have the potential to assist them in transforming their practice. One implication is that professional developers who scaffold learning activities may assist participants in experiencing a more optimal balance between the challenge of the tasks and their professional skills. Finally, offering adequate feedback may help participants to adjust their professional performance.

Another potentially promising theoretical contribution of this study is that it highlights the degree to which these kinds of motivational issues may be at the core of Csikszentmihalyi's (1996) concept of flow experiences. Specifically, when an experience captures attention and preserves an adequate balance between task demands and participants' skill levels, flow may be facilitated. Findings from this study indicate that when these conditions are not met, discomfort may ensue, increasing the likelihood that participants may disengage from the discomfort. This disengagement has the potential to disrupt both flow and participants' learning.

The role of social support in engagement. It appears that this kind of imbalance between task demands and expertise may be most likely to occur when participants' skill levels place them in a zone of proximal development, or in other words, at a point where they cannot perform the learning tasks without assistance from a mentor who is more knowledgeable or skilled. Scholarship on motivation suggests that adequate social support may help mediate this imbalance, and by doing so, sustain motivation. However, findings from this study indicate that due to the fact that many teachers perceive "knowing" as an essential component of their professional roles, their need for assistance may negatively influence their perceptions of their professional expertise, as well as their willingness to continue to engage with the task. Some may even be unwilling to seek the assistance they need in order to protect themselves from being perceived negatively by their colleagues. Hence, assistance may be most readily received when it is provided by peers from similar professional contexts

who have parallel professional roles and responsibilities. The pedagogical implications that emerge from each of these aspects of engagement are discussed in the sections below.

Practical Pedagogical Strategies That Emerge from Elaborating Engagement

The strength of participants' attention and the depth of their subsequent transformation may be related to how well the learning environment and experiences involved in the professional development attend to issues of engagement. The ideas discussed in the preceding sections of this chapter point toward several pedagogical strategies that may assist professional developers in the task of engaging participants more fully. Some of the most promising include multisensory methods and materials that support participants' ongoing reflection, engage participants' emotions in ways that feel personally relevant and meaningful to them, and provide scaffolding that may help mediate participants' cognitive load and social interactions. I will discuss the pedagogical implications inherent in these ideas in the following sections.

Multisensory methods and materials. The embodied nature of professional development and the preceding elaboration of the multifaceted nature of engagement both suggest a need for greater attention to "the whole participant." Two strategies that may assist professional developers in doing this are packaging input in multisensory ways that make heavy use of images to convey conceptual content, and drawing on methods and materials that are tactile or kinesthetic in nature (such as manipulatives or cooperative learning processes). Active, hands-on, inquiry-based, project-centered learning opportunities may be especially productive approaches to increasing multisensory involvement.

Multimedia and other technology-infused learning activities.

Transliteracy theory illuminates the fact that technologies are more than just tools—they embody specific epistemologies. This implies that technology integration is not a task, but rather, a way of thinking about teaching and learning that has the potential to transform the act itself. This is congruent with findings from this study, which indicated that technology-related institute activities heavily influenced participants' subsequent classroom practice. However, pre-institute survey results suggested that even though the majority of participants had access to technology, many of them may have been using it in very functionally fixed ways. Findings from this study offer insight into this tension, suggesting that technology “training” which focuses solely on skill development may not “move” participants toward change as well as technology-infused activities that emphasize the relationships between student thinking, the development of proficiency in world languages, and pedagogical reasoning. World language teachers may benefit from opportunities to engage with technology in pedagogically sound ways that allow them to personally experience how it might be used to facilitate language learning. Such opportunities appear to enable participants to perceive its relevance for and applicability to their own classrooms. Hands-on experiences with pedagogically sound uses of technology also appear to have the potential to transfer to classroom practice more readily than when participants are left to figure out how to “translate” into their existing practice technological tools they have been “shown.” Further research is needed to determine the degree to which strategies that emerged as promising ways to

facilitate sustained, successful engagement with new technologies during this study may be applicable in other contexts. These strategies include stating expectations for participants' knowledge and performance clearly, building on their prior knowledge, carefully sequencing content, allocating adequate time for hands-on practice, and providing detailed scaffolding of participants' interactions with technology. However, findings from this study also suggest that without sustained reflection, hands-on engagement may be limited in its ability to foster transfer to classroom practice.

Sustained reflection. According to the findings that emerged during this study, professional developers may be able to foster more sustained “grappling” (Sizer & Sizer, 1999) with institute content in a variety of ways. These methods include presenting cognitively complex content that contains elements of incongruence; encouraging contrastive reasoning; and inviting comparisons of approaches, conceptual content, instructional strategies, and teaching philosophies. Tools that may help support these processes include graphic organizers, heuristic devices, multiple representations of content, and activities grounded in metaphors. As noted in previous sections, mediating the cognitive load and professional discomfort that is often associated with grappling may augment the influence of these methods. Promising interventions that may assist with this mediation include activating participants' prior knowledge, highlighting patterns, providing adequate scaffolding, and including purposeful opportunities for participants to consolidate what they are learning. Consolidation activities might include opportunities for participants to summarize what they have learned,

to reflect on its significance for their personal and professional contexts, to connect it to other things they know, and to consider how it might be applied to other problems they are facing. In longer institutes, it may also be important to provide unstructured time for participants to relax, socialize, and ponder. Failure to dedicate adequate time to processing and practice may leave institute content fragmented and disconnected, making it difficult for participants to develop useful schema that might perhaps enable them to effectively pursue future learning. Professional conversations appear to be another strategy for promoting sustained reflection that may lead to positive outcomes.

Professional conversations. Participants' conversations with one another seemed to support their reflective processing and long-term learning. Consequently, careful attention to interpersonal relationships may be important. For when the dynamics of such interactions become negative (as shown in Chapter 9), they appear to eclipse the benefits of institute content and negatively impact participants' willingness to fully engage with institute activities. This implies that it might be useful to devote time to activities that help participants get to know one another both personally and professionally. I posit that these kinds of relationship-building activities may position participants to engage more fully in "learning-focused conversations" (Lipton, 2001). In addition to opportunities during the institute to converse, formal opportunities to reconnect through pre-arranged meetings at professional conferences or in follow-up professional development sessions may also help participants to maintain the momentum for change built during a professional development experience. However, findings

from Chapter 9 of this study suggest that participants may need assistance in managing the tensions that may emerge during the course of these interpersonal interactions.

Managing risk in the learning environment. Change always involves both risk and possibility. It may often require a substantive investment of self as well. Consequently, professional development providers may need to help participants mitigate the risks of experimentation by protecting participants' roles as experts while supporting them as learners. Setting clear expectations for the structure, content, and participants' roles during the institute may assist them in activating prior knowledge and selecting schema that will help them to mitigate the challenge to their professional competence that uncertainty might otherwise impose. Including ongoing opportunities for reflection and providing feedback on their professional performance in sufficient quantities may allow them to consolidate their learning and adjust their performance. Additionally, helping participants to reframe teaching and leading as "learning" instead of "knowing" may help alleviate the tensions that sometimes arise when they encounter situations during the institute that expose what they may not know. Other possible interventions include structuring group work to mediate the balance of challenge and skill required by each task, and carefully monitoring it so that should tensions emerge, they can be directly addressed.

As noted in Chapter 9, differences in participants' professional roles and responsibilities seemed to shape what they valued, what they perceived as relevant, and the epistemologies that guided their professional decision-making.

Consequently, if participants in future institutes were to come from a diverse array of contexts, it might be helpful to draw their attention to these issues, as well as to embed differentiation into the plans for the institute.

The professional isolation inherent in the professional contexts of many world language educators may also mean that their opportunities to collaborate with colleagues are relatively limited. As a result, professional developers may need to help participants set norms for group work, provide overt instruction regarding techniques for expressing disagreement in productive ways, and establish explicit processes to ensure that everyone has opportunities to contribute to professional conversations.

It is possible that professional developers who employ the pedagogical strategies outlined above may be better able to support participants in transferring the content of professional development sessions into their professional practice. However, additional research is required in order to determine the extent to which these implications may be useful in designing subsequent iterations of professional development for groups of world language educators that are more representative of the profession at large.

Suggestions for Future Research

Much energy has been devoted to attempts to identify the characteristics and features of “effective” professional development. Yet, this study revealed substantive gaps between the research-based conception of this particular professional development institute and its actual enactment. The tensions that emerged from these gaps may prove especially fruitful in identifying areas for

further research. I have attempted to synthesize the issues that appear most promising for additional investigation in the areas for future study outlined below.

- *Are participants who possess strong transliteracy skills more skilled at integrating the content of professional development into their professional practice than those who lack them, and are patterns in the way participants talk about technology reliable indicators of their transliteracy skills?*
- *How might professional developers mediate the heavy cognitive load that the development of transliteracies may impose on participants—especially those who are not very familiar with or skilled in using technology?*
- *What kinds of representations are most effective in activating participants' prior knowledge while simultaneously reframing it, and how might professional developers mediate resistance from participants whose prior experience with teaching and learning has not included a wide variety of representations?*
- *To what degree are world language educators able to make deep connections between new pedagogical strategies and their practice immediately following exposure to them?*
- *What pedagogical strategies are successful in helping participants to reframe teaching and leading as "learning" instead of "knowing," and how might professional developers preserve participants' sense of expertise while still fostering their professional growth?*

- *How might professional developers help participants with differing epistemological commitments build shared perspectives that allow them collaborate and learn from one another more productively?*

Attention to areas of study like this may help professional developers test some of the implications outlined above that I have theorized may enable the design of more productive learning environments and experiences for participants.

Conclusions

This study has acknowledged the complex array of factors that influence professional development in world language education. Findings from this study indicate that if we hope to produce students who reach high enough levels of proficiency to meet the growing national demand for advanced linguistic proficiency, we must deliver professional development in more compelling ways—ways that attend to world language educators' motivational needs and support their thinking. One important insight that has emerged from this study is that in order for professional development to be effective, it must not only address the “what” of content through the theoretical lenses of scholarship, but also model the “how.” World language educators need exposure to both theory and practice in order to develop the densely connected conceptual networks and pedagogical reasoning skills they need to transform the learning experiences they create for their students.

Findings from this study are promising in that they suggest that deliberately engaging teachers in multifaceted ways that help them to playfully recontextualize and reflect on their practice may invite changes in perspective

that facilitate their learning. Over time, it appears that these shifts in thinking may impact their professional practice. Clearly, additional research is needed to further explore these findings and to investigate the questions they raise. Design-based approaches to research may be one useful way to assist world language professionals in examining these questions. Findings from such studies may enable them to make more informed decisions about the content, rationale, and processes used in future design cycles of professional development experiences that seek to effect change in foreign language teaching and learning in the United States. Even though this study raises more questions than it answers, it tells us enough to know that the journey we must take in order to answer them will be compelling!

APPENDICES

Appendix A – Selected Questions Raised by New Visions Participants &

NFLRC Advisory Board Members

- o What implications do current trends in government and public policy, commercial industry, and private services have for the kind of professional development that the NFLRC offers? What implications do they have for language education in the next 10 years?
- o How might we expand foreign language advocacy and education in the community to ensure that every American has experiences with world languages (as is common with art, music, or physical education)? How might less commonly taught languages fit into this picture?
- o How might we intensify our research efforts?
- o How could we expand and disseminate effective models of foreign language education more widely?
- o What do we believe? How can we better align what we believe with the kind of professional development we currently provide? How can we give participants experiences that will help them to understand why we believe what we do about language education and prepare them to do the same for their colleagues?
- o How might we improve articulation across K-12 contexts, university language programs, and teacher preparation programs?
- o How might we better prepare world language educators to contextualize language instruction in rich, complex contexts from across content areas?
- o How might we address issues of teacher recruitment and retention in world language education?
- o Since the three modes of communication (interpretive, interpersonal, and presentational) are often mediated by technology, how might we assist teachers in learning to use technology to expand the reach of world language education (i.e. through distance learning, online learning, or virtual worlds)?

Appendix B - Mentoring, Leadership, & Change 2003 Daily Schedule

8:30 a.m. – 10:15 a.m.	Focus Topic Workshop
10:15 a.m. – 10:30 a.m.	Morning Break
10:30 a.m. - 12:00 p.m.	Focus Topic Workshop, Continued
12:00 p.m. – 1:00 p.m.	Lunch
1:00 p.m. – 3:30 p.m.	Hands-on Project Time
3:30 p.m. – 3:45 p.m.	Afternoon Break
3:45 p.m. – 5:00 p.m.	Debrief & Discussion Session
5:00 p.m. – 5:30 p.m.	Free Time
5:30 p.m. – 6:30 p.m.	Dinner

Appendix C – Overview of Mentoring, Leadership, & Change 2003 Institute Agenda (p. 1)

Day	Tuesday – July 29	Wednesday – July 30	Thursday – July 31	Friday – August 1	Saturday – August 2
Morning (8:30 a.m. – 12:00 p.m.)		Introduction to the Institute Lunch	Assessment Workshop Lunch	<i>Thematic Units</i> Workshop Lunch	<i>Technology</i> Workshop Lunch
Lunch (12:00 p.m. – 1:00 p.m.)					
Afternoon (1:00 p.m. – 3:30 p.m.)		<i>Mentoring, Leadership, & Constructivism, & Change</i> Workshop	Assessment Project Time	<i>Thematic Units</i> Project Time	<i>Technology</i> Project Time
Afternoon Discussion Session (3:45 p.m. – 5:00 p.m.)		How would you help others to navigate this process? (personal, building, district, profession, community)	How would you help others to navigate this process?	How would you help others to navigate this process?	How would you help others to navigate this process?
Dinner (5:30 p.m. – 6:30 p.m.)		Dinner	Dinner	Dinner	Dinner
Evening Activities	Welcome Dinner @ 7 p.m.				

Mentoring, Leadership, & Change • 2003 • Cherice Montgomery & Cindy Kendall

Appendix C – Overview of Mentoring, Leadership, & Change 2003 Institute Agenda (p. 2)

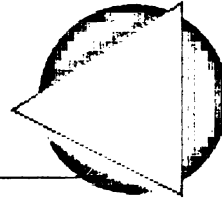
Day	Sunday – August 3	Monday – August 4	Tuesday – August 5	Wednesday – August 6
Morning (8:30 a.m. – 12:00 p.m.)	Individual time for church or work	K-6 Issues Project Time	Action Research Project Time	Group presentations, evaluation, and wrap-up
Lunch (12:00 p.m. – 1:00 p.m.)	Lunch	Lunch	Lunch	Lunch
Afternoon (1:00 p.m. – 3:30 p.m.)	K-6 Issues Workshop	Action Research Workshop	Work Time	Off to airport
Afternoon Discussion Session (3:45 p.m. – 5:00 p.m.)	How would you help others to navigate this process? (personal, building, district, profession, community)	How would you help others to navigate this process? (personal, building, district, profession, community)	What else do you need to continue what you have begun here?	
Dinner (5:30 p.m. – 6:30 p.m.)	Dinner	Dinner		
Evening Activities			Farewell Dinner @ 7 p.m.	

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Appendix D – Conceptual Statements

Mentoring, Leadership, and Change

Conceptual Statements



Collaborate with your group in order to create a graphic representation of each statement.

- 1) **Understanding** is the well that provides momentum for *change*.
- 2) **Change** is created by or is the result of a *shift in perspective* (deepening understanding).
- 3) A **shift in perspective** is the result of *exploration, collaboration, and reflection*.
- 4) **Exploration, collaboration, and reflection** arise from *cognitive dissonance*.
- 5) **Cognitive dissonance** results from a *conflict between self and context* (system).
- 6) **Conflict** can be mediated through *mentoring*.
- 7) **Mentoring** is a form of *leadership*.
- 8) **Effective leadership** recognizes and honors ethical, contributing members of *the learning community*.

Appendix E – MLC 2006 Open-ended Personal Statements

- 1) One thing that you should know about my life is . . .
- 2) One thing that I'd like to know about you is . . .
- 3) Three ideas or experiences that have significantly influenced my philosophy of teaching and learning are . . .
- 4) One way that my thinking has changed over the course of my career so far is.
..
- 5) The primary reason I wanted to attend this institute was . . .
- 6) One of the ways that I think this institute will challenge me is . . .
- 7) One of my biggest pet peeves in working with others is . . .
- 8) One thing that I hate to do when it comes to collaborating with others is . . .
- 9) One thing that you should know about working with me is . . .
- 10) I hope that you will be patient with . . .
- 11) When it comes to technology, I am not comfortable . . .
- 12) What I would like to learn about technology is . . .

Appendix F – Thinking Template

Essential Questions

"And questions long buried under answers may be unearthed" (Tom Barone, 2001, p. 3).

In this space, list no more than 5 to 7 questions that would guide others in exploring your topic area in ways that will help them to develop a deep, enduring understanding of it.

- 1)
 - 2)
 - 3)
 - 4)
 - 5)
 - 6)
 - 7)
-

Key Concepts

"... the emphasis should be on a few powerful ideas that students are unlikely to discover on their own and that can help them make sense of a wide variety of more specific ideas" (Putnam & Borko, 1997, p. 1271).

In this space, make a list of key concepts (one- or two-word phrases) that encapsulate important facets of your topic area. (Hint: You might want to try using Word Art to do this.)

Appendix F – Thinking Template (p. 2)

Guiding Principles

"... Search for principles. Carefully separate them from the detail used to explain them. Principles are concentrated truth, packaged for application to a wide variety of circumstances It is worth great effort to organize the truth we gather to simple statements of principle" (Richard G. Scott)

In this space, make a list of no more than 7 principles (or rules of thumb) that others could use to guide them in applying key concepts from your topic area to their own classrooms or contexts.

1)

2)

3)

4)

5)

6)

7)

Personal Reflections

"For what you see and hear depends a good deal on where you are standing: it also depends on what sort of person you are" (Lewis, 1955, p. 136).

In this space, note 1 reflection or personal connection that each person in your group made with your topic area.

Person 1:

Person 2:

Person 3:

Person 4:

Appendix F – Thinking Template (p. 3)

Quality Models

"... we teach who we are" (Palmer, 1998, p. 2).

In this space, list no more than 5 quality models of your topic area in action.

- 1)
 - 2)
 - 3)
 - 4)
 - 5)
-

Powerful Quotations

"The voice of the mentor becomes the internal voice of the protégé" (Lipton & Wellman, 2003)

In this space, list no more than 20 powerful quotations related to your topic area. Please use the following format: "Quotation" (Author's Last Name, Year of Publication, p. #). "Quotation" (Author's Last Name, Year of Publication, p. #).

Resources & Materials

"The selection of a material or activity is also the selection of an array of forces that will influence how students will be challenged to think ... the curriculum is a mind-altering device" (Eisner, 2004, pp. 13, 72).

In this space, make a list of the TOP TEN resources and materials that you would recommend to a foreign language educator who is interested in understanding and using your topic area to improve their practice.

Appendix F – Thinking Template (p. 4)

References

Eisner, Elliot W. (2002). *The arts and the creation of mind*. New Haven: Yale University Press.

Lewis, Clive S. (1983/1955). *The magician's nephew*. NY: Scholastic.

Lipton, Laura, & Wellman, Bruce. (2003). *Mentoring matters: A practical guide to learning-focused relationships (2nd ed.)*. Sherman, CT: MiraVia.

Palmer, Parker. (1998). *The courage to teach: Exploring the inner landscape of a teacher's life*. San Francisco, CA: Jossey-Bass.

Putnam, Ralph T., & Borko, Hilda. (1997). Teacher learning: Implications of new views of cognition. In B.J. Biddle, et. al. (Eds.), *International handbook of teachers and teaching* (pp. 1223-1297). Netherlands: Kluwer Academic Publishers.

Appendix G – Mentoring, Leadership, & Change 2006 Institute Schedule

8:30 – 9:00	(30 min.)	Principles & Practices: Mentoring, Leadership, Mentoring, Leadership, Change, Design, & Creativity
9:00 – 9:30	(30 min.)	Compelling Mini-experience 1 & Debrief
9:30 – 10:00	(15 min.)	Compelling Mini-experience 2 & Debrief
10:00 – 10:15	(30 min.)	BREAK
10:15 – 10:45	(30 min.)	Stepping Outside the Box: Key Concepts & Principles of Design Frames (Graphic Design, Architecture, Music, News & Filmmaking, & Marketing)
10:45 – 11:30	(45 min.)	Mini-task in Mixed Groups
11:30 – 12:00	(30 min.)	Insights & Issues
12:00 – 1:30	(90 min.)	LUNCH
1:30 – 3:00	(90 min.)	Mini-experience Development Time in Focus Topic Groups
3:00 – 3:15	(15 min.)	BREAK
3:15 – 3:45	(30 min.)	Compelling Mini-experience 3 & Debrief
3:45 – 4:15	(30 min.)	Compelling Mini-experience 4 & Debrief
4:15 – 4:45	(30 min.)	Compelling Mini-experience 5 & Debrief
4:45 – 5:00	(15 min.)	Wows, Wishes, & Words of Wisdom
5:00 – 5:30	(30 min.)	Free Time
5:30 – 6:30	(60 min.)	DINNER

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Appendix H – Overview of Mentoring, Leadership, & Change 2006 Institute Agenda (p. 1)

Day	Thursday, July 20	Friday, July 21	Saturday, July 22
8:30 - 9:00 (30 min.)	Welcome, Introductions, & Logistical Information	Leadership & Mentoring	Creativity & Design
9:00 - 9:30 (30 min.)	21st Century Technologies	Graphic Arts Compelling Mini-experience 1 & Debrief	Creativity & Design (Continued) Interior Design & Architecture Compelling Mini-experience Development Time in Focus Groups
9:30 - 10:00 (30 min.)	21st Century Literacies	Graphic Arts Compelling Mini-experience 2 & Debrief	
10:00 - 10:15	BREAK	BREAK	
10:15 - 10:45 (30 min.)	21st Century Learners	Interior Design & Architecture	Mentoring & Leadership
10:45 - 11:30 (45 min.)	Mini-task in Mixed Groups	Interior Design & Architecture Mini-task in Mixed Groups	Music
11:30 - 12:00 (30 min.)	Insights & Issues	Insights & Issues	Music Mini-task in Mixed Groups
12:00 - 1:30	LUNCH	LUNCH	LUNCH
1:30 - 3:00 (90 min.)	That Which Moves Us: The Nature of Compelling Experiences	Interior Design & Architecture Mini-experience Development Time in Focus Groups	Music Mini-experience Development Time in Focus Groups
3:00 - 3:15	BREAK	BREAK	BREAK
3:15 - 3:45 (30 min.)	Graphic Arts	Graphic Arts Compelling Mini-experience 3 & Debrief	Interior Design & Architecture Compelling Mini-experience 2 & 3 Debrief
3:45 - 4:15 (30 min.)	Graphic Arts Mini-Experience Development Time in Focus Groups	Graphic Arts Compelling Mini-experience 4 & Debrief	Interior Design & Architecture Compelling Mini-experience 4 & 5 Debrief
4:15 - 4:45 (30 min.)	Mini-Experience Development Time in Focus Groups (Continued)	Graphic Arts Compelling Mini-Experience 4 & Debrief	Interior Design & Architecture Compelling Mini-experience 1 & 2 Debrief
4:45 - 5:00	Wows, Wishes, & Words of Wisdom	Wows, Wishes, & Words of Wisdom	Wows, Wishes, & Words of Wisdom

Appendix H – Overview of Mentoring, Leadership, & Change 2006 Institute Agenda (p. 2)

Day	Sunday, July 23	Monday, July 24	Tuesday, July 25
8:30 - 9:00 (30 min.)	Individual Work Time	Change Music Compelling Mini-experience 3 & Debrief	Marketing News & Filmmaking Compelling Mini-experience 4 & Debrief
9:00 - 9:30 (30 min.)			
9:30 - 10:00 (30 min.)			
10:00 - 10:15 (15 min.)		BREAK	BREAK
10:15 - 10:45 (30 min.)			
10:45 - 11:30 (45 min.)			
11:30 - 12:00 (30 min.)		News & Film-making Mini-task in Mixed Groups	Marketing, Continued Mini-task in Mixed Groups
12:00 - 1:30 (90 min.)			
1:30 - 3:00 (90 min.)			
3:00 - 3:15 (15 min.)	Individual Work Time	LUNCH	LUNCH
3:15 - 3:45 (30 min.)			
3:45 - 4:15 (30 min.)			
4:15 - 4:45 (30 min.)		BREAK	BREAK
4:45 - 5:00 (15 min.)			

Appendix H – Overview of Mentoring, Leadership, & Change 2006 Institute Agenda (p. 3)

Day	Wednesday, July 26	Thursday, July 27
8:30 - 9:00 (30 min.)	Creating Compelling Classroom Experiences	Taking the Institute Home With You
9:00 - 9:30 (30 min.)	Marketing Compelling Mini-experience 5 & Debrief	Present Newsletter Skeletons & Individual Action Plans
9:30 - 10:00 (30 min.)	Marketing Compelling Mini-experience 1 & Debrief	Present Newsletter Skeletons & Individual Action Plans
10:00 - 10:15 (15 min.)	BREAK	BREAK
10:15 - 10:45 (30 min.)	Creating Compelling Classroom Experiences, Continued	Evaluations & Good-byes
10:45 - 11:30 (45 min.)	Mini-task in Mixed Groups	
11:30 - 12:00 (30 min.)	Insights & Issues	
12:00 - 1:30 (90 min.)	LUNCH	
1:30 - 3:00 (90 min.)	NFLRC Newsletter Development Time in Focus Topic Groups	
3:00 - 3:15 (15 min.)	BREAK	
3:15 - 3:45 (30 min.)	Marketing Compelling Mini-experience 2 & Debrief	
3:45 - 4:15 (30 min.)	Marketing Compelling Mini-experience 3 & Debrief	
4:15 - 4:45 (30 min.)	Marketing Compelling Mini-experience 4 & Debrief	
4:45 - 5:00 (15 min.)	Wows, Wishes, & Words of Wisdom	

Pack & Bus Departs (Lunch on Bus)

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Appendix I – MLC 2006 Pre-institute Survey

Introduction

The staff of the National K-12 Foreign Language Resource Center (NFLRC) is interested in learning more about your experiences with the topic areas that will be addressed during the Mentoring, Leadership, & Change: Designing Compelling Experiences for 21st Century Learners Institute.

Your responses to this survey will help us to refine our plans for the institute so that we can better meet your needs.

There are 10 questions and we expect that it will take you approximately 15-20 minutes to complete the survey.

1. To which group have you been assigned for this institute? (Use the drop down menu to select the correct group.)

Community Outreach
Differentiated Instruction
Institute Leader (Cherice, Cindy, Marcia)
Professional Development
Program Development
Teacher Preparation

2. How long have you been teaching and/or working in the field of education? (Use the drop down menu to select the correct number of years.)

1 year
2 years
3 years (etc.)
35 years
More than 35 years

21st Century Technologies

Help us learn more about your experience with 21st Century technologies by answering the questions below.

3. List the technology to which you have easy access at home and briefly describe some of the things you do with it AT HOME.

Appendix I – MLC 2006 Pre-institute Survey (Continued)

4. When you are working with your students or colleagues, what hardware can you access easily AT YOUR SCHOOL or institution? (Please check all that apply.)

- ☐ CD Player
- ☐ Computer (for teacher use)
- ☐ 4-5 Computers (in my classroom or office—for student use)
- ☐ Computer Lab
- ☐ Data Projector
- ☐ Digital Camera
- ☐ Digital Videocamera
- ☐ Digital Voice Recorder
- ☐ Document Camera (i.e., ELMO)
- ☐ DVD Player
- ☐ Green Screen
- ☐ Laptop Cart
- ☐ MP3 Player (i.e., iPod)
- ☐ Overhead Projector
- ☐ Polycom
- ☐ Smart Board
- ☐ Tape Recorder
- ☐ VCR & TV
- ☐ Walk-and-Talk Board
- ☐ Wireless Connectivity

Briefly describe some of the things you do with this technology

5. How often do you use the following technologies, both personally and professionally? (Please mark only one response per item.)

I don't know what this is	Once a year or less	Monthly	Weekly	Daily
--------------------------------------	------------------------------------	----------------	---------------	--------------

Audio Editing Program (such as Audacity or Sound Forge)
 BlogsDatabase/Spreadsheet (such as Microsoft Access, Excel, or Filemaker Pro)
 Digital Camera
 Digital Video Camera
 E-mail
 Flickr
 Machinima
 MP3 Player (such as an iPod)
 Photo Editing Program (such as Photoshop)
 Podcast

Appendix I – MLC 2006 Pre-institute Survey (Continued)

Presentation Program (such as PowerPoint)
RSS/XML Feeds & Aggregators (such as Bloglines)
Search Engine (such as Google or Yahoo)
Social Bookmarking/Tagging (such as del.icio.us)
Video Editing Program (such as iMovie or Pinnacle Studio)
Vlog or Vodcast
Web Authoring Tool (such as Dreamweaver, Frontpage, or Netscape Composer)
Webquests
Wikis

Compelling Experiences

Help us learn more about your idea of a compelling experience by responding to the prompts below.

6. In the space below, please explain what the phrase "compelling experience" means to you.
7. In the space below, please tell us about one or more compelling experiences you have had. Use the following questions to guide your response:
 - a) What were you doing?
 - b) When did it happen (early morning, in the winter, when I was a teenager)?
 - c) Where did it happen (on a bus, at church, in a K-12 classroom, in a forest, at home, in a museum, in a store, at a theater, in a university, etc.)?
 - d) What about the experience made it compelling for you?
8. In the space below, please briefly describe the most compelling experience you have ever CREATED for students or colleagues. Use the questions below to guide your response:
 - a) Briefly describe the experience you created.
 - b) What did you do to make the experience compelling?
 - c) Is there anything you would do differently next time to make it even more compelling?

Appendix I – MLC 2006 Pre-institute Survey (Continued)

Institute Focus Topics

Help us learn more about your experience with some of the topics that we will be exploring during the institute by responding to the prompts below.

9. Please read each statement and mark the answer that best describes how often you do the following things. (Mark only one per item.)

Less than once a year	At least once a year	At least once a month	At least once a week	At least once a day
----------------------------------	---------------------------------	--------------------------------------	-------------------------------------	--------------------------------

I initiate partnerships between my educational institution and businesses, community leaders, or community organizations...

I give people with whom I work a choice of the methods, materials, processes, or structures for completing tasks...

I provide formal professional development to colleagues...

I am involved in developing new language programs...

I mentor preservice teachers...

I mentor colleagues...

I provide leadership in my professional context(s)...

I attempt to initiate change in my professional context(s)...

I apply principles of design in my professional context(s)...

As an adult, I have compelling experiences...

I use metaphors as tools for teaching and/or learning...

I use multiple representations of the same concept when explaining things to my students and/or colleagues...

10. Please mark the category that best describes your experience with each of the following topics. (Mark only one response per topic.)

I am UNFAMILIAR with key concepts and principles	I can LIST key concepts and principles	I have EXPERIMENTED WITH THE APPLICATION of key concepts and principles	I can CORRECT MISCONCEPTIONS others have about key concepts and principles.	I can MODEL how to apply key concepts and principles.
--	--	--	---	---

Cognitive Flexibility Theory
Community Outreach
Designing Compelling Experiences
Differentiated Instruction
Informal Learning Environments
Initiating, Implementing, & Sustaining Change
Leadership
Mentoring
Metaphors as Tools for Learning
Motivation
Multiple Representations
PreK-12 FL Program Development
Pre-service Teacher Preparation
Principles of Design
Professional Development
21st Century Learners
21st Century Literacies
21st Century Technologies
Visual Thinking

End of Survey

When you are satisfied with your answers, please click DONE to submit your responses. Thank you for taking time to complete this survey!

Appendix J – MLC 2006 Post-institute Survey

Introduction

The staff of the National K-12 Foreign Language Resource Center (NFLRC) is interested in learning more about your experiences with the topic areas addressed during the Mentoring, Leadership, & Change: Designing Compelling Experiences for 21st Century Learners Institute.

There are 10 questions and we expect that it will take you approximately 15-20 minutes to complete the survey.

1. To which group have you been assigned for this institute? (Use the drop down menu to select the correct group.)

Community Outreach
Differentiated Instruction
Institute Leader (Cherice, Cindy, Marcia)
Professional Development
Program Development
Teacher Preparation

2. How long have you been teaching and/or working in the field of education? (Use the drop down menu to select the correct number of years.)

1 year
2 years
3 years (etc.)
35 years
More than 35 years

21st Century Technologies

Help us learn more about your experience with 21st Century technologies by answering the questions below.

3. How do you anticipate that your technology use may change as a result of this institute?

Appendix J – MLC 2006 Post-institute Survey (Continued)

Compelling Experiences

Help us learn more about your idea of a compelling experience by responding to the prompts below.

4. In the space below, please explain what the phrase "compelling experience" means to you.
5. In the space below, please tell us about one or more compelling experiences you have had during the institute. Use the following questions to guide your response:
 - a) What were you doing?
 - b) When did it happen (early morning, in the winter, when I was a teenager)?
 - c) Where did it happen (on a bus, at church, in a K-12 classroom, in a forest, at home, in a museum, in a store, at a theater, in a university, etc.)?
 - d) What about the experience made it compelling for you?
6. In the space below, please briefly describe a compelling experience you hope to create for students or colleagues. Use the questions below to guide your response:
 - a) Briefly describe the experience you hope to create.
 - b) What will you do to make the experience compelling?

Institute Focus Topics

Help us learn more about your experience with some of the topics that we explored during the institute by responding to the prompts below.

7. Please mark the category that best describes your experience with each of the following topics. (Mark only one response per topic.)

Appendix J – MLC 2006 Post-institute Survey (Continued)

I am UNFAMILIAR with key concepts and principles	I can LIST key concepts and principles	I have EXPERIMENTED WITH THE APPLICATION of key concepts and principles	I can CORRECT MISCONCEPTIONS others have about key concepts and principles.	I can MODEL how to apply key concepts and principles.
---	---	--	--	--

Cognitive Flexibility Theory
 Community Outreach
 Designing Compelling Experiences
 Differentiated Instruction
 Informal Learning Environments
 Initiating, Implementing, & Sustaining Change
 Leadership
 Mentoring
 Metaphors as Tools for Learning
 Motivation
 Multiple Representations
 PreK-12 FL Program Development
 Pre-service Teacher Preparation
 Principles of Design
 Professional Development
 21st Century Learners
 21st Century Literacies
 21st Century Technologies
 Visual Thinking

Appendix J – MLC 2006 Post-institute Survey (Continued)

8. Consider the focus areas (Community Outreach, Program Development, Professional Development, Teacher Preparation, and Differentiated Instruction) and the compelling frames (graphic design, architecture/interior design, music, news and filmmaking, and marketing). Explain what, if anything, you now understand about (A) TEACHING AND LEARNING and (B) MENTORING, LEADERSHIP, AND CHANGE that you did not understand before the institute?
9. What was the least valuable part of the institute for you?
10. What processes or strategies used during the institute were most useful in helping you understand the concepts that were presented?

End of Survey

When you are satisfied with your answers, please click DONE to submit your responses. Thank you for taking time to complete this survey!

Appendix K – Screenshot of MLC 2006 Follow-up Institute Survey

2006 Mentoring, Leadership, and Change Follow-Up

1. Identification Number

Please enter the last four digits of your Social Security number. This is for analytical purposes only.

2. Communication

Communication

	Too little	About right	Too much	Not applicable
Since the Institute, the amount of communication I've had with the Institute leaders has been...	☐	☐	☐	☐
Since the Institute, the amount of communication I've had with other participants has been...	☐	☐	☐	☐

Please use the scale below to respond to the following items.

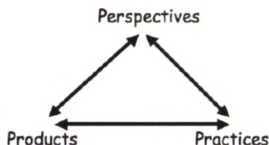
	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
My communication with the Institute Leaders was useful.	☐	☐	☐	☐	☐	☐
My communication with other participants throughout this school year was useful.	☐	☐	☐	☐	☐	☐
The Center has been a valuable source of materials and information throughout this school year.	☐	☐	☐	☐	☐	☐
Institute leaders have been supportive of my teaching efforts throughout this school year.	☐	☐	☐	☐	☐	☐
The skills and information I gained from the Institute have been useful to me professionally.	☐	☐	☐	☐	☐	☐
I would recommend National K-12 Foreign Language Resource Center Institutes to colleagues/other educators.	☐	☐	☐	☐	☐	☐
Participation in the Institute has influenced my classroom teaching.	☐	☐	☐	☐	☐	☐

Appendix K – Screenshot of MLC 2006 Follow-up Institute Survey
(Continued)

2006 Mentoring, Leadership, and Change Follow-Up

3. Your Thoughts about the Institute

Of all the experiences you had during the institute, which one(s) have had the greatest impact on your teaching/professional responsibilities in the last year?



What does the triangle above mean to you?

How have you shared the concept of compelling experiences with colleagues?
Please describe whether it was formal or informal, in what situations, and the number of colleagues.

How did your experiences with technology during the institute influence your

Appendix K – Screenshot of MLC 2006 Follow-up Institute Survey (Continued)

2006 Mentoring, Leadership, and Change Follow Up

teaching this past school year?

▲

▼

Please mark the category that best describes the degree to which each of the following instructional strategies influenced your understanding of the concepts addressed during the institute. (Mark only one response per topic).

Don't
remember the
strategy No impact Limited impact Some impact Powerful
impact

Audio Clips
Classroom Climate
Comparisons
Concept Maps
Conceptual Relationships
Cooperative Learning Strategies (Affinity
Diagram w/ Post-its, Carousel Brainstorming,
Four Corners, Inside/Outside Circles, Jigsaw,
Think/Pair/Share, etc.)
Design Frames (architecture, filmmaking,
graphic design, news, marketing, music)
Diagrams
Establishing Relationships Between Concepts
Experiential Learning
Field Trips (Compare 2 places)
Focus Topics (community outreach,
differentiated instruction, professional
development, program development, teacher
preparation)
Graphic Organizers
Journaling/Reflection Time
Layered Concepts
Learning Centers
Metaphors as Tools for Learning
Mini-projects
Multimedia Examples
Multiple Representations of Content
Music
Opportunities to Give Presentations to the
Group

Appendix K – Screenshot of MLC 2006 Follow-up Institute Survey (Continued)

2006 Mentoring, Leadership, and Change Follow-Up

Playing with Concepts
Podcasting
Post-institute Newsletter Creation
PowerPoint Presentations
Pre-institute Group Work
Questions I Asked
Questions Facilitators Asked
Readings
Sample Student Work
Small Group Work (with focus group)
Small Group Work (in mixed groups)
Spiraled Content
Stuff on the Walls
Technology
Thinking Templates
Triangles
Video Clips
Visual Models
Whole Group Discussions
Wiki
Worksheets (ABC Summary Sheet, Acrostic,
Gimme 5, etc.)

Appendix K – Screenshot of MLC 2006 Follow-up Institute Survey (Continued)

2006 Mentoring, Leadership, and Change Follow-Up

5. Use of Instructional Strategies

Please mark the instructional strategies that you are experimenting with in your classroom.

- ☐ Audio Clips
- ☐ Classroom Climate
- ☐ Comparisons
- ☐ Concept Maps
- ☐ Conceptual Relationships
- ☐ Cooperative Learning Strategies (Affinity Diagram w/ Post-its, Carousel Brainstorming, Four Corners, Inside/Outside Circles, Jigsaw, Think/Pair/Share, etc.)
- ☐ Design Frames (architecture, filmmaking, graphic design, news, marketing, music)
- ☐ Diagrams
- ☐ Establishing Relationships Between Concepts
- ☐ Experiential Learning
- ☐ Field Trips (Compare 2 places)
- ☐ Focus Topics (community outreach, differentiated instruction, professional development, program development, teacher preparation)
- ☐ Graphic Organizers
- ☐ Journaling/Reflection Time
- ☐ Layered Concepts
- ☐ Learning Centers
- ☐ Metaphors as Tools for Learning
- ☐ Mini-projects
- ☐ Multimedia Examples
 - ☐ Multiple Representations of Content
- ☐ Music
- ☐ Opportunities to Give Presentations to the Group
- ☐ Playing with Concepts
- ☐ Podcasting
- ☐ Post-institute Newsletter Creation
- ☐ PowerPoint Presentations
- ☐ Pre-institute Group Work
- ☐ Questions I Asked
- ☐ Questions Facilitators Asked
- ☐ Readings
- ☐ Sample Student Work
- ☐ Small Group Work (with focus group)
- ☐ Small Group Work (in mixed groups)
- ☐ Spiraled Content
- ☐ Stuff on the Walls

Appendix K – Screenshot of MLC 2006 Follow-up Institute Survey (Continued)

2006 Mentoring, Leadership, and Change Follow-Up

- Technology
- Thinking Templates
- Triangles
- Video Clips
- Visual Models
- Whole Group Discussions
- Wiki
- Worksheets (ABC Summary Sheet, Acrostic, Gimme 5, etc.)

6. Final Thoughts about the Institute

Think of a compelling experience you have created for students or colleagues within the last year (i.e., following the institute). What strategies did you use to make it compelling? What indications suggested to you that it was compelling for participants?



Explain what, if anything, you now understand about (A) TEACHING AND LEARNING and (B) MENTORING, LEADERSHIP, AND CHANGE that you did not understand immediately following the institute?



What questions do you still have about the concepts addressed during the institute?



2006 Mentoring, Leadership, and Change Follow-Up

7. Thank You

Thank you for completing this survey. Your response is greatly appreciated.

Appendix L – Inside/Outside Circles (Getting to Know You Activity)

Mentoring, Leadership, and Change

Inside/Outside Circles



Draw a symbol that represents something important about you

Each time you get a new partner, answer the next question on the list.

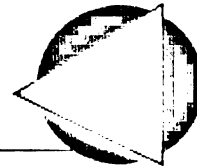
- 1) What happened at school this year that made you happy?
- 2) In what ways has this school year challenged you?
- 3) What do you like to do when you are not at school?
- 4) What is something interesting about you that others wouldn't know if you didn't tell them?
- 5) Why did you decide to come to this institute?
- 6) What do you hope to learn from this institute?
- 7) Have you experienced, seen, heard, read, or studied anything that has changed your thinking about teaching and learning in the last year?

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Appendix M – Story Squares (Getting to Know You Activity)

Mentoring, Leadership, and Change

Story Squares: Tell Me About It



Name:

For each label, think of a corresponding experience from your life. Draw a picture or symbol to represent the experience in the box provided. Trade papers with a partner. Point to a picture on your partner's paper that you'd like to know more about. When your partner points to one of your pictures, share that particular story.

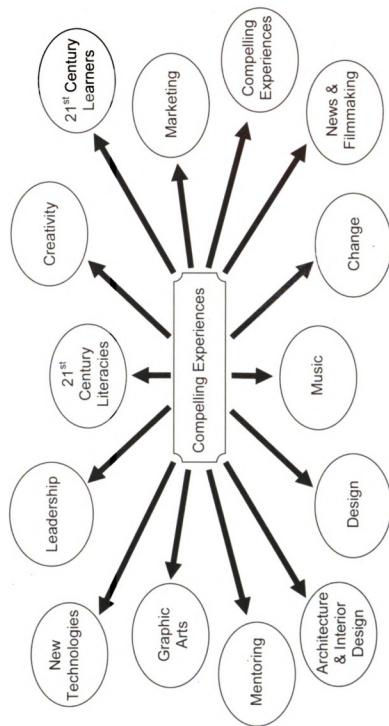
Angry or Scared	Embarrassed	Excited
Frustrated or Irritated	Grateful or Relieved	Happy or Silly
Pleased or Proud	Sad	Surprised

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Appendix N – Compelling Experiences Map

Mentoring, Leadership, and Change

Compelling Experiences Map

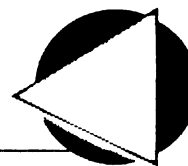


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Cindy Kendall & Cherice Montgomery

Appendix O – Build a Brochure

Mentoring, Leadership, and Change

Build A Brochure



THE PURPOSE

To communicate the key concepts and principles of your group's topic area to others in a promotional format that can be easily distributed and absorbed at a glance.

THE PRODUCT

A promotional brochure that compels those who read it to seek additional involvement with your group's topic area.

THE PROCESS

- 1) Determine your audience.
- 2) Review your group's *Thinking Template* and determine the concepts and principles that are most critical to a complete and accurate understanding of your topic area.
- 3) Identify how those items might connect with one another and with the interests and experiences of your target audience.
- 4) Determine how you will use the principles of graphic design to communicate those ideas to your target audience in powerful ways.
- 5) Divide the project into smaller pieces.

Design Process

http://www.brochures.com/brochure_design.html

- 6) Determine who will assume responsibility for each piece of the project.
- 7) Create the brochure.

Folds & Formats

Design Spice: Folding Your Brochure

http://www.designspice.com/main/tutorials/articles/art_folds.php

New Life for Old Brochure Layouts

<http://www.graphic-design.com/DTG/Design/Brochure/default.html>

Mix & Match Brochure

<http://www.ideabook.com/mix/mixmatch.htm>

Tips

How to Design & Write a Basic Brochure

<http://smalltownmarketing.com/brochuredesign.html>

Other Publication Ideas

- Brochure
- Flyer
- Advertisement for a Newsletter (School, Professional Organization, Parent Newsletter)
- Professional Organization Advocacy
- Tool for dept. discussion

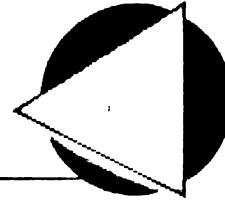
THE PRESENTATION

- A) 5 min. - Read & Write (Audience reads, then completes a fast write)
- B) 10 min. - Present (Key ideas, techniques used to engage audience, potential uses)
- C) 5 min. - Rapid Reactions (Orally from audience)

Appendix P – Compelling Acrostic Closure Activity

Mentoring, Leadership, and Change

Compelling Connections



Use the letters below to summarize the ideas from today's discussion and activities that were most powerful for you.

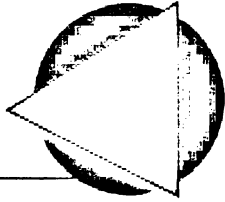
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Appendix Q – Creativity & Design Summary Templates
(Debrief of Readings)

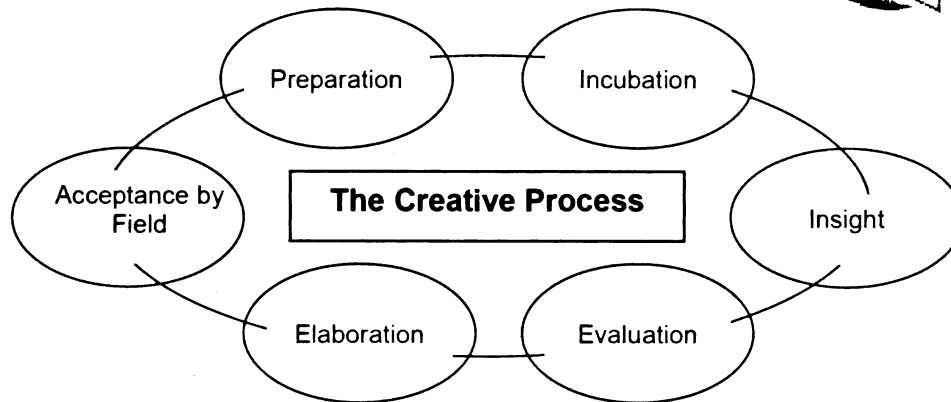
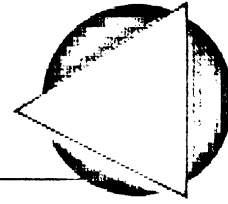
Mentoring, Leadership, and Change

Creativity & Design



Concepts	Principles	K-12 Connections
Allusivity		
Context		
Creativity		
Design		
Iterative Process		
Mental Models & Conceptual Networks		
Metaphors & Analogies		
Variations on a Theme		

Creativity



Phases	Personal Connections	K-12 Connections
Preparation ➤ Immersion ➤ Privileged Access ➤ Problem Identification: (Personal experiences or conflicts, domain requirements, social pressures)		
Incubation <i>"I think that it is very important to be idle."</i>		
Insight <i>"Insights tend to come to prepared minds."</i>		
Evaluation <i>"You cannot transform a domain unless you first thoroughly understand how it works."</i>		
Elaboration		

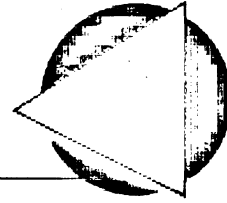
Csikszentmihalyi, Mihalyi. (1996). *Creativity: Flow and the psychology of discovery and invention*. NY: HarperPerennial. ISBN 0-06-017133-2.

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Appendix R – Music and Moods

Mentoring, Leadership, and Change

Music and Moods



10 minute task. Imagine you have been asked to brainstorm for an upcoming video about your institution. There are many scenes in the video—scenes about the people, the physical campus, about activities and events, etc. Your intended audience may be internal or external.

In order to be effective, your team will brainstorm at least 5 possible scenes and identify accompanying music.

Our institution's name: _____

Scene	Selected Music

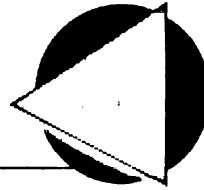
To get started, on your laptop, launch **iTunes**, click on the **Music Store**.

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Appendix S – Of Space, Place, & Patron (Multiple Intelligences)

Mentoring, Leadership, and Change

Of Space, Place, & Patron



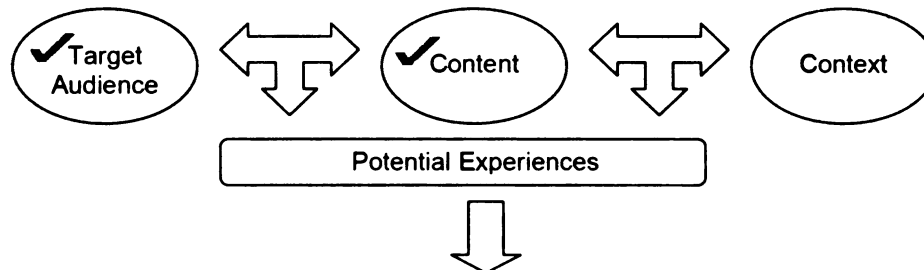
THE PURPOSE

To communicate the possible experiences that are available through your topic area in a compelling, learner-centered way.

THE PRODUCT

Potential experiences that could provide others with a foundation in your group's topic area on which they can continue to build.

THE PROCESS



- 1) Who is your target audience?
- 2) What is your target audience's context (physically, conceptually, emotionally)?
- 3) What kinds of personal experiences does your target audience need in order to develop a more layered, dimensionalized understanding of key concepts and principles from your topic area?
- 4) How will you use the principles of graphic, architectural, and interior design to create a powerful learning environment for your target audience?
- 5) How can you draw on your understanding of learning styles and multiple intelligences to help other MLC participants understand the choices you have made?
- 6) Who will assume responsibility for each piece of the project?

THE PRESENTATION

15 minutes – Your choice

Multiple Intelligences

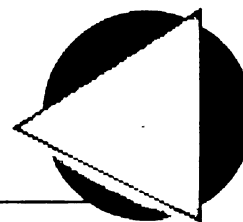
- Bodily-kinesthetic
- Interpersonal
- Intrapersonal
- Logical-mathematical
- Musical
- Naturalistic
- Verbal-linguistic
- Visual-spatial

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Appendix T – Learning Centers: Blogs

Mentoring, Leadership, and Change

Centers: Blogs



1) Explore the following sites:

What is a weblog?

<http://www.userland.com/whatAreWeblogs>

<http://blogs.law.harvard.edu/whatMakesAWeblogAWeblog>

What do bloggers blog about?

<http://blog.humlab.umu.se/therese/archives/000811.html>

<http://www.photoblogs.org>

Who blogs?

View the data on this chart:

<http://www.perseus.com/blogsurvey/thebloggingiceberg.html>

What do you notice about . . . ?

Age Range	Number of Blogs Created by Age	Percentage of Total Population

What do blogs about topics of interest to language teachers look like?

<http://dekita.org/>

<http://graf.skynetblogs.be/>

<http://Turmericthillforeignlanguage.blogspot.com/>

How can a teacher locate blogs in the target language that students might be interested in reading?

<http://weblogs.about.com/od/writingandcontent/a/blogcontent.htm>

<http://blogdex.net/?idx=total>

<http://www.blogwise.com/>

<http://www.ebn.weblogger.com/>

So how do people keep track of the interesting blogs that they find and know when they have been updated?

<http://www.bloglines.com>
<http://alex.halavais.net/news/index.php?p=872>

What are some ways that teachers are using blogs with students?

<http://webquest.org/bdodge/>
<http://mrtd.tblog.com/>
<http://runkles1.tblog.com/>
<http://skynetor2.skynetblogs.be/>
<http://speakrussian.blogspot.com/>

Why might a teacher consider having students blog?

<http://flteach.blogspot.com/>
<http://www.weblogg-ed.com>
http://www.firstmonday.dk/issues/issue9_6/huffaker/
<http://www.personal.psu.edu/users/l/l/le117/aatf/>
<http://kairosnews.org/node/3458>
<http://escrapbooking.com/bloggging/index.htm>

How do I create and use my own blog?

<http://www.blogger.com>
<http://weblogs.about.com/od/writingandcontent/a/blogcontent.htm>

How can I protect myself and my students from the digital dangers of blogging?

Blogs in the Classroom:

<http://insight.zdnet.co.uk/internet/0,39020451,39232695-2,00.htm>

The Blue Skunk Blog: Young Bloggers, Can We Stop Them? Can We Steer Them?

<http://doug-johnson.squarespace.com/blue-skunk-blog/2005/11/5/young-bloggers-can-we-stop-them-can-we-steer-them.html>

How to Blog Safely (About Work or Anything Else)

<http://www.eff.org/Privacy/Anonymity/blog-anonymously.php>

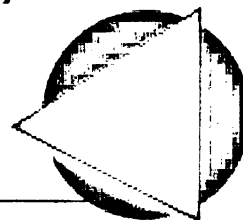
Edublog Insights: Guidelines for Blogging

<http://anne.teachesme.com/2005/11/08#a4515>

Appendix U – Learning Centers: Capturing Kids

Mentoring, Leadership, and Change

Centers: Capturing Kids



- 1) What is the most compelling experience you ever had as a student?
- 2) Explore the student work on the back table.
 - Capture a Concept Project
 - Family Food Project
 - Fashion Magazines
 - How-to Instructions
 - If I had the head of a . . . , the body of a . . .
 - Mystery Matches
 - Pop-up Books
 - Round Robin Valentines
 - Timeline

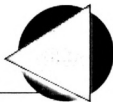
Discuss the answers to the following questions with your partner:

- 3) What can you tell about what students understand and are able to do from examining this work?
- 4) What kind of thinking did each of these projects require from students?
- 5) Where do you see that understanding broke down and is there anything the teacher could have done in order to better scaffold students' engagement with the tasks?
- 6) How do the assignments we give change what it is possible for students to understand?
- 7) Consider the experiences you have had this week. Make a list of some of the experiences that you could create for students in a world language classroom that would draw on the fields of graphic arts, music, architecture, film, etc. , and leave it here so the next group can add to it.

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Mentoring, Leadership, and Change

Centers: Checkpoint

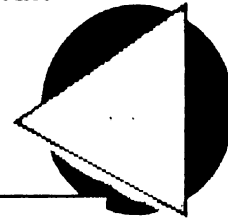


- 1) What is **working** for me so far is . . .
- 2) What I still have **questions** about is . . .
- 3) What I hope we **do differently** the last few days is . . .
- 4) What I **need** is . . .
- 5) The one question I hope we get to **before the end** is . . .

Appendix W – Learning Centers: Literacy & Design

Mentoring, Leadership, and Change

Centers: Literacy & Design



- 1) Go to this link, then explore the site(s) of your choice from 2005 or 2006:

<http://nflrc.iastate.edu/news/homepage.html>

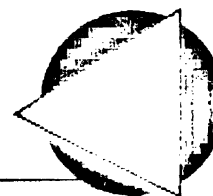
- 2) What features of the newsletter(s) that you explored were powerful?
- 3) What features of the newsletter(s) that you explored need improvement?
- 4) If you were to create an online newsletter for your topic area, what guiding questions would you use to lead viewers' thinking through the key concepts and principles of the topic?
- 5) Identify at least 3, high quality, compelling websites related to your topic area to which you could send viewers. Be sure that the sites you choose provide answers to the following questions:
 - a) WHAT is this topic area about?
 - b) HOW could I use this in my classroom?
 - c) WHY should I bother? (How will this help students learn?)

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Appendix X – Learning Centers: Mentoring & Change

Mentoring, Leadership, and Change

Centers: Mentoring & Change



- 6) **Make a list of 5 questions about your topic area that would help someone else to show what they know about it.**

- 7) **Use the questions you listed above to interview your partner—a person who is probably representative of at least one group of stakeholders. The goal of the interview is to find out:**
 - How your topic area might be personally relevant to them?
 - What components of your topic area resonate with them and WHY?
 - What do they know about your topic area?
 - What questions do they have about your topic area?
 - What additional information do they need in order to apply key ideas from your topic area to their own personal contexts?

- 8) **Look at the following materials and discuss them with your partner:**
 - Barriers to Change
 - *C & The Box*
 - Relationship Between Knowledge, Time, & Creativity/Transfer
 - Situational Dispositions Toward Transfer

- 9) **Read pages 26-27 of *Mentoring Matters*, then flip through the book and skim the charts and diagrams you see.**

- 10) **Have a conversation with your partner about how the ideas you just read, in conjunction with the information on pages 103-105 and 129 might be used to mediate someone's understanding of your topic area.**

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Appendix Y – Learning Centers: Not Necessarily the News

Mentoring, Leadership, and Change

Centers: Not Necessarily the News



1) Explore these sites:

BBC Languages: <http://www.bbc.co.uk/worldservice/languages/>

Broadcast Live: <http://www.broadcast-live.com>

Digg.com: <http://www.digg.com/>

Newsmap: <http://www.marumushi.com/apps/newsmap/newsmap.cfm>

10 x 10: <http://www.tenbyten.org/10x10.html>

2) What kind of news interests you?

3) What features make a news story compelling to you?

4) You are a news reporter. You have been given the following information about a recent news story. Use the information to write a compelling, 30-second breaking news clip for the radio.

When: This week around 3:30 p.m.

Where: ISU Memorial Union

Who: An unidentified participant in MLC

What: The compelling event of your choice

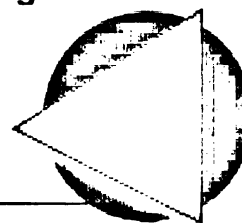
How: It is not known how it happened and the situation is currently under investigation

5) Use Audacity to record your news clip. (Press record, speak, press pause for the next person.)

Appendix Z – Learning Centers: Packaging Knowledge

Mentoring, Leadership, and Change

Centers: Packaging Knowledge



1) Discuss the following questions with your partner:

What comes to mind when you think of a “knowledge package” (Ma, 1999)?

What comes to mind when you think of a “concept knot” (Ma, 1999)?

2) View the PowerPoint™ on knowledge packages and concept knots.

3) Synthesize the concepts from ONE topic area we have considered this week by creating a “one-pager” (Curtain & Dahlberg). See the examples on the table for ideas. Include at least . . .

- 1 image
- 2 quotes from things you’ve read
- 2 of your own thoughts

4) Save your work to the network drive:

afp://129.186.123.36/Groups/mlc06

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Podcast Prep

Time to make a podcast! You will be promoting an upcoming event related to your focus group with an audio podcast.

Planning.

1. Write 3-5 lines of text that convey the following information:

- What is the name of the event?
- When will the event occur?
- Where will the event occur?
- Who will attend?
- Why should someone attend (benefits)?

2. Practice your text out loud, with a great radio voice! Watch the dynamics, pitch, diction, and pace of your spoken word.

Recording your podcast.

1. Open GarageBand and select *Podcast* when prompted.
2. Select the male or female sound track, and use the record button to record your text.
3. Call Cindy to verify your work so far.

Embellishing your podcast.

1. Add appropriate music or other sounds to your podcast on another track.
2. Save your file. Export your podcast to disk. (Call Cindy if assistance is needed.)

Appendix BB – Viral Marketing Homework/Closure Activity

Mentoring, Leadership, and Change

Homework: The Science Scoop



PROFOUND PONDERINGS (To help you think deep thoughts):



If you were a virus, how would you spread?



If you were a seed, how would you ensure the survival of your species?

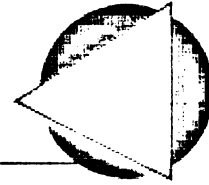


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Appendix CC – Newsletter Template

Mentoring, Leadership, and Change

Newsletter Template



Task: Collaborate with others who attended MLC 2006 to design one issue of the NFLRC newsletter that will provide foreign language educators who did not have the opportunity to attend the institute with thoughtful, online professional development regarding your focus area topic.

Roles: The group facilitator should coordinate these efforts, but group members should contribute to the structure, organization, and content of the newsletter.

Audience: Your primary target audience consists of people who are currently working in K-12 schools.

Goal: Remember, your goal is NOT to provide a comprehensive course on your focus topic, but rather, to provide a concise and compelling reading experience that will give readers opportunities to explore clear examples of your key concepts and guiding principles in action in ways that help them to consider the meaning of the topic for their own personal contexts.

Format: Apply principles of design to help busy readers think about your topic in new ways that make them want to seek additional information. Short paragraphs written in a conversational style that contain representative examples of your key ideas will be most appropriate.

Content: Rephrase the guiding principles from your *Thinking Template* as questions. These will become the essential guiding questions for the newsletter. Offer several potential “answers” to each question in the form of links:

- **Perspectives:** One “conceptual” link that will help readers understand key ideas more thoroughly
- **Practices:** One “contextual” link that provides at least one good model of what these concepts look like in action, and one “student-based” link that shows them how this topic applies to their work with students in K-12 classrooms.
- **Products:** One “student-based” link that will help readers to envision how students might become involved with this topic area and how doing so will help them to use their language skills more productively

Submission: Send an electronic copy of the finished newsletter as a Microsoft Word document to Cherice and Cindy by _____. We will edit your work and prepare it to be posted on the NFLRC website.

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Appendix V – Newsletter Template (p. 2)

Use this template to outline the sections that you will include in your newsletter.

Title
Introductory Paragraph
Guiding Question #1
Link 1
Link 2
Link 3
Guiding Question #2
Link 1
Link 2
Link 3
Guiding Question #3
Link 1
Link 2
Link 3
Guiding Question #4
Link 1
Link 2
Link 3
Guiding Question #5
Link 1
Link 2
Link 3
Quotes to Ponder
Memories of Iowa
References

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Century Learners ♦ 2006 ♦ Cherice Montgomery & Cindy Kendall

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