

HOW INSTRUCTORS DEVELOP THEIR BELIEFS, KNOWLEDGE, AND PRACTICE AS
THEY TEACH ONLINE PROFESSIONAL DEVELOPMENT (OPD) COURSES

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ABSTRACT

HOW INSTRUCTORS DEVELOP THEIR BELIEFS AND KNOWLEDGE AS THEY TEACH ONLINE PROFESSIONAL DEVELOPMENT COURSES

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This study investigated how three instructors developed their professional learning of beliefs, knowledge, and practice by examining their professional learning processes using constructive, social constructive, and transformative theoretical perspectives on learning. It also focused on their challenges and supports in developing their professional learning. This case study selected three instructors who are teaching online professional development courses at a Mid-western university, by using purposeful and convenience sampling strategies. Data included pre- and post interviews, three written reflections, and online instruction observations. The findings show that the three instructors developed their beliefs, knowledge, and practice about online teaching by using their own professional learning opportunities, such as reflecting on their online teaching and learning experiences, discussing with experienced instructors and their colleagues, doing self-study, and participating in workshops and seminars. The three instructors solidified their beliefs by implementing their values in effective online instruction, building up their pedagogical, content, and technological knowledge, and challenging and transforming their practices. The study also shows that the three instructors experienced challenges in developing their beliefs, knowledge, and practice because of external and internal barriers. Regarding the external barriers, the three instructors wanted online teaching preparation (training or taking online classes), ongoing support (providing online or face-to-face professional development opportunities), having discussion opportunities (with mentors and with colleagues or experienced instructors), access to resources and self-paced learning

opportunities, and department support (reducing time or technology support). Regarding the internal barriers, the three instructors showed that they needed to change their negative thoughts or concerns about teaching online; they needed to transition to online culture (emphasizing email communication, asynchronous/synchronous discussion, online etiquette, and collaboration and social interaction); and they needed to have flexible and adaptable attitudes about their teaching. The implications for practice and research of online professional development are discussed.

In His Heart a Man Plans His Course, but the Lord Determines His Steps (Proverbs 16:9)

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CHAPTER 1

INTRODUCTION

Rationales for This Study

Experiences of Professional Development in Korea

When I participated in developing professional development programs for K-12 teachers in Geoyng-gi Do in Korea (“Do” is like State in the US), I developed and provided teachers with two types of professional development programs: the first was for new teachers during the beginning of their careers (one time), and the second was for new and experienced teachers during the summer vacation (every year). Most professional development has been provided in face-to-face learning formats, but as technology advances, many Do (States) have developed and provided online professional development (OPD) for their teachers. Most OPD has been provided with self-study modules, in which teachers learn online content by themselves. There are no instructors or no interactions with other teachers during this learning process. After completing the courses, teachers must take online tests or one face-to-face test on a given day in a school. Whereas teachers in face-to-face PD contact and interact with instructors and other teachers, teachers in OPD do not have such opportunities. Even though OPD in Korea has some promise in addressing the challenges traditional PD has faced, the Korean OPD seems to face other problems, such as the lack of interaction between instructors and learners, the difficulties of integrating content and practice, and the question of the effectiveness of OPD.

From my experiences as a teacher and professional development instructor, I argue that Korean OPD designers and instructors need a fuller understanding of the characteristics of OPD, instructors, and adult learners (K-12 teachers). Most OPD has been provided to teachers in order to achieve the purpose of professional development, such as improving teacher quality and

students' achievements, supporting teachers' needs, and sharing instructional information. However, current OPD in Korea has limitations in achieving these purposes because many OPD modules limit teachers by focusing on transmitting content knowledge or introducing new reforms without connecting them to their current contexts. From my experiences and personal discussions with Korean teachers, one of the reasons for this is that there are few instructors who can teach OPD, and few examples of online modules and online instructors' roles in Korea. Because OPD is new to instructors and to adult learners, teacher educators and policy makers need to provide them with good examples of and guidelines for OPD teaching and learning. Especially, research on how instructors learn to design and teach OPD needs to be studied in order to test out whether OPD is a good option for the Korean context. The lack of successful OPD modules and instructors' experiences challenged me and motivated this study, to investigate some OPD courses and instructors' experiences in America. This study will suggest some important implications for policy makers and instructors who design and provide OPD courses in Korean contexts.

Experiences of Online Professional Development in the USA

Many American teachers take masters programs or professional development programs in order to sustain or update their teaching certificates, to continue advanced study to improve and deepen their practice, and to keep them updated on current reforms. These days, many American teacher education programs have developed and provided OPD for their pre- and in-service teachers. Many teachers favor OPD courses because they can solve some of the problems that traditional face-to-face PD has, such as balancing time between work and family, and the difficulties of long distances. However, whenever I talk with other instructors or graduate students participating in SITE (Society, Information, Technology, and Education) and ED-

MEDIA (Educational Media and Technology) conferences, I find that many American institutions still do not provide or prepare OPD courses.

Allen and Seaman (2010) maintained that 80% of online courses are at the undergraduate level, and online graduate level courses are 14%. Most online courses have been provided to undergraduate students, and the rate of online graduate courses is rather low. With the development and demands of online learning, the numbers of online masters courses and specifically OPD courses for teachers, are also expected to increase continually. However, teacher educators and researchers need to be aware of another barrier; for example, many teachers and instructors still do not support online courses, some instructors are struggling with developing and teaching OPD courses, and some institutions cannot find many instructors who can or want to teach OPD courses. My experiences in America have encouraged me reconsider my vision of OPD, such as developing and initiating OPD courses in Korea or in states which do not have OPD courses, because many researchers have developed and reported that successful OPD courses have positively impacted teachers' quality and students' achievements.

In addition to these experiences in Korea and America, my literature review and research experience guided this study. Many studies have focused on the design of OPD courses, technology development, or students' participation, attitudes, and satisfaction. OPD is a new environment not only for students and teachers, but also for instructors. Researchers and policy makers need to support instructors' teaching and their professional learning in teaching OPD courses. Because instructors design, implement, and modify OPD courses, it is important for researchers to support and encourage instructors. Thus, I would like my study to contribute to current research studies on instructors' professional learning from their teaching of OPD courses.

Background of This Study

The demands for high-quality teaching and learning in the 21st century have required teachers to re-learn and upgrade their knowledge and practice. In order to meet this demand, teachers have participated in various types of professional development, such as workshops, seminars, or university-provided courses (Master of Arts). Many educators have argued that professional development is one of the keys to improve teacher knowledge and practice (Darling-Hammond & McLaughlin, 1996; Lawless & Pellegrino, 2007). Graduate or Master of Arts programs provided by universities have been available to teachers as one type of professional development program, in order to upgrade their teaching certificates and to improve their knowledge and practice (Gibson & Skaalid, 2004; McCray, 2012). However, some educators have pointed out the problems of current professional development programs, such as lack of financial resources, the disconnection from theory and practice, and the limitations of time and location (Schlager & Fusco, 2003; Shanklin, 2009). Even though little research has reported on the limitations of professional development courses provided by the university, similar issues could be raised about these programs. Therefore, researchers need to pay attention to how university instructors have strived to develop and improve professional development programs and courses in order to enhance the quality of professional development in university contexts.

Online professional development (OPD), with the development of technology and the Internet, has emerged as an important type of professional development program in recent years (Dede, 2006; Lock, 2006). OPD provides teachers with more varied and flexible learning opportunities than traditional professional development because it can provide flexibility of time and place. Many universities have also developed and provided OPD courses or online Master of

Arts programs for teachers. They have found that OPD courses help teachers participate in professional development programs more easily, experience new forms of teaching and learning, and differentiate their learning styles, and they encourage interaction and collaboration with other teachers in online environments (Ginsburg, Gray, & Levin, 2004; Carey, Kleiman, Russell, Douglas & Louie, 2008). Holmes, Signer, & MacLeod (2010) argued that online learning environments provide teachers with convenient and effective opportunities to have “a new set of experiences, skills, resources, and knowledge” (p. 76).

Problem Statement and Research Questions

With the increase of online courses in higher education, many teacher education programs have provided OPD courses for teachers who are struggling with balancing time between career and family life (Dede, 2006; Ginsburg et al., 2004; Holmes et al., 2010; Keller, 2005; Russel, Kleiman, Carey, & Douglas, 2009). However, current research on OPD courses has some limitations. First, most of the research has focused on designing online modules and developing technology tools (Clary & Wandersee, 2009). This technology-based approach tends to ignore participants’ creative learning and practice in online environments. Chitanana (2012) pointed out that OPD courses have been provided for many years, but the quality of the courses is still in question because many courses have been conducted in the same way as traditional professional development programs. Therefore, researchers need to study how online instructors develop and construct their beliefs and practice of technology integration in creative ways.

Second, related to the first issue, many researchers have emphasized learners’ attitudes and their perspectives, not paying attention to instructors (Bolliger & Wasilik, 2009). Understanding instructors’ experiences and their perspectives is important because they design and implement online courses, and such understandings could influence their instruction as well

as students' learning. In addition, when examining and describing the extent to which instructors approach OPD courses adaptively, creatively, and critically, a qualitative approach can be more useful than a quantitative method. Examining how instructors learn and develop their professional learning will increase understanding of their beliefs and practices in the context of OPD courses. Therefore, this study involved observing some instructors in OPD courses for in-service teachers in a Master's program in curriculum and teaching.

The main research question guiding this study was what the professional learning of online instructors' knowledge and beliefs from the OPD courses they teach looks like, and how this learning impacts their practice in teaching OPD courses. I will explore this main question with four sub-questions:

1. What are the three instructors' beliefs and knowledge about online teaching?
2. To what extent and how did the three instructors develop their professional learning as they taught OPD courses?
3. What is the relationship between the three instructors' professional learning and their learning processes?
4. What factors promoted or hindered their professional learning?

Statement of Significance

This study began with my experiences as a professional development coordinator and participant in South Korea and America. My interest included the following questions that may be of interest to others who may have little, if any, experience with OPD: what if I teach online professional development courses; what if I need to design them; and what if I need to support new and experienced instructors who are or will be teaching the online courses? In order to understand how to support instructors' online teaching, I would like to know what they know

about online teaching, how they developed their learning during their teaching, and what challenges they had and what support they want. Many researchers have examined the effectiveness of online learning, showing students' and instructors' satisfactions, attitudes, and perspectives about online teaching and learning. Other researchers have examined how to develop and provide effective online learning courses, and what challenges students and instructors have.

However, few researchers have studied online instructors' professional learning approaches, processes, and development of their own professional learning during their teaching. Rather than doing surveys or interviews at the end of the semester asking about their reflections, this study tried to follow the three instructors' professional learning during the semester. Therefore, this study is significant in three ways. First, readers can better understand how online instructors develop their professional learning of their beliefs, knowledge, and practice as they experience online teaching. Second, readers can better understand how online instructors develop their professional learning by using three learning perspectives: constructive, social constructive, and transformative (to be discussed in the next chapter). Third, readers can better understand what challenges instructors have, and how we can support them to reduce the challenges. Fourth, Korean distance education for teachers has been provided since 1972, but internet-based professional development programs have only started lately; thus this study can help instructors or OPD course designers in Korea understand and support OPD instructors.

Dissertation Structure

This dissertation consists of nine chapters. The purpose of this chapter is to present the rationale for my study, the statement of the problem, and the significance of the study. In chapter 2, I explain the literature related to this study. Based on my literature review, I constructed a

conceptual framework for understanding instructors' professional learning and their challenges. Chapter 3 outlines the specifics of the research design and how I collected and analyzed the data. I present the results of the study in chapters 4 through chapter 6. Chapter 7 analyzes each case's commonalities and differences in order to understand the three instructors' professional learning. Chapter 8 provides a discussion of the results and implications for practice and future research.

CHAPTER 2

LITERATURE REVIEW

Researchers have studied teachers as adult learners in professional development and OPD (Online professional development) courses in higher education, but little research has studied instructors as adult learners when they teach OPD courses. In order to support new and experienced instructors who are or will be teaching OPD courses, researchers need to understand not only online course interfaces and technology tools, but also instructors' learning processes and their instructional experiences in the online environment. The purposes of this literature review are five. First, I examined general professional development and OPD in order to understand whom instructors are teaching and the purposes of professional development courses. In this review I focused on OPD courses provided by a university because this study took place in higher education. Second, in order to understand instructors' perspectives on online teaching, I examined studies related to instructors' perspectives in the online environment. Third, I defined professional learning for this study, and examined how adult learners develop their professional learning. Fourth, I explained the learning theory perspectives I used to examine instructors' professional learning. Fifth, I constructed a professional learning growth model for this study, and I discuss how this model guided this study.

Instructors Who Teach Online Professional Development Courses

Professional Development

Researchers and policy makers have made efforts to provide quality education to K-12 students. They have argued that improving the quality of teachers is one of the important efforts to achieve positive effects on student achievement (Rockoff, 2004). Teachers have participated in ongoing education, which has been used with various terms, such as professional development,

staff development, or in-service teacher development (Sparks & Hirsh, 1997). Even though these terms are different, all have a similar important purpose, which is to enhance the quality of teaching that will lead to improved student learning. Professional development has been considered as one of the ongoing education programs, and it provides teachers with opportunities to improve their knowledge, skills, and practice as well as to upgrade their teaching certificates, which is required by state governments (Darling-Hammond & McLaughlin, 1996; Guskey, 2000).

Many researchers have examined how to provide effective professional development for teachers; they have organized and planned intensive programs, encouraged collaboration, integrated content and pedagogy into their practice, and related teachers' instructions to meaningful activities (Guskey, 2009). In addition, many researchers have proposed ongoing support for teachers (Harwell, 2003), because teachers want sustained support and continued communication with other cohorts. Guskey (2000) said that ongoing and intentional professional development has positive effects on teachers' knowledge and practice. Harwell (2003) maintained that ongoing and systematic professional development is more useful than individual workshops or one-time events because teachers can develop and apply their practice during the process of professional development. Similarly, Lim, Abas, and Mansor (2010) pointed out the importance of ongoing support and feedback, arguing that teachers need sustained access to resources and assistance.

These days, online learning environments provide teachers with different and more convenient opportunities that traditional professional development does not have. Holmes et al. (2010) argued that online learning environments provide convenient and efficient opportunities for teachers who want to improve by acquiring a new set of experiences, skills, and resources.

Online Learning

Before discussing online professional development (OPD), I need to talk about online learning briefly, because OPD is conducted in online environments. Online learning has also been used with various other terms, such as e-learning, distance learning, Internet learning, virtual schooling, and Web-based learning. Dabbagh and Bannan-Ritland (2005) defined online learning as “an open and distributed learning environment that uses pedagogical tools, enabled by Internet and Web-based technologies, to facilitate learning and knowledge building through meaningful action and interaction” (p. 15). Waston, Winograd, and Kalmon (2004) simply and clearly defined online learning as “education in which instruction and content are delivered primarily via the Internet” (p. 95). In this study, online learning and teaching refers to online Masters of Arts programs which are conducted by higher educational institutions using the Internet and technology tools that provide teachers with organized context, content, and processes which consist of high quality professional development (Harwell, 2003).

Online learning has been considered as one of the alternative methods of the 21st century (Allen & Seaman, 2010). Allen and Seaman (2010) reported that more than four million college students were taking online classes in 2010, and the numbers will keep increasing. Online teaching is fundamentally distributed through the Internet. Allen and Seaman (2010) maintained that 80% of online courses are used at the undergraduate level, and online graduate level courses are 14%. As online courses have become prevalent, researchers and educators have sought deep understanding of teaching and learning in online contexts. Some educators claim that a revolution in teaching and learning is required to meet the demands of complex society and online learning contexts in the 21st century (Jenkins et al., 2007).

Even though online learning has been popular in education, some researchers point out that online learning has some limitations, such as disconnections and isolation among members; limited feedback; and lack of interactions among students (Dziuban, Hartman, & Moskal., 2004; Kirtman, 2009; Lock, 2006). These researchers are concerned that online learning cannot provide the quality of education that face-to-face learning provides, for example, interaction between teachers and students, hands-on experiences, collaboration, and quick feedback. However, many learners think that online learning opportunities can provide more valuable experiences for them than some traditional classroom experiences, because the online environment motivates collaboration, flexibility, and differentiated learning. With these advantages and the demands of students, many higher education programs have developed and provided their students with online courses (Thomas, 2004). There are remaining debates on the effectiveness of face-to-face and online learning (Means, Toyama, Murphy, Bakia, & Jones, 2009; Kirtman, 2009), but many researchers have paid attention to the advantages of online teaching and the possibility of positive applications to OPD.

Online Professional Development

With the advancement of technology and the demands of society and students, higher educational institutions have developed and provided OPD courses for graduate students or teachers. Dede (2006) said that “the need for professional development that is tailored to teachers’ busy schedules, that draws on valuable resources not available locally, and that provides work-embedded support has stimulated the creation of online teacher professional development programs” (p. 2). OPD provides flexibility for teachers who are prevented from attending a traditional program because of fixed class dates and long distances.

These days, teachers are interested in and enroll in OPD courses because they feel that the courses are more comfortable and efficient than face-to-face professional development (Clary & Wandersee, 2009; Richardson, 2002). OPD environments can provide teachers with a variety of advantages: teachers can engage in the OPD courses anytime and anywhere, and teachers can receive immediate feedback related to their school issues, interact with context through various technology tools, differentiate their learning styles, and access resources and information easily (Garrison & Cleveland-Innes, 2005; Richardson, 2002). As face-to-face professional development research has indicated, many successful factors are similarly applied to OPD, for example, authentic and context-based learning, reciprocal participation, meaningful learning experiences (Chitanana, 2012), learning communities, self-directed learning, and online resources (Ausburn, 2004).

However, some instructors are still hesitating to teach online because of uncertainty about the quality of such teaching (Keller, 2005), the difficulties of designing online courses (Shieh, 2009), and the lack of standard online pedagogy (Levine & Sun, 2003). Baran, Correia, and Thompson (2011) said that “there was still lacking in terms of sharing strategies for transforming teacher practices for online teaching and helping teachers understand and adapt to the new teaching environment”(p. 29). They went on say that instructors who are teaching or will teach OPD courses need to share good “exemplar pedagogical-related thinking, beliefs, and knowledge for making teaching effective” (p. 50). OPD course modules and instructors’ roles are defined and provided by a group of experts, such as program designers or technology developers, but many instructors interpret the modules and their roles differently and critically according to their contexts.

Therefore, examining how instructors understand their online context and how they develop their professional learning is important. In summary, OPD for teachers has been emphasized and provided in order to improve students' achievement, upgrade professional certification and advancement, and meet the NCLB's highly qualified teacher requirements. Many studies have reported on students' perspectives, the OPD model, and effective strategies, but few studies have examined OPD instructors' perspectives and their own learning in OPD contexts. In the next section, I talk about how instructors think and understand their online courses.

Instructors' Perspectives about Online Professional Development Courses

There has been much research examining students' attitudes, satisfactions, and perceptions of online learning, but research investigating instructors' perspectives is still limited (Ray, 2009; Santilli & Beck, 2005). Ray (2009) argued that "although studies exist focusing on instructors' satisfaction with instructing in the online format, additional research focusing on faculty perspectives represents an important aspect of gaining a thorough understanding of the online format from a research point" (p. 263). She pointed out that much research fails to examine current online instructors' preparation and their beliefs about online instruction. She conducted a survey study which asked about instructors' perceptions of online instruction. She surveyed 111 participants' perspectives about online teaching, such as online preparation and ongoing support. After analyzing the data, Ray (2009) concluded that "the majority of instructors new to online learning receive little to no training, and consequently use the same pedagogical tools utilized in the traditional face-to-face classroom" (p. 264). Understanding and examining instructors' perspectives on online teaching are important because they are the most important factor for successful online teaching (Fish & Bill, 2009). Therefore, this section examines

previous studies of instructors' perspectives on online teaching and finds some gaps among the studies.

Hurt (2008) did a qualitative study of online teaching from the instructors' perspectives. She examined how instructors view the advantages and disadvantages of online teaching. She interviewed 11 instructors two times. She indicated that instructors believe that students need to adapt their learning styles to the online environment, such as maturity, flexibility, self-discipline, and basic technology skills. She also indicated that instructors were concerned about the lack of interaction, the difficulties of access, the lack of technology skills and knowledge, and the lack of integrity issues. However, her study did not explain how the instructors tried to reduce those challenges or how they developed their own professional skills or knowledge.

Santilli and Beck (2005) examined 47 instructors who were teaching online classes. They surveyed those instructors, asking about their experiences and background in online teaching. They found that the participants learned their online teaching from professional training opportunities, such as participating in workshops or taking classes. Even though they aimed to know "the experiences and perceptions of faculty teaching online courses" (159), their survey studies did not explain how the participants experienced their online teaching and what opportunities they had for their online teaching.

Conrad (2004) did a qualitative study of online instructors who were teaching online courses at a Canadian university. She interviewed five instructors two times in order to know their teaching experiences. She mentioned that the instructors learned and prepared their online teaching by participating in faculty-led workshops and by getting support from previous instructors. She also found that the participants valued a socially-constructed community to discuss and share their experiences. She went on say that "Socially constructed environments

provide comfortable and trustworthy virtual homes to online learners” (p. 40). She emphasized that human activities can improve the sense of community of the participants. Her study shows how instructors develop their online teaching skills and knowledge, such as participating in socially constructed meetings or creating human interactions. However, she mainly relied on her interviews with the participants, so it is difficult for readers to understand how they applied their learning and experiences to their practice in online courses.

Batts (2008) investigated 22 instructors who were teaching online technology courses. He used online teaching practice survey tools in order to know how instructors perceived best practices in online courses. He found that instructors need training opportunities, which “are offered for faculty to learn about online teaching” (p. 487). Unlike the other studies reviewed above, Batts found that instructors develop their professional learning by having real-time online discussions with students. He went on say that instructors develop their professional learning when “they can relate past experiences and real life situation with students through examination of case studies in their courses” (488). His study shows that instructors can develop their professional learning by formal training and informal online discussions with students.

Duncan and Young (2009) examined what challenges instructors have as they teach online classes. Unlike other researchers, they approached instructors’ online teaching in terms of a learning theory perspective, such as constructive learning theory. They valued instructors’ engagement in online courses. They collected data with survey and interview methods from 92 instructors. They found that the participants were struggling with encouraging students to engage in participation, helping students interact with each other, and creating opportunities for engagement. They showed not only the participants’ challenges, but also discussed how they solved the challenges. For example, Duncan and Young showed that “the participants structured

their courses to create active learners in their virtual classrooms” (p. 25), in order to encourage students’ participations. Duncan and Young argued that “higher education instructors are continually evolving their teaching strategies to provide a quality distance education experience for students” (p. 29). Even though the researchers did not identify and categorize the participants’ professional learning processes, they showed that instructors developed their professional learning by using various learning opportunities as well as overcoming their challenges with their professional learning.

Even though these studies showed instructors’ perspectives on online teaching, they had some limitations. First, these studies did not show what kinds of professional learning instructors need to develop, such as their beliefs or knowledge. Second, research needs to examine how instructors develop their professional learning because they are ongoing learners for improving their instruction. Third, researchers need to investigate their learning approaches in order to support and encourage their learning.

When instructors experience OPD courses which may not fit their expectations or previous experiences, they adapt or transform their practice based on their learning through critical reflection on their experience. Instructors are active and ongoing learners who modify given roles and challenge their practices critically. Researchers need to understand instructors as creative learners in OPD environments. In order to understand how instructors learn to teach OPD, in terms of instructor’s perspectives, this study investigated what instructors’ professional learning looks like and how they develop their beliefs, knowledge, and practice as they teach OPD courses. So, in the next section I talk about what professional learning looks like and how we can support instructors’ professional learning.

Professional Learning

The purpose of this study is to investigate the professional learning of instructors who are teaching OPD courses in a teacher education program. There are various definitions of professional learning in higher education, emphasizing knowledge or practice perspectives. Mike (2010) defined professional learning as “the application and use of different sources of knowledge, often derived through engagement in professional development” (p. 2). Day and Gu (2007) argued that professional learning “will enrich teachers’ knowledge base, improve their teaching practices, enhance their self-efficacy and commitment to quality of service, and it will contribute to their sense of self as a person and a professional” (p. 425). These researchers consider professional learning as an important contribution “to the changing and complex demands of our profession and also to meet the varied needs of the learners with whom we work” (Rolheiser, 2009, p. 1).

Fundamentally, professional learning has the purpose of improving or changing learners’ perspectives or practices. Mike (2010) argued that “the intent behind any professional learning is to create change—a change in instructional practice, a change in beliefs, and a change in understanding” (p. 28). Compagnucci and Cardos (2007) also emphasized that professional learning seeks changes in participants’ epistemology and practice. They went on to say that professional learning development refers to “a learning process [that] focuses in the reflection that facilitates the exploration and revision of experiences and knowledge promoting a new understanding that is translated in action” (p. 3).

This study examined the professional learning of OPD instructors, focusing on their learning approaches and their challenges. The professional learning of OPD instructors can occur through participating in professional development or in a professional learning community,

developing and teaching professional development courses, and any activities that influence their teaching practice. Some researchers have identified successful elements of professional learning; for example, learners need to have opportunities for collaboration, in order to transform their learning into deliberate practice (Boyle, While, & Boyle, 2004). Pedder, James, and MacBeath (2005) examined how K-12 teachers and educators value and practice professional learning, and they maintained that inquiry, critical and responsive learning, and social capital are important factors for successful professional learning. In order to implement successful OPD courses, some researchers have paid attention to supportive and challengeable factors for instructors' professional learning.

Opfer, Pedder, and Lavicza (2011) analyzed a national survey of teachers in England. They indicated that teachers develop their professional learning, which leads to their changes in beliefs, knowledge, or practices. In their study, Opfer, et al. (2011) quoted many researchers' findings related to teachers' professional practice. Opfer, et al. (2011) also examined teachers' professional learning and their changes. They collected data from "a national sample of teachers in England, which was a sample of 388 schools (329 primary and 59 secondary) which were randomly selected" (p. 446). They surveyed the teachers, focusing on their learning activities and their beliefs about their professional learning. They found teachers' professional learning types, and they categorized their learning into four areas: internal orientation, external orientation, research orientation, and collaborative orientation (p. 450). They said that internal orientation is more related to teachers' personal learning practice, such as "reflection, modifying, and experimenting" (p. 448). External orientation is related to teachers' learning through websites, feedback, or following good examples. Research orientation is accomplished by reading research. Collaborative orientation means that teachers learn by discussing with their colleagues.

Even though Opfer, et al.'s (2011) model of teacher learning orientation explained how teachers develop their professional learning by using various approaches, their categorization is rather limited, because their model focused on what learning opportunities were given, rather than how learning opportunities were constructed or developed into their professional learning. Instructors as well as teachers need to construct and develop their learning not only through active engagement and intentional learning, but also through available resources and support. Therefore, it is necessary for researchers to understand how instructors construct or develop their professional learning in terms of learning theory perspectives. Opfer, et al. (2011) argued that "teacher learning is a dynamic process and we cannot understand learning by separating features of activities from individual teachers' orientations to learning."

In summary, this literature review shows that some researchers have indicated that online learning environments require online instructors to challenge their knowledge and practice, such as using technology and content management system knowledge and skills (Fein & Logan, 2003; Palloff & Pratt, 2009; Peruski & Mishra, 2004), new roles for online instructors (Lin & Dyer, 2013; Yang & Cornelious, 2005), different styles of interactions (Moore & Kearsley, 2012), and new methods of online learning and assessment (Lin & Dyer, 2013; Pratt & Palloff, 2009). In addition, some researchers have reported the effectiveness of OPD, even though online environments have some limitations, such as isolation, lack of face-to-face interactions, and difficulties of time management. Many teacher education programs have provided OPD courses for teachers for the last decade (Asbell-Clarke & Rowe, 2007; Dede, 2006; Galley, 2002; Kim, Morningstar, & Erickson, 2011; Lawless & Pellegrino, 2007; Lowes, Lin, & Wang, 2007; Russel, Kleiman, Carey, & Douglas, 2009). K-12 teachers have been taking OPD courses because they are efficient and convenient for them to achieve their personal goals, receive professional

certification and advancement, and improve their knowledge and skills (Asbell-Clarke & Rowe, 2007; George, 2007). Russel et al. (2009) maintained that K-12 teachers feel more comfortable in taking OPD courses because they can choose their own convenient time, they can access the courses from any place, and they can control their learning pace. OPD courses have also provided teachers with opportunities that they cannot experience in their local areas (Kim et al., 2011).

Irrespective of the increasing interests and demands of OPD courses, researchers have pointed out that many online instructors face challenges when they teach online classes, such as lack of preparation for online teaching, lack of support and collaboration, concerns about technology use, students' passive participation, and time management (Gabriel & Kaufield, 2007; Palloff & Pratt, 2009; Peruski & Mishra, 2004). Peruski & Mishra (2004) said that such new types of online environments cause instructors to feel the pressures of teaching online classes because many instructors are not familiar with the new environments and instructing within them. In order to understand instructors' learning in this study, I examined learning theory perspectives and constructed an integrated model.

Conceptual Framework

The purposes of this study were to provide a rich description of professional learning processes that are experienced by instructors in OPD courses, to describe their professional learning of their knowledge and beliefs, to investigate whether and how professional learning experiences affect their practices of OPD, and to identify what challenges and support the instructors experienced. In order to examine instructors' professional learning process, I categorized instructors' learning orientations into three learning processes: constructive, social constructive, and transformative. First, some instructors develop their professional leaning

through a constructive learning process, such as learning by teaching (Fenwick, 2004; Pedder, 2007; Peruski & Mishra, 2004). Pedder (2007) pointed out that teachers construct individually their professional learning by using different sources of evidence and resources. By inquiring into their previous ideas and resources, teachers develop their own professional learning. Second, instructors interact with other colleagues to develop their professional learning. Some researchers have argued that professional learning can be effective when learners learn from each other by using collaboration (Baran et al., 2011; Mike, 2010). Third, instructors need to do critical reflection in order to change their previous thoughts and practice (Burden, 2010; Neuman, 2005). Burden (2010) noted that critical reflection is “a powerful tool that facilitates professional learning” in teaching-based contexts. In the next section, I discuss learning theories (constructive, social constructive, and transformative learning) and connect the learning theories to the conceptual framework for this study.

Constructive and Social Constructive Learning Theory

This section reviews constructive and social constructive learning theories. These two theories helped me understand not only students’ learning, but also adults’ (here, instructors’) learning. These constructivist and social constructivist theories also have been used as theoretical frameworks for understanding teachers’ online learning in teacher education fields (El-Deghaidy & Nouby, 2008; Yaman & Graf, 2010; Yeh, 2010). These researchers have shown that learners construct their knowledge and experiences from personal and social learning.

Constructivists believe that learners learn by constructing knowledge and making meaning by themselves (Rovai, 2004). Rovai (2004) argued that “individuals gradually build their own understanding of the world through experience, maturation, and interaction with the environment” (p. 80). In his study, Rovai (2004) found that learners construct their knowledge

and practice when they implement active learning and cooperation with others. Reihlen and Apel (2007) indicated that individuals understand and construct knowledge through active and constructive processes. Many researchers have shown that the constructivist approach helps researchers understand how learners construct and develop their learning in online settings. This constructivist approach also implies that researchers can understand how instructors experience and develop OPD courses by examining their active, constructive, and social activities.

However, examining only instructors' activities is not enough for understanding their learning, because they also construct and develop OPD courses through not only their own learning, but also through interaction with their students and other cohorts. Social constructivism thus has the potential of explaining how instructors construct their knowledge and meaning through social interaction. Social constructivists view learning as "socially shared cognition that is co-constructed within a community of participants" (Green & Gredler, 2002, p. 57). Social constructivists emphasize the role of social interaction because they believe that learners' knowledge is developed through social negotiation (Savery & Duffy, 1995; Woo & Reeves, 2007). Woo and Reeves (2007) emphasized that providing learners with meaningful social interaction is important because the construction of knowledge is possible through "mediation and negotiation within a learning community" (p. 20). Therefore, understanding instructors' professional learning in context when they teach and interact with their colleagues is important because some social constructivists believe that instructors construct new experiences through social interactions (Palincsar, 1998). Palincsar went on to say that learners' activities are "mediated by language and other symbol systems, and are best understood when investigated in their historical development" (p. 371). Researchers need to examine instructors' social interactive activities because the activities represent their understanding and learning of OPD.

Constructivism and social constructivism help researchers understand how instructors construct and develop their learning by their individual learning and by social interaction in online environments. In addition, this study sought to understand instructors' learning not only from the perspective of the evolution of the perspectives of constructivism and social constructivism, but also with more revolutionary perspectives, such as, transformative learning. The perspective on the evolution of perspectives on learning focuses on the growth and development of instructors, whereas revolution perspectives pay attention to instructors' creative and disruptive learning. Instructors are expected to adopt and modify their pedagogical approach for constructing a learner-centered OPD environment. Once instructors decide to teach OPD courses, they construct the routines of online modules, syllabi, and activities designed by former instructors or course designers through professional learning communities, workshops, or individual learning. Some researchers have been concerned that this organized model could reproduce the same class resources and activities without creating any new activities and materials for the online learning context (Baran et al., 2011).

Therefore, online instructors need to go beyond what they already know and what they have learned from their previous experiences of online learning and teaching when they are offered online teaching. Some researchers have noted that instructors not only follow the previous ideas and course structure, but also adapt them thoughtfully, such as using new and different technology tools and online instructional strategies (Baran et al., 2011; Kreber & Kanuka, 2006). Baran et al. (2011) found that instructors reconstruct their roles as they experience and revise their approaches to "understanding the course content, designing and structuring the course, knowing their students, enhancing teacher-centered relationship, guiding student learning, increasing teacher presence, conducting the course evaluation, and creating an

online teacher personal” (p. 49). They pointed out that some instructors renovate their instruction by acting, doing, and reflecting upon their practice when they meet unexpected situations.

Some researchers have stressed the importance of the adaptation of adult learners because they are flexible regarding different learning environments, students’ demands, and new technologies (Garrison & Kanuka, 2004; Blin & Munro, 2008). Garrison and Kanuka (2004) also emphasized that instructors in online environments need to change their roles, such as from teacher to facilitator and from teacher-centered to student-centered. In addition, some researchers have asked instructors not only to adopt, but also to disrupt online environments (Blin & Munro, 2008), in order to implement online courses effectively. Blin and Munro (2008) maintained that adult learners, in a new learning environment, need to transform or alter “the structure of teaching and learning activities taking place in formal education” (p. 476). Rather than enacting OPD courses by simply adding online activities or online tasks, instructors are required to challenge their previous instruction and create interactive OPD environments. In order to explain this revolutionary and disruptive perspective, I next discuss transformative learning theory.

Transformative Learning Theory

Transformative learning theory has been used as one of the important conceptual frameworks for studying adult learning (Mezirow, 1991; Taylor, 2008). This theory seeks to explain how adults construct and appropriate “new and revised interpretations of the meaning of an experience in the world” (Taylor, 2008, p. 5). Transformative learning theory provides new perspectives on instructor learning because it can explain how they actively question and transform their practices and beliefs. Mezirow (1996) defined learning as “the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one’s experience in order to guide future action” (p. 162). Mezirow has developed and revised the

concept of transformative learning since he first coined it (Kitchenham, 2008). In 2000, he and his associates detailed the process: “We transform our taken-for-granted frames of reference (meaning perspectives, habits of mind, mind-sets) to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action” (p. 8). They went on to say that this transformative perspective helps researchers understand how instructors challenge their previous ideas, values, and meanings critically.

Transformative learning theory has been used in teacher education fields, for example, in teachers’ application of new professional development program models (Kabacki, Odabasi, & Kilicer, 2010), faculty members’ use of technologies (Whitelaw, Sears, & Campbell, 2004), and a teacher’s learning of new concepts (Gilbert, 2003). Kabachi et al. (2010) defined transformative learning as “a process in which adults change their views and habits-which they have gained as a result of their experience” (p. 266). They designed and provided a mentoring program, which was based on transformative learning theory, for teachers to develop information and communication technologies’ skills and knowledge. They explained that teachers adapted to new situations through a critical reflection and learning process, but they did not describe how teachers’ transformative experiences influence their instruction because the data relied on survey results.

Whitelaw, Sears, and Campbell (2004) examined how faculty members transform their teaching philosophy and practice when they participate in an instructional development project. They found that faculty members change their pedagogical styles, which then influence their pedagogical beliefs and practices. This study also relied on participants’ survey results, and thus did not show how they transformed their beliefs and practices in their contexts. They pointed out

this problem and suggested that their research method (self-reports) needed to be supplemented, such as by using qualitative methods in order to overcome the limitations of reliability and quality. Gilbert (2003) examined how one teacher understood the teacher role in working with parents and students. She described one teacher's learning process on that issue using a case study method, and she described how the teacher transformed her personal teaching strategies and personal views. Even though Gilbert showed only one case's example, she described well the process of the teacher's transformative learning.

Recently, transformative learning theory has been used in online environments (Reushle, 2008; Sari, 2012). The OPD context is different from other online learning contexts for students, or from traditional professional development for teachers; for example, OPD deals with teachers who are currently teaching students. Reushle (2008) shared her own transformative learning experiences while planning and conducting an OPD course. She designed the OPD course for teachers in order to investigate how the teachers prepared their own online teaching. She stated that she transformed her way of thinking and her perspective on teaching in the online context from her reflective experience. She went on say that "this reflective practice experience has helped me to discover, rediscover, and continue to structure my own study of, and beliefs about, knowledge and knowing" (p. 25). In order to support transformative learning, she suggested that "developing a crucially reflective practice, networking and dialoguing with other educators, and taking an active role in professional development" (p. 26) is important.

Sari (2012) examined Indonesian teachers and teacher educators in an OLC4TPD (online learning community for teacher professional development), and their transformation of pedagogy through the online learning community. She engaged in email discussions with teachers and interviewed them. She found that the online learning community helped teachers transform their

pedagogy in teaching 21st century students. She said that the Indonesian teachers were not familiar with using online learning communities for their professional development, but the OLC4TPD encouraged the participants to challenge the possibility of online learning community for their professional development. The program also helped the participants to change their previous technology and social media, such as using Facebook or mobile technology. Her main data analysis was to focus on the function of the online learning community; thus she did not explain how they transformed their pedagogy in detail.

Transformative learning theory has provided an important foundation for adult learning in OPD environments. But as this review shows, there are still some areas researchers need to address. First, research using transformative learning needs to describe the process of transformation, in other words, the ways learners transform their pedagogy or practice. Gilbert (2003) said that “transformative learning goes beyond reflection-in-action discussed by Schon” (p. 4), and she went on say that transformative learning includes critical self-reflection and examination of classroom contexts. Understanding the transformation process, critical reflection on experience, and participating in discussions with others are all important. Second, the transformative learning framework pays attention to learners’ willingness to transform their previously held perspectives or practices. Taylor (2008) mentioned that the transformative process is influenced by a frame of reference. He defined frames of reference as “structures of assumptions and expectations that frame an individual’s tacit points of view and that influence their thinking, beliefs, and actions” (Taylor, 2008, p. 5). Therefore, examining whether and how instructors adopt and disrupt the frame of reference in OPD courses is important because the online environment requires instructors to transform their previous beliefs, knowledge, and practices as well as to adopt them thoughtfully. This transformative learning theory helped me

understand the three instructors' transformation of their beliefs, knowledge, and practice as they taught OPD courses. Many researchers have investigated instructors' professional learning in terms of one learning theory process. However, this literature review shows that researchers need to examine instructors' professional learning by integrating the three learning processes: constructive, social constructive, and transformative learning.

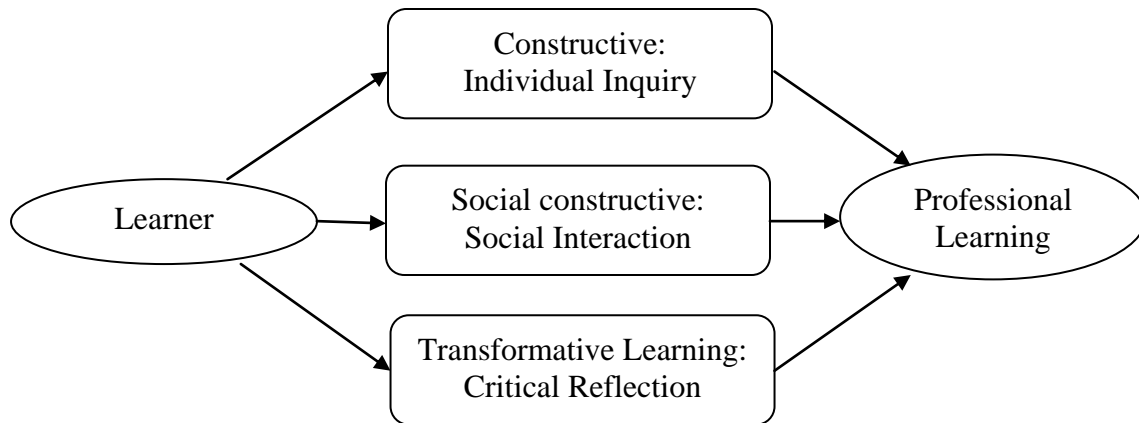


Figure 2-1 Adult Learners' Professional Learning Process

Based on my literature review, I described an adult learner professional learning process (Figure 2-1). Figure 2-1 shows that adult learners achieve their professional learning through individual inquiry, social interaction, and/or critical reflection, or by combining these three learning processes. However, this professional learning process still needs to include some additional factors in the OPD environment, in order to explain the relationships among the three learning processes, and among the components of professional learning, such as belief, knowledge, and practice.

The two concepts for constructing the conceptual framework for this study are how each learning process can be connected and can interact with each other. Figure 2-1 shows various professional learning processes but does not explain how these learning processes are interconnected. Siemens (2004) pointed out the limitations of current learning theories

(behaviorism, cognitivism, and constructivism) because they “do not address learning that occurs outside people (i.e. learning that is stored and manipulated by technology). They also fail to describe how learning happens within organizations.” As technology has advanced, learning approaches need to consider the importance of technology (Siemens, 2004). Many students are using various technologies in and out of school, such as smart phones, tablets, computers, online classes, social media, and so on. Educating from “what to teach” to “how to teach” to “where to find” to “how to connect” is important for learners. There is much information and knowledge around us these days. The issue is how to connect and interact with them for appropriate use in our relevant contexts.

Recently, connectivism has emerged as an alternative learning process in the technology era (Siemen, 2004). Let’s see Siemens’ definition of connectivism:

Connectivism is driven by the understanding that decisions are based on rapidly altering foundations. New information is continually being acquired. The ability to draw distinctions between important and unimportant information is vital. The ability to recognize when new information alters the landscape based on decisions made yesterday is also critical.

Connectivism is a learning process rather than a new learning theory because it suggests how knowledge can be connected in order to achieve learning goals. Connectivism proponents emphasize how the process of connecting among knowledge, information, and resources influences learners’ professional learning. Therefore, they consider “information flow within an important element in organizational effectiveness” (Siemen, 2004). The knowledge, information, or resources learners use can be adapted and transformed by their connections and interactions. In the OPD environment, instructors and learners do not meet face-to-face, which affects their

mutual relationships or humanism. Learners' learning and practice are also disconnected from other students because most of their activities are implemented online. Instructors also are disconnected from students, and sometimes from other instructors who might influence their teaching and professional learning. Examining how instructors connect and interact their learners, resources, information, and context is important for understand their professional learning because the new OPD environment demands new learning processes.

Some researchers have shown that instructors construct their knowledge and practice by interacting with other colleagues (Opfer, et al., 2011), including online content management skills and technology. The authors said that some learners like self-study, such as reading books or finding websites for themselves in order to get some resources and information, and to read articles related to their teaching. It is important for instructors to have flexible and various opportunities because they have different learning styles, as students do. However, as Bould and Walker (1998) pointed out, instructors' professional learning without critical reflections from interaction with others could limit their professional learning growth.

Therefore, I expanded my original adult learning process model in order to include two additional concepts, connections and interactions. Figure 2-2 shows how instructors develop their professional learning through these three learning processes through connections and interactions. Professional learning includes changes in knowledge, belief, and practice. The circle of professional learning could be large or small according to the development of instructors' beliefs, knowledge, and practice.

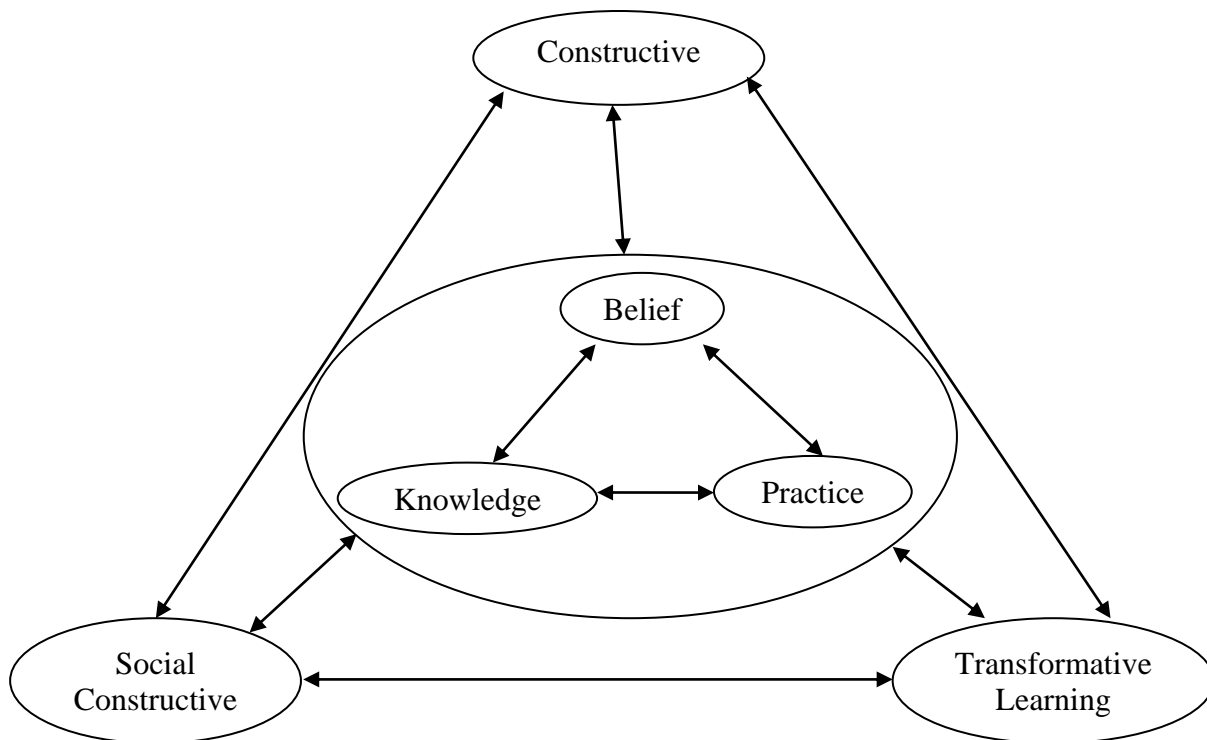


Figure 2-2 Professional learning growth model

In a professional learning circle, practice is deliberate practice because the practice is “effortful activity motivated by the goal of improving performance” (Ericsson & Charness, 1994, p. 738). The authors said that learners develop their knowledge and belief through implementing and reflecting on their practice. Cervero (1992) mentioned that learners’ practice is deliberate action toward professional learning. It means that when learners engage in practice they try to implement deliberately their knowledge or beliefs. He emphasized deliberate practice because the goal of the practice is wise action in learning and implementing their knowledge and practice. He went on to say that “knowledge acquired from practice is more useful than what they acquire from more formal types of education” (p. 92). This model shows that each learning process (constructive, social constructive, and transformative) is connected to each other, and to his/her professional learning. The learning process is also influenced by each other.

CHAPTER 3

METHODOLOGY

The purpose of this study is to examine what the professional learning of online instructors' knowledge and beliefs from their teaching of OPD courses looks like and how this learning impacts their practice in teaching online professional development (OPD) courses. I defined professional learning in this study as "any demonstrable change, growth, or evolution in instructors' beliefs, knowledge, and practice through their engagement in any professional practice in online courses." Instructors' professional learning in online courses is important because they develop their beliefs and knowledge through their practices, and their development influences the effectiveness of their online classes. Ultimately, this study aims to understand instructors' professional learning processes in terms of learning theory perspectives, and also to provide guidelines on how to encourage their professional learning. I will explore their professional learning with the following four sub-questions:

1. What are the three instructors' beliefs and knowledge about online teaching?
2. To what extent and how do the three instructors develop their professional learning of their beliefs and knowledge as they teach OPD courses?
3. What is the relationship between the three instructors' professional learning and their learning processes (constructive, social constructive, and transformative)?
4. What factors promote or hinder their professional learning?

In this chapter, I explain the research design, the study context, the participants, data collection and process, data analysis, limitations, strategies for reducing the limitations, and the credibility of this study.

Research Design

In this study, I used a qualitative case study approach to describe the professional learning of three OPD course instructors. Many researchers have examined instructors' roles, barriers, attitudes, and satisfactions with online teaching, but few researchers have been interested in instructors' professional learning as they teach online courses. This study will provide a better understanding of how instructors develop their professional learning, especially their beliefs and knowledge, through their teaching practice in the online environment.

Based on my literature review and the conceptual framework of multiple professional learning approaches, a qualitative case study design was selected. The case study approach was useful for this study because it helped me describe selected cases of professional learning and the phenomena related to their learning process in descriptive ways. Yin (2009) argued that the case study approach helps researchers understand complex interrelationships between "the occurrence and the contextual settings." Merriam (1988) also mentioned that "the case study offers a means of investigating complex social units consisting of multiple variables of potential importance in understanding the phenomenon" (p. 41).

I assumed that each instructor's professional learning process could be different because of multiple variables around them, such as gender, educational experience, online or technology familiarity, and subject matter. Even though a case study cannot predict instructors' future behaviors as an experimental design seeks, it can provide rich and holistic insights and descriptions for readers (Merriam, 1998). In chapter 3, I explain the research context, such as what the three instructors' educational background looked like, how I selected the samples, and how I collected and analyzed data.

Context

This study took place in a Mid-Western university which provides OPD courses for in-service teachers. This university has developed and provided OPD courses since 2001, and many teachers in and out of state take the OPD courses for sustaining or updating their teaching certificates and improving their instruction. When this study was conducted, 15 courses were provided (Table 3-1). Most of the courses were taught by one instructor, except two courses. There was only one section of Emma's and Dan's course, while Jane's course was offered to three sections and she taught one of them (the three instructors' names are pseudonyms). Having one or two more instructors in one course could influence the instructors' professional learning as they teach OPD courses. Because the instructors of the same course could collaborate with each other, they could feel more comfortable in preparing and teaching the same courses (I will talk about this later).

Table 3-1 Online courses

Course	Instructor	Case
TE8**-Professional Development & Inquiry	One instructor	
TE8 **- Inquiry Classroom Teaching Learning	One instructor	
TE8**-Education Development & Social Change	One instructor	
TE8**-Teaching School Subject Matter with Technology	One instructor	Emma
TE8**-Elementary Reading Assessment Instruction	One instructor	
TE8**-Secondary Reading Assessment Instruction	One instructor	
TE8**-Language Diverse & Literature Instruction Assessment	One instructor	
TE8 **- Accommodating Differences Literacy Learners	Three instructors	Jane

Table 3-1 (cont'd).

TE8**-Methods and Materials for Teaching Children's and Adolescent	One instructor	
TE8**-Assessing and Responding to Literacy Learning Difficulties I	One instructor	
TE8**-Teaching School Mathematics	Two instructors	
TE8**-Inquiry, Nature of Science	One instructor	
TE8**-Teaching and Learning K-12 Social Studies	One instructor	
TE8**-Curriculum Design, Development, and Deliberation in Schools	One instructor	
TE8**-ESL/FL Classroom Practice: K-12 Literacy Instruction	One instructor	Dan

The Masters of Arts program has been provided entirely online for at least two years except the ESL K-12 endorsement option. Students are supposed to complete thirty credits in order to get the master's degree. The school website explained the program's course:

[The program] is designed for beginning and experienced teachers alike, the majority of whom are teaching full time and all of whom are deeply committed to public education and teaching P-12 students. Our program tailors coursework to meet our students' individual interests while focusing on the program goals of: 1) Engaging in critical inquiry, 2) Developing as accomplished teachers, and 3) Becoming teacher leaders

Because the OPD courses are provided completely online, this program is useful for studying and examining each instructor's beliefs and her/his practice in the OPD courses.

Participants

The participants for this study were selected by using both a purposeful and a convenience sampling method. Purposeful sampling strategy is effective when a researcher wants to “discover, understand and gain insight and therefore must select a sample from which the most can be learned” (Merriam, 1998, p. 61). Patton (2002) also said that purposeful sampling strategies can provide more informative resources, so that researchers can “learn a great deal about issues of central importance to the purpose of the research” (p. 46). One form of purposeful sampling is a convenience sampling strategy, which is effective when participants are easy to access and contact. But Koerber and McMichael (2008) indicated that “some amount of effort will likely be involved in reaching and recruiting participants” (p. 463) from the convenience sampling process. They also pointed out that researchers need to be careful to generalize their study because the familiarity of the participants.

By using a convenience sampling strategy, I selected one group of instructors who were teaching OPD courses at the university. I contacted the instructors formally or informally in order to find participants. The purpose of this study was to explore and demonstrate how instructors develop their professional learning as they teach OPD courses rather than generalizing the results of the study. Thus, the relationships between instructors and researcher were important in order to understand their teaching processes, to examine their learning in more detail, and to question emerging issues and developing ideas. Therefore, in the final stage, I selected three instructors who could provide more rich experiences and evidence for their professional learning. The processes of purposeful and convenience sampling in this study were as follows.

1) Defined sample: Much research has studied teachers as adult learners in professional development or OPD courses. Based on the literature review and my experience, this study

defines the sample as instructors (faculty or teacher educator) who are teaching teachers or graduate students in OPD courses.

2) Contacted coordinator: In the middle of August, I met the program coordinator to get some information related to OPD course instructors.

3) Informed possible volunteers: After IRBs' approval (Institutional Review Board), I communicated with some potential volunteers, by using e-mail or face-to-face contexts, about my study and the possibility of their participating in the study. Before communicating with potential volunteers, I identified criteria for sample selection: Volunteers had experiences teaching graduate courses (professional development courses) or online graduate courses (OPD courses), because I believed that their professional development course experiences could provide richer data on their learning process and methods than new instructors.

4) Contacted by email: I emailed the potential volunteers and formally asked if they were willing to participate in this study.

5) Selected sample: After getting their responses, I selected three instructors who were suitable for this study (instructors who have been teaching graduate or OPD courses).

6) Finalized sample: I got signed consent forms from the three instructors and explained the process of this study.

For selecting participants for this study, I used the criteria I set up. The first criterion selecting participants was that they were instructors who have K-12 and higher educational teaching experiences. Second, they needed to have online teaching or learning experiences as a student or an instructor. Third, the participants needed to teach at least one online class during the semester of my study. Finally, I selected instructors who were willing to participate in this study, such as willing to write written reflections and have interviews with the researcher. Even

though I selected participants from volunteers, I also thought of other issues, such as teaching different disciplines (literacy, or technology integration course) or using different technology tools (Wiki, Angel, or Blackboard). The information on selected sample is below.

Table 3-2 The three instructors' information

Name	K-12 teaching experience	Higher education experience	Online teaching experience	Course subject	Student enrollment	Classroom management
Dan	10 years	Undergraduate Graduate	1 year	Language	8	Angel
Emma	9 years	Undergraduate Graduate	1 semester (as a teacher assistant)	Technology	17	Wiki
Jane	8 years	Undergraduate Graduate	3 years	Literacy	21	Angel & Blog

* Angel is an educational content management system this MA program basically provided

Data Collection

Data sources for this case study included online class observations, interviews, and the instructors' written reflections. Data collection and data analysis were conducted concurrently. I describe the data collection timetable (Table 3-3), and explain the data collection process separately.

Table 3-3 Data collection timetable

Data sources	Collection methods	How/where	How often
Interview	Record interviews and transcribe them	Face-to-face	beginning and end of semester
Online documents	Observe and transform instructors' online postings and email into transcripts	Online	Throughout semester
Online modules	Observe and write memos	Content management system	Whenever online module is provided
Written reflection	Collect online written reflection	Email	Three times (once per month)

Interviews. This study mainly relied on interview data in order to answer the four research questions. Patton (2002) indicated that the interview is a good method for researchers to understand participants' perspectives. I interviewed three instructors by using semi-structured interview protocols to examine their professional learning during the semester. Interviews with the instructors were conducted during the beginning week and the final week of the course. For this study, I constructed semi-structured interview protocols (see Appendix A and B). I conducted a pilot interview with two colleagues in my department to get feedback. This feedback and my discussion with my advisor helped me construct interview protocols which were appropriate in length and for the purpose of this study. After revising the interview protocol, I implemented another pilot interview with one professor and two teaching assistants who had online master's course teaching experiences.

The interviews were conducted to gather information about the instructors' professional learning through the theoretical lenses of constructive, social constructive, and transformative learning perspectives.

Table 3-4 Research questions and interview question

Research Questions	Purpose	First Interview	Second Interview
What are instructors' educational backgrounds for teaching online courses?	Context & preparation	Q 1, 2, 3, 4,	Q 1
What are instructors' beliefs on [effective] online teaching and what activities/practices did they provide in order to support/realize their beliefs?	Instructor' beliefs	Q 5, 6, 7	Q 2, 3, 4
What and how knowledge did instructors develop in order to teach [effective] online courses?	Instructors' knowledge	Q 5, 6, 7	Q 2, 3, 4
How did instructors develop their beliefs, knowledge, and practice through their own professional learning?	Instructors' professional learning	Q 8, 9	Q, 5, 6, 7

Table 3-4 (cont'd).

What are the relations among belief, knowledge, practice, and their professional learning?		Q 8, 9, 10	Q 8, 9
What are challenges and supports for their professional learning?	Challenge & support		Q 8, 9

During the interviews, I also took notes for adding some questions to their written reflections or saving the data in case the data of the recording was lost. Kvale (1996) pointed out the importance of open-ended interview questions. He said that it is necessary to “change the sequence and form of the questions in order to follow up the answers given and stories told.” (p. 124). Even though the interviews were constructed with an open-ended structure, a certain set of questions were used in order to find out about their professional learning development. My first interview focused on asking about the three instructors’ educational experiences in K-12 and higher education as well as their online learning and teaching experiences. I also asked about their beliefs, knowledge, and practice based on their previous online teaching and learning experiences. The second interview was interested in examining how the three instructors developed their professional learning and what challenges and support they had. The first and second interview questions were distributed across the interviews as follows (the interview protocols are included in Appendix 1).

The interview questions addressed six components of the instructors’ professional learning, in terms of a) teaching background and perspectives about OPD courses and learners, b) instructors’ beliefs about online teaching, c) instructors’ knowledge about online teaching, d) instructors’ practice related to their beliefs and knowledge, e) instructors’ professional learning, and f) instructors’ professional learning challenges. All interviews were digitally recorded after getting permission from each participant.

Online observations. The purpose of the online observations was to examine the instructors' deliberate practice. This observation consisted of two parts: one was to examine the instructors' engagement in online discussions and email, and the other one was to examine their online modules. First, I examined each instructor's engagement in his/her discussions with students in order to examine his/her written feedback and how he/she communicated with students. I also got instructors' emails which explained weekly course purposes and assignments. The instructors' online guidelines and email provided me with valuable data to address my written reflection questions.

Second, in the case of online modules, the instructors were supposed to develop and revise them for their learners. For example, Jane had developed her online course for three years; thus she already had an online module, a syllabus, assignments, and educational resources. Before the semester began, Jane collaborated with her colleague in revising the online course, such as changing some assignments, articles, and the process of a final project. Dan got an online module, a syllabus, assignments, and other resources from the previous instructor. He mostly followed the online module and content, rather than revising them. Emma, who taught fully an online course for the first time, met previous instructors who had taught the same course. From the discussions with them, Emma revised the previous online module by adding some technology tools, assignments, or resources. Course online modules were used as an analysis tool to understand the instructors' deliberate practices in OPD courses. Taylor (2011) said that "when learners are unable to find what they need or are confused about where to go and what to do, it is harder for them to learn" (p. 119). He went on to say that online course modules can be important tools in order to understand instructors' intentions of the OPD course.

I paid attention to when instructors revised or changed some practices. Based on my observations, I also asked some questions as part of the written reflection questions. For example, Emma revised her original plan, which was to discuss technology resources rather than technology integration. So, I made a question about that in the third written reflection question paper. I asked, “In wiki week 11, you asked students to revisit and think ‘technology integration.’ Was this your original plan (Why did you plan it in this way)? Or did you change your plan? (If so, why did you change it in this way?).” These online observation data were used as valuable resources for my written reflection questions and final interview. During the observations, I transcribed or captured each instructor’s words and online modules. When I interviewed them at the end of a semester, I asked their thoughts on the changes in their online modules or their online practices.

Online written reflection. The third data collection strategy was instructors’ online written reflections. Many researchers have emphasized the role of reflection in adult learners’ learning. McNamara and Field (2007) argued that “The capacity to reflect on one's own strengths and weaknesses, to learn from constructive criticism, and to practice critical reflection by monitoring one's own work performance and interpersonal interactions is essential to the ability to learn from experience and is the cornerstone of the journey to becoming a lifelong learner” (p. 87). Cranton and King (2003) indicated that adult learners who are in professional positions have not had enough opportunity to learn what they are doing. They argued that adult learners “learn their craft through experience, modeling themselves on others and reflecting on their practice” (p. 31).

Therefore, the purpose of online written reflection is to investigate how instructors learn from their experiences. Each instructor was asked to do online written reflections three times.

Each written reflection question was made up of three parts: first, I asked about their main practices, such as what did you learn from your practice? What happened to the activity? And what were your students' responses? Second, I asked some questions which were constructed from my observations of online or email communication; for example, in Emma's third written reflection, I asked, "Since week 12, you created 'Looking ahead,' why did you create this? What is this for? How did you know this was necessary?" Third, I asked about their professional learning process, their beliefs and knowledge about online teaching, and their overall evaluations of their practice. These questions guided the three instructors to reflect on their practice and write their reflections (see Appendix C). Those written reflections were also used as resources for additional questions during the final interview.

Data Analysis

In qualitative research, data analysis involves finding patterns and themes from the data. Yin (2009) said that "data analysis consists of examining, categorizing, tabulating, testing, or otherwise recombining evidence, to draw empirically based conclusions" (p. 126). Therefore, my purpose of data analysis was to examine how instructors developed their professional learning, whether the instructors' professional learning changed their knowledge and beliefs, and whether this change influenced their practice during an OPD course. In this section, I describe how I analyzed the data (online observations, written reflections, and interviews). After collecting the data, interview transcripts and written reflections were transcribed verbatim. The data collected from online observations, written reflections, and interviews were analyzed in the following processes: 1) getting to know data, 2) categorizing and identifying patterns, 3) identifying connections within and between cases, and 4) interpreting the data.

1) Getting to know data: I constructed each transcript for the interviews, online observations, and written reflections. I read and re-read the transcripts/documents. I wrote down any impressions and ideas I had in the transcripts (Table 3-5). For example, my first impressions included ‘without f2f interaction → the students don’t know who we (instructors) are,’ or ‘learn from a faculty member → have f2f meetings during the semester.’ After this, I made another table with the selected transcripts including detailed information. For example, in figure 3-1 below, I made titles: Emma’ interview (pre-interview), script number (EI09), content (Emma’s interview scripts), memo/questions (9-3: how does Emma know about...), 1st code(9-1: lack of interaction), and 2nd code. In the table, EI09 means Emma’s ninth script in her pre-interview. I specified the script (9-1, 9-2, and 9-3) into several parts in order to categorize the data.

Table 3-5 The process of getting to know data (captured from Emma’s transcripts)

Source	code number	Content	Memo/Questions	1st code
Pre-Interview	EI09	They see my pictures, they email me.” And she was like, “ No, they don't know you. They've never had any face to face contact with you. So you're an instructor to them, not somebody that really matters. So if they don't do well on something, oh well.” So then I was talking to a faculty member here who mentioned that she requires her students in online courses to have office hours at some point in the semester.	9-3: how does Emma know about Skype conversation? How will she use that?	9-1: lack of interaction 9-2: Learn from experts 9-2-1: Challenge new tools /ideas
Pre-Interview	EI10	Fifteen minutes is not a big amount of time and I want to do it toward the beginning of the semester so that I can touch base with them to find out how they're doing, if there's anything in the course that they don't like	10-1: What else did Emma do to interact with her students?	10-1: Emma' s value on Skype

2) Categorizing and identifying data: I read the transcripts and the memos, and I categorized them into some themes. Initial themes included adapt, belief, belief & practice, instructor background, professional learning, etc. (Table 3-6). As I categorized the data, I also organized the categories into coherent subcategories. For example, belief-belief on barriers, belief on instruction, belief on interaction, and belief on connection and background-K-12 educational, online learning and teaching, and subject matter experience. However, I also was open to other ideas, and I revised the framework based on what I found in the data. For example, I began with the following categories related to instructors' challenges: lack of interaction, lack of technological and content knowledge, and lack of training. When I noticed instructors' challenges related to their internal issues, such as their hesitation to change their practice, students' readiness for online course, or school culture. I reorganize the categories to include internal challenges with their professional learning.

Table 3-6 The process of categorizing data (captured from Emma's transcripts)

Category	Sub-Category	Code	Source	RQ
Adaptation	Adaptation	Change format (Reduce students' anxiety)	emo133	RQ2-2
	Adaptation	Flexible Structure (Be open to change)	emo134	RQ2-3
	Adaptation	Prepare unexpected challenge	emo171	RQ2-3
Instructor Belief	Belief on activity	Belief on assignment (Digital)	emo223	RQ1-1
	Belief on online activity	Connect activity information into course learning	emo131	RQ1-1
	Belief on online discussion	Belief on Online discussion	emo123	RQ1-1
	Belief on online teaching	Connect course learning into the online class	emo124	RQ1-1
	Belief on online teaching	Connect course learning into their own classes	emo253	RQ1-1
	Belief on students' feedback	Students' feedback (is important)	emo151	RQ1-1

3) Identifying connections within and between cases: Based on each case's patterns, I tried to find differences or commonalities within and between cases. For example, I wrote down some patterns I could find in each case: background, belief, challenge, change, pedagogy, perspective, and professional learning (Figure 3-1). In order to discern each case, I colored each case with yellow, blue, and green.

Background		Belief		Challenge		Change	
Background	EI1	Belief	EI41	Challenge - her knowledge	EPI32	Change - belief	JI23
Background	EI2	Belief	EI44	Challenge - how to solve it	JI9	Change - belief	JI24
Background	JI1	Belief - change	DPI8	Challenge - how to solve it	JI10	Change - belief & knowledge	DPI40
Background	DI1	Belief - her course	JI27	Challenge - how to solve it	JPI38	Change - perspective on Wiki	EPI3
Background	DPI1	Belief-her course	JI26	Challenge - how to solve it	JPI39	Change - practice	EPI21
Background	DPI7			Challenge - how to solve it	JPI40	Change - practice	JI28
Background	DPI10			Challenge - how to solve it	DI7	Change - practice	JI29

Figure 3-1 The process of connecting data (captured from data analysis)

4) Interpret the data: I interpreted the data based on the themes or patterns I found. For example, I compared each case's background: K-12 educational, higher educational, and online learning and teaching experiences (Table 3-5).

Table 3-7 The process of interpreting data (captured from data analysis)

Theme	Category	Emma	Jane	Dan
Backgr ound	Educational Background	Teaching English in K-12	Teaching Literacy in K-12	Teaching French in K-12
	Higher Ed Background	Field instructor 1yr Literacy 2yrs	Literacy 4yrs	World Language 2yrs
	Online Learning & Teaching Experience	Learning: (Doctor level) one semester Teaching: (Assistant teacher) for one semester	Teaching: Literacy for three years	Teaching: FL Teaching Practice for one year
Belief	Belief about online teaching	1. Need to build Connections & Interactions 2. Need to build relationships	1. Need to build Connections & Interactions 2. Need to build Social interaction 3. Need Clear communication	1. Need to build Connections & Interactions 2. Need Balancing
	Belief and practice	1. Skype chatting, Respect 2. Group work: Interaction 3. Email: Connection	1. Written Discussion 2. Group Discussion: Share ideas & experiences	1. Written Discussion 2. Few Discussions & assignments

Based on the analysis process, I analyzed and interpreted the three types of data

(online observation, written reflection, and interviews). After explaining each case's results, I also implemented a cross-case analysis. Yin (2009) said that "cross-case syntheses can be performed whether the individual case studies have previously been conducted as independent research studies" (p. 156). I looked for patterns and themes related to the instructor's professional learning in terms of the instructor's perspective on the lenses of constructive, social constructive, and transformative learning theory, focusing on their beliefs and practice. By identifying patterns and themes from each case, I looked for similarities and inter-group differences. This cross-case analysis helped me understand why one instructor's professional learning was different from or similar with others, how they learned with different learning

process, and what relationships may have existed among the instructors (Khan & VanWynsberghe, 2008).

Study Limitations and Credibility

Study limitations

My case study approach has limitations for two reasons in this study. First, I selected three instructors by using purposeful and convenience sampling strategies because I assumed that they could provide rich experiences of professional learning in different contexts. Because of this selection process, this case study cannot generalize its results and predict other instructors' professional learning process or their future behaviors. The second limitation is the reliability of the investigator's research skills. Merriam (1998) said that "Qualitative case studies are limited, too, by the sensitivity and integrity of the investigator. The researcher is the primary instrument of data collection and analysis" (p. 42). She mentioned that readers cannot help relying on a researcher's instincts and abilities of collecting and analyzing data. Hamel also indicated that the case study is limited because of "its lack of rigor in the collection, construction, and analysis of the empirical materials that give rise to this study" (Hamel, 1993, as cited in Merriam, 1998, p. 43).

Credibility

Many researchers have suggested some strategies to reduce the limitations of case study research (Crowe, Cresswell, Robertson, Huby, Avery, & Sheikh, 2011). In order to reduce the limitations of generalization, they said that "developing in-depth knowledge of theoretical and empirical literature [and] justifying choices" are necessary. In this study, I reviewed previous studies related to instructors' professional learning, their beliefs and practices in online environments, and the learning process. This in-depth knowledge from the literature review

helped me select three experienced instructors who had not only educational experiences, but also online teaching experiences. I was also open to unexpected issues, and I tested my preliminary explanations or framework in order to mitigate the lack of theoretical and empirical generalizations. Another strategy to increase the integrity of this research was using the triangulation method (document or written reflection, interview, and observation). Merriam (1988) said that multiple sources of data help researchers enhance the external validity or generalization of research results. In addition, I clarified the procedures of data collection and analysis process, as discussed above. Finally, I did a cross case analysis in order to examine commonalities and differences among instructors about their professional learning in OPD courses.

CHAPTER 4

EMMA

In this and the next two chapters, I demonstrate what the professional learning of online instructors' knowledge and beliefs in OPD courses looked like and how this learning impacted their practice in teaching online professional development (OPD) courses. In this chapter, I explore the following questions in relation to what I learned about one instructor, Emma: 1) What were her instructors' beliefs and knowledge about online teaching? 2) To what extent and how did she develop her professional learning as she taught an OPD course? 3) What was the relationship between her professional learning and her learning approaches? and 4) What factors promoted or hindered her professional learning?

Before discussing these research questions, I explain Emma's participants' experience in teaching OPD courses for one semester, focusing on her unique experiences and professional learning processes by using a case study method, as described in Chapter 3. Each participant in this study had unique beliefs about learning and teaching, but similar features of professional learning in OPD courses. Even though this case study cannot predict all instructors' future behaviors as an experimental design seeks to do, it can provide rich and holistic insights and descriptions of Emma's professional learning (Merriam, 1998).

Instructor Emma

Educational Background

Emma had been a teaching assistant in the College of Education at a Midwestern university for four years as part of her responsibilities as a doctoral candidate. Before Emma taught in higher education, she taught for 11 years in Michigan at the high school level. She taught ninth, tenth, eleventh, and twelfth grade English at different times. At the end of the

eleventh year, she taught at the college level as an adjunct for a semester, and she taught an English class there. Emma mostly taught English subject matter in K-12 settings, and she was also interested in teaching in K-12 professional development programs for new and practicing teachers.

At the higher education level she had various teaching assistantships and field supervising experiences. She field instructed for one year, focusing on observing pre-service teachers and supporting their internship experiences in K-6 settings. In her second year in higher education, Emma taught a “Secondary Content Area Literacy” course for two years. She taught about the role of social context and socio-cultural background in learning at the secondary level. In the fourth year, Emma was assigned to teach an online course, “Teaching School Subject Matter with Technology,” for one year. When she participated in the study, she taught the course online for the first time. In addition to these teaching experiences, Emma was interested in how teachers can use technology effectively in the classroom.

Regarding online teaching, Emma did not have full teaching experience online. But Emma had some online teaching and learning experiences for a while before she taught this online class. As a graduate assistant, she assisted one online class for a semester. During that time, Emma read her students’ postings and gave some feedback. She also communicated with her students in order to know about their learning. Even though she was not the main instructor, Emma said that it was a good opportunity for her to experience an online course. As a student, Emma had one online class experience for one semester. The course was the History of U.S. Education. Emma said, “So for me, having been a student in an online course at the doctoral level and following that up as a graduate assistant a couple of years later helped me prepare this course.” Emma’s previous experiences, as a student and as a teaching assistant in the online

environment, influenced her beliefs, knowledge, and practice when she began teaching online classes.

Online Course Context

Emma's K-12 educational background was more related to English or literacy, but Emma was assigned to teach the "Teaching School Subject Matter with Technology" course. This online course was developed for master's students. Most of the students were K-12 teachers who were currently teaching K-12 students. The course is "an interdisciplinary graduate course designed to explore the educational value, potential, and challenge of using technology in the teaching and learning of subject matter" <http://education.msu.edu/maed/courses/Spring2014.asp>). She went on explain that the course offers a perspective for integrating educational technology with content and pedagogical practice. In her syllabus, Emma emphasized that teachers need to develop strategies and methods for teaching school subject matter with technology through this course, focusing on students' participation and authentic learning experiences in using educational technology to teach various subject matter and grade levels.

The College of Education gave Emma more flexibility to choose and design her course; thus she chose a Wiki as her online management system (Table 4-1). She constructed four important menus on the left side: Home, About TE800, TE800 schedule, and TE800 Additional Resources. In the Home menu, Emma explained how students can use a Wiki, and what a Wiki's functions are. Emma made some efforts in constructing the "About TE800" menu. She provided her syllabus, assignments, and discussion opportunities there. Whenever her students wanted to know their assignments or their feedback, they could check them by just clicking the menu. After finishing the assignments or classes, students could go back and check their discussions and assignments.

Table 4-1 Instructor Emma's Wiki structure (excerpt from Emma's course wiki week eight)

Home	Week Eight - October 14, 2012
Wiki Editing Information	This Week's Lesson: digital storytelling wrap up, extensions of digital literacy and a review of teaching with technology (including a revisit of TPACK and UDL, among other things)
About Wikispaces	
About TE 800	Required Readings: There are TWO readings to complete this week (including Davidson's text)
Syllabus	
Go To Groups	Required Viewings: There are TWO viewings to complete this week (one is about an hour, so plan accordingly)
Who We Are - TE 831	
Course Members	This Week's Assignment/What's Due:
Assignments	Reflection on Last Week
TE 831 General Grading Rubric	As far as assessment of this assignment, I will view all of your digital stories and send individual feedback to you via email (reminder, the digital story assignment is worth 20% of your semester grade). I also expect that you have read my comments related to your glogs and have added your own comments to last week's discussion board.
Our Digital Stories	
Our Re-Purposed Lesson Plans	This Week's Lesson So now that you created your own digital story, what would you say are the affordances and constraints of digital storytelling? As I have stated before, digital storytelling offers educators and students a creative way to author media... This is all valuable (and an essential component of digital citizenship), but requires a time commitment and some understanding of content and technology.
Tech Tools [1] [2] [3]	
Now You See It	
VoiceThread Final Project Assignment	
TE 800 Schedule	
August [29]	
September [2] [9] [16]	

Table 4-1 (cont'd).

<p>[23] [30]</p> <p>October [7] [14] [21] [28]</p> <p>November [4] [11] [18] [25]</p> <p>December [2] [9]</p>	<p>Required Readings: (there are TWO required readings this week, including Davidson's book)</p> <p>Required "Viewings": (there are TWO required viewings this week)</p>
<p>TE 800 Additional Resources</p> <p>TPACK & SCOT Theories</p> <p>Copyright & Fair Use</p> <p>Free Technology</p> <p>Technology Grants</p> <p>Your Ideas & Links</p>	<p>This Week's Assignment/What's Due: (there are TWO things due this week)</p> <p>1) Watch Digital Stories and Post Comments:</p> <p>2) Finish Davidson's book and post two discussion questions to the Now You See It page, before Sunday, 10/21/12.</p> <p>Looking ahead: participate in a Skype conversation, focused on Davidson's text (NOTE: Maria, Chris Cooke, Trisha and Melanie, you have your Skype conversation scheduled for 10/21 from 11am-12pm EST)</p>

Emma said that students could get some ideas and resources even after finishing this course because the content would always be there. The online class was 16 weeks long, and Emma divided the 16 weeks with three big goals (units).

The first unit, called Conceptual Tools, provides a foundational understanding for teaching with technology. The second unit, called Tech Tools, explores hardware, software, and Internet technologies that have the possibility of enhancing teaching and learning. A focus for this second unit is on the affordances and constraints of integrating

certain technologies in teaching. The third unit, Meta-cognitive Tools, is more summative and includes students' reflections on their learning throughout the course

(<http://te831fs2012.wikispaces.com/>).

According to the schedule, Emma provided her direction in the middle side of the Wiki, such as what students needed to read, view, and create every week. In order to help students' understanding, Emma showed four main issues each week: Week's Main Focus, Reflection on Last Week, Required Readings & Viewings, and This Week's Assignments & What's Due. It seemed to be very clear and easy for students to navigate because students could confirm their responsibilities, due dates, and resources. Emma also provided a "TE800 General Grading Rubric"; thus students were able to check what they needed to focus on when they did their assignments or had discussions. Regarding communication, Emma usually used her Wiki weekly introduction, and she sent an email every Sunday to encourage students' participation. In order for students to access and navigate easily, Emma said that she tried to make her Wiki simple but clear, based on her interaction with other colleagues and her own experiences.

Online Course Preparation

Emma did not have any special training for teaching online courses. She said that when she was assigned to teach online courses, she was a little concerned because she did not know how to prepare and teach a course online. Nonetheless, Emma said that her previous online experiences (as an assistant teacher and a student) helped her make sense of online instruction. As stated earlier, before starting to teach in higher education settings, she took an online class as a graduate student. She experienced some advantages and challenges when she took the online class, such as time and place flexibility, and lack of interaction. When Emma communicated with her students by using email, she also experienced some students' rudeness and their

irresponsibility in their learning. Emma later said that these experiences made her think of approaching the online course differently.

Having discussions with a previous instructor was the most important support for Emma to prepare her online class. She met Bob (pseudonym) and talked about his know-how for this course. In her first interview, which was conducted at the beginning of the semester, she said, “If I had not met him, I would be at a significant loss right now. I feel very confident and comfortable in what I'm doing because I had his platform. If I had to create a class from the ground up, I would find that very stressful. At least right now – in a different space I would find it fun.” She did not follow all his structure; rather, based on his basic structure, she revised the course thoughtfully by using her own online teaching and learning experiences, such as emphasizing synchronous communication by using Skype. While preparing the online class, Emma continually reflected on her own experiences as a learner and as an assistant teacher online with her strong belief in students’ learning. In the next section, I present how Emma developed her professional learning and her beliefs and knowledge through her practices in the online course.

Emma’s Professional Learning

Professional learning is learning that someone does to enhance whatever job they are doing. It's opportunities for learning to enhance your own growth and abilities as a professional.
(Emma, at the second interview)

Many researchers have defined teachers’ professional learning, focusing on changes in teachers’ knowledge, beliefs, and practice (Mike, 2010; Mouza, 2009). Mike (2010) argued that “the intent behind any professional learning is to create change-a change in instructional practice, a change in beliefs, and a change in understanding” (p. 28). Therefore, the purpose of this section

is to understand how Emma developed or changed her professional learning of her beliefs, knowledge, and practice. This section is divided into three parts: 1) Emma's beliefs and knowledge about online teaching; 2) the extent to which and how Emma developed her professional learning as she taught OPD courses; and 3) the professional learning approaches Emma used for the construction of her professional learning.

Emma's Beliefs about Online Teaching

Many researchers have studied and examined teachers' beliefs about teaching and learning, and how the beliefs influence teachers' practices (Belbase, 2012; Pajares, 1992), their perceptions and decisions (Handal, 2003), and their instructional approaches (Rienties, Brouwer, & Lygo-Baker, 2013). Some researchers have also argued that teachers' beliefs are influenced by the subject matter and the school culture in which teachers participate. The results of this study show that Emma had strong beliefs about her teaching and students' learning. Emma said that she believed her students are humans and have lives, and they need support from each other, especially from instructors, such as caring about students' projects, learning, and lives. Emma's beliefs about teaching an online course were presented in three ways: valuing relationships, interactions, and connections.

First, Emma valued the relationships between instructor and students in online environments, as well as in face-to-face classes. Emma expressed her frustrations with her previous online class because of the lack of relationships. When she assisted an online class before this semester, she had one student in another country. Because Emma was not able to see the student, she had difficulty understanding the student's thoughts and online activities. Emma said, "She was rude and disrespectful and she made blatant statements that were actually pretty inaccurate." Emma tried to have discussions with her, but the student did not respond to Emma's

requests. She wanted to help the student, but she could not do anything because she was not able to communicate with the student.

Emma told about another weird experience in that course. One of her students emailed Emma that he was not able to submit his assignments because he was at a conference and did not have Internet access. It was just an hour before the deadline for the assignments. Emma politely responded to him that he was not able to get full credit because he missed the due date and only talked about his situation just before the deadline. He never responded back to Emma. Emma thought that this was a lack of building relationships between herself as an instructor and the students. Emma said, “I wonder if, at the beginning of the semester, if there had been those one on one's, that student would have been less snippy. She wouldn't think things through. She wouldn't just type things and then send it. “After having these experiences, Emma seemed to believe that instructors need to find some pedagogical approaches to build relationships with students in online environments, such as showing his/her presence, how much he/she cares about his/her students' learning, and teaching students how to respect each other. How Emma implemented her practice in order to show up her beliefs will be discussed later.

Second, Emma valued interactions between students and instructors, between students and content, and between students. As Emma showed her beliefs about interaction in her professional learning, she provided many opportunities for students to interact with her and other students. During her first interview, Emma said that she planned to emphasize students' interaction with each other, even though she believed the interaction between instructors and students is also important. Emma said that she was not able to interact with her students every time because of time issues. Emma said that “I value their interaction. If I am going to be instructing, I want them to know who they are. I want them to understand how they learn from

each other. [However], I can't do that if all I am getting is emails every once in a while." Thus, Emma provided group interaction opportunities and encouraged her students to communicate with each other and learn from others.

Third, Emma valued connections with her students. She said that learners, young and old, need connections in their learning, whether they are personal connections or connections between content and ideas, or between content/ideas and the world in which they live. This idea came from when she was an undergraduate and from her graduate student experience. In her previous online teaching as an assistant, she experienced some challenges in connecting with students. She said, "As I said earlier, it's hard for me to connect with students, although they do participate in activities that provide opportunities for connection." In the online environment, Emma said that learners could feel disconnection with students, and especially with instructors, more than in face-to-face classes, because they cannot see each other or talk in classrooms. Emma seemed to believe that students would feel a sense of community when they were connected to each other, such as seeing each other and sharing each other's professional and personal lives. In the next section, I discuss how Emma developed her professional learning of her beliefs, such as implementing her beliefs through her practice.

Emma's Professional Learning of Beliefs and Practice

Emma talked about her professional learning: "It's essentially any learning that I'm doing that is promoting my ability to be a professional in my field." The results of this study show that Emma had solidified her previous beliefs about students and teaching during her online course. During the first interview, Emma said, "I think it [being considerate of students] probably stems much more from personal beliefs and values about humans. I'm a person of faith so the things I believe as a Christian, I think I bring into other parts of my teaching about treating people fairly

and honorably.” Emma often said that she believes students can learn and develop their learning and knowledge when they feel that they are being loved and taken care of by teachers. She also said that teachers need to encourage and support students’ learning continually. Her online experiences and her personal beliefs influenced her preparation of this online course. While Emma implemented her beliefs into her practice in her online course, she solidified her beliefs about online teaching.

Emma built relationships with her students. Emma believed that online instructors need to build personal and professional relationships with their students in the online environment. Emma’s belief influenced her practice in this online class. When Emma began online teaching this semester, she recalled her negative experiences with the online format’s limitations, lack of interaction, and students’ disrespectfulness. However, Emma had a strong belief that human interaction can build relationships and improve students’ reliability. Therefore, Emma planned many practices for building and sustaining close relationships between students and instructor, such as Skype video chatting, email communications, and giving timely feedback. Emma also shared her personal and professional lives with her students in order to make them feel comfortable in the online environment.

First, in order to build relationships, Emma showed her presence to students during the whole semester. After Emma experienced not having relationships with students in her previous online teaching, she talked with her peers and a faculty member about that issue. During the discussions, Emma found that one faculty member required her students in online courses to come to her office at some point in the semester, even though the course was presented online. Emma got ideas from the discussion about building relationships with students. She considered using video conversations and group discussions. But she was not sure about this until she was

frustrated with her email communications this semester, because this semester was her very first online teaching by herself. Before the class began, Emma emailed her students to ask about who they were and what they wanted from this course, in order to understand her students. However, Emma said that she still did not understand what was going on in students' online world because their responses were rather artificial. She said, "I realized that I didn't have a very good 'sense' of my students, individually. I missed the face-to-face, real-time interactions with my students which I've always had in face-to-face teaching." Emma went on said that she was not able to build relationships in the way she set up this class.

Even though instructors and students see each other by uploading their pictures online and by communicating through email, Emma seemed to think that online environments were limited in building meaningful and close relationships. Therefore, Emma searched some online tools for breaking the limitations of the online environments. She often spoke of the importance of teacher presence in the online environment. She found the Skype video chat tool, and said that the tool was easy to use and free. Before the first big assignment, she wanted to check with each student to see how this class was going for them, as well as make friendly relationships with her students. Emma communicated with every student by using the Skype tool for 15 minutes. After one-to-one Skype chats in the fourth week, she got much positive feedback from her students. One of the students said to Emma that she felt the instructor's presence (Emma) for the first time in an online environment. The student also said that she felt like learning from a real human being, not from a computer. Emma said, "I have a much better sense of my students as individuals and I think – although I have no empirical evidence- that this also makes me more real to my students." Emma also felt that she built close relationships with her students because

her students seemed a bit distant or aloof at the beginning of the conversation, but by the end they were laughing and appeared much more relaxed.

In addition, she used email for sustaining the close relationships. Emma usually sent email two times a week. Many of her emails were about her personal and professional life. For example, in October, she shared her personal experiences with her students, “Happy [almost] mid-October! Our son is officially seven today and we've had a lot of cake/ice cream this weekend! We're planning to complete the birthday festivities with a "grandparents' party" later tonight, which should be fun.” Emma wanted to show her students that she is a normal person who has a personal life, as well as showing that she is an instructor who can help their learning. From students’ feedback at the end of the semester, many students expressed that they felt Emma’s teacher presence in the online course because of Emma’s efforts, such as chatting with Skype and sharing her personal and professional lives.

Second, Emma believed that instructors need to show how much they care about their students’ learning. When she was an undergraduate student, she said that she learned many academic things in one course. She said, “She (one professor) made me really think long and hard about when you teach, how you teach well, but I was scared to death of her because she did not care about her students well.” Her personal beliefs and experiences led to Emma thinking of caring for students, as well as teaching them. Emma wanted to show what she is doing for her students. Online surveys in week 1, the TPACK (technological, pedagogical, and content knowledge) narrative survey in Week 2, and Skype chatting in week 4 were all part of her intentions of caring about her students. The online survey was about introducing themselves to other classmates. The TPACK narrative survey was to check students’ understanding of

technological, pedagogical, and content knowledge after learning the concepts. She clarified the purposes of the survey by asking the following three questions:

- 1) Is TPACK a helpful theory when considering how to teach school subject matter with technology? Explain why or why not?
- 2) Of the three knowledge categories (technological knowledge, pedagogical knowledge, and content knowledge), which is your strongest? Why? Which is weakest?
- 3) What knowledge area would you like to develop? Why?

(extracted from Emma's 2012 course syllabus)

Regarding the two surveys, Emma gave her students timely feedback by encouraging their efforts and participation. Emma valued her students' feedback because she believed that quick and appropriate feedback reflects instructors' caring attitudes or considerate practices for her students. Emma said, "I want them to know I am reading it, I want them to know that I am giving them feedback." Sometimes, she had difficulty in giving feedback to her students because it took much time. Thus she tried to keep balance on giving feedback, for example, asking students to give feedback to each other.

Third, Emma believed that instructors need to teach students how to respect each other, especially in the online environment. Emma was concerned about the lack of interaction in the online course, because she seemed to think that face-to-face interaction can be helpful for not only improving students' learning, but also sustaining respectful relationships between students and instructors. She shared some frustrating experiences related to the respect issue. When she assisted an online class, she had one student who was enrolled in the course but who never emailed her. The student never responded to her email, and then she was not doing anything. Emma thought that the student was not going to take the class. So Emma contacted her boss and

her adviser regarding that issue. However, to her surprise, the student emailed both of them but she still did not email Emma. After that, the student started doing the assignments but did them late. The student did not have any interaction with Emma at all. Emma said, “That wouldn't have happened in a face to face environment.” Emma pointed out the lack of respectful relationships in the online environment. Finally, the student ended up dropping the class, but Emma never once heard from her. After this online co-teaching experience, Emma seemed to believe that online environments need to provide some opportunities in order to build respectful relationships between instructor and students. That is one of the reasons Emma used one-to-one Skype conversations this semester.

Emma also believed that students need to show respect to each other, such as showing etiquette in the online environment. She showed some examples of how to respect to each other in online discussion postings. Rather than simply writing their comments in the discussion posts, Emma called participants' names and responded with her thoughts by respecting others' ideas. Emma said, “It is small thing like making sure you use the person's first name when you are referring to their comment.” She continued to say that she tried to make online discussion be more like humanistic chatting in a real face-to-face classroom.

Emma promoted connections. During the first interview, Emma emphasized building relationships with her students, and also sustaining the relationships. Emma said that if students feel connections with her, her students would feel the sense of community which promotes open and meaningful interactions and discussions among students. In order for students to feel connections, Emma attempted new strategies which she learned from other colleagues. First, as discussed previously, Emma used Skype chat in order to create a sense of community. When she was an undergraduate student, she felt that she was not connected to her instructors. She said, “I

don't need to know every little thing that they (instructors) did, but I love to hear what their kids are up to. It just makes me feel like they are human beings, that there is more to them than just this academic person." Emma also had similar experiences when she took one online class by using a Wiki website. At that time, she had to upload her tasks and to post her ideas on discussion posts. But she was often frustrated because there was not much feedback or meaningful discussion. It was not easy for her to know who her peers were and what they were doing. In order to reduce this feeling of disconnection, this semester Emma tried to connect students to her by synchronous video chatting. She said that Skype chatting was an important start to being connected with students. Through Skype chatting, Emma and her students knew each other more than through written online chatting.

She also provided group Skype discussions. Students had to meet online and discuss class topics in synchronous environments. Emma's intention was to let her students feel a sense of community by seeing and discussing with each other. After finishing the group discussion, Emma said, "I value connections between students and teacher/students, and the go-to-groups were one way I could foster these connections." She continued to say that the Skype group conversation allowed them to do both, and to discuss content from a book that connected to the course content, providing a springboard for group discussion.

E-mail communication sustained the connections with her students during the semester, whereas Skype chatting promoted connections at the beginning of the semester. Emma shared her difficulties with chatting with a Skype tool even though she found that the chatting was effective for improving the connections between instructor and students. The Skype chatting took much time, and sometimes it was difficult for Emma to set up the schedule because of time differences. Emma used email and the telephone as other communication tools for

complementing the communication. Emma believed that communication is important in the online environment because clear and regular communication is necessary for students to feel connected with the instructor, even when they cannot see each other. Emma said,

The email is another way to connect with students and let them know what's coming up; although the information in the email is similar, in some cases, to the week's lesson the email is another opportunity to introduce the week, clarify anything that may have come up the previous week, as well as offer additional information.

Emma went on say that she wanted her students to know that she was interested in their learning and was tracking their studies. She said that weekly emails enabled her to direct their attention (to some degree) and to make their relationships be connected. Through her email, she kept communicating with her students and let them know that they were in the same community.

Emma also worked to find ways for her students to connect the course content to their own lives. Emma said that most of her students were teachers, and she wanted to support the teachers to connect their learning to their classroom activities. Emma said, "It's a Master's class. I am working with teachers and if they cannot take what they are learning and apply it into their classroom with their students, I feel like I am not doing a good job serving them." Emma provided various activities for students to connect their learning to their classroom activities. For example, the digital story assignment (if they were teaching, they were supposed to use this in their class), the re-purposed lesson plan assignment (a lesson, if they were teaching, that they were supposed to teach), and the tech tools (finding tools they were interested in and wanted to learn more about). After applying these assignments to their classrooms, students were supposed to share their experiences with other cohorts and with Emma.

Emma encouraged students' interaction. Because Emma believed that interaction is an important strategy for improving students' learning in the online environment, she continually encouraged not only the interactions between students and herself, but also between students. In order to encourage students' learning from their interactions, first Emma used Wiki as her online management system. She said, "The discussion post is nice for the Wiki. The wiki allows for discussion posts, which is important and for students to embed content on pages, which is nice." For example, Emma provided three "Tech Tools" assignments for a semester. Emma wanted her students to search for, use, and report back on different tools. In addition to posting tools and information, students were required to read their peers' posts and to try out as many tech tools as possible this semester. Emma said that the features of Wiki were simpler and clearer for students to interact with other students. Emma said that her students enjoyed this activity through interacting with other students about the new technology tools.

Second, Emma used groups as an opportunity for them to learn from each other. Emma found that many of her students knew a lot about technology and had some good ideas. For example, she said that one student, in particular, helped her figure out an issue they were having with the wiki (i.e., students accidentally deleting others' posts on a page), and she gave Emma some feedback. Emma realized that she did not want to be the only person students asked when they had questions – that's a lot of questions, potentially, to answer, and she wanted her students to interact with each other, outside of discussion posts and other assignments. Emma provided a "Go to Groups" activity for interacting with each other. In her Wiki introduction, Emma said, "With the birth of technology and considering the information age in which we live, the teacher is no longer the person who 'knows everything'. In the 21st Century, the teacher's role is that of a co-learner, at the same time s/he facilitates students' learning, creating opportunities for

learning and growth.” Emma wanted her students to interact with each other in order to know some issues related to technology before they asked her. Because Emma knew that some students hesitated to ask her questions, she wanted to provide comfortable environments for those students. Emma later found that her students interacted with each other very assertively. She said, “I’m glad I did this. In talking with my students via Skype and via email, many indicated that they were using these groups and appreciated having someone else to ask before asking the instructor.” Emma went on say that a lot of online classes focus on student-teacher interactions, and she wanted to be sure that this class had as much student-student interaction as possible. She was sure that the go-to-groups were one way to do this.

In addition to emphasizing students’ interactions, Emma also stressed the interactions between students and her. In the beginning of the semester, Emma mostly used email for providing information and sharing her personal life. However, she used email for interacting with students, as well as building relationships. In week 12, Emma gave some assignments to her students through email. Instead of posting their opinions on the Wiki, students had to interact with Emma by sharing their thoughts. She said that she wanted to ensure that students read the assigned article and interacted with her. She did this activity because she found that many students were not used to communicating through email. She said, “One of the things that I learned is that I have to let my students know that you need to respond to my emails. You actually need to communicate with me.” She tried to communicate with her students, but some students did not send back their responses. Despite of some negative outcomes, Emma said that the required email assignment seemed to invite students to interact with her.

Emma's Professional Learning of Knowledge and Practice

Beliefs are static and represent eternal truths that remain unchanged in a teacher's mind regardless of the situation. Knowledge is fluid and evolves as new experiences are interpreted and integrated into existing schemata. (Pajares, 1992, p. 314)

Killian (2003) suggested that teachers need three types of knowledge: knowledge about subject matter, knowledge about students' learning, and knowledge about teaching in order to teach students more effectively. In the online environment, instructors also need such knowledge, and this study shows that Emma valued and increased such knowledge through her practice. Emma had English and literacy teaching experiences, but her content knowledge did not seem to be related to her online teaching because she had to teach technology integration topics. Emma's knowledge of online teaching, in this study, seemed to be based not on her previous beliefs, but rather on her research interests and her current practices with the online course. She said that she was doing research about technology integration in K-12 settings at that time. This section explains how Emma understood and developed her knowledge of students, online teaching, content, pedagogy, and technology through her practices during this semester.

Emma's knowledge about students. As indicated earlier, Emma valued knowledge of students. Emma said that if she knew her students, such as who they were and what they were interested in learning, she could provide resources and instruction that would meet their needs and promote their learning. Through various activities, Emma came to know her students. Emma came to know her students from their feedback. Emma often conducted online surveys during the semester. In the first week, Emma conducted an online survey. She said,

I want to know my students, their backgrounds, and what they already know/do related to technology. I also wanted to know what they wanted to learn more about, so that I could

tailor some of my instruction and some of the information I provided throughout the course to meet their needs.

After finishing the online survey, Emma found that she had a diverse set of students: they lived all around the world, they had varying levels of teaching experiences, and they taught different levels of students. She also found that many of students did not know as much about different technology tools as she had expected. Because Emma understood her students' needs and their technology abilities, she was able to adjust her course. She said that she was ready for getting students' feedback and tailoring the course structure and activities. Emma said, "This (online survey) was good for me to know/realize, so that I could be sure to build in examples and tutorials when/where necessary. This survey also allowed me to get a 'sense' of each individual as well as the class as a whole before we officially started the semester."

Emma added a "Wiki Editing Information" section for students who were struggling with using a Wiki. She also provided a "Reflection on Our Last Class Session" section because Emma did not want her students to miss their learning process or be concerned about their previous topics because of the online course features, such as lack of communication. Skype one-to-one chatting and email communication, as I said in the previous section, were also used as important activities for Emma to know her students and their needs in this course.

Emma also required her students to write reflection feedback on their practices. After the Skype one-to-one chatting, Emma said that she perceived her students much better than when she communicated with them by Email. Her students' feedback on the Skype activity was very positive. From the students' feedback, Emma found that many students had never used Skype before and did not have great connectivity. Emma said,

This (Skype one-to-one chatting) will, hopefully, make this group Skype call more successful and less frustrating – they can work out any problems before they meet with their group (i.e., connectivity, audio issues, etc.). Otherwise, it's possible that some students wouldn't have used Skype before this group call and that could've been a disaster, which I'd like to avoid.

Emma understood students' technical issues and their conditions of online learning activities. With this feedback, Emma was able to tailor her next online activities, Group Skype Discussion. She asked each group leader to meet online before they implemented the Group Skype Discussion activity. Emma also got students' negative feedback on some activities. After a TPACK narrative survey, which was to ask about students' technology knowledge and use in the classroom, Emma found that her students were confused about doing the survey because they did not understand what Emma wanted from them. The title of the activity, "Survey," made them misunderstand the purpose of the activity. From students' positive and negative feedback on the survey and their reflections, Emma knew how students understood and learned technology knowledge, skills, and some theories related to technology use.

Emma's knowledge about online activities. Emma increased her knowledge about online instructional activities. She said that students' assignments and online activities made her improve her online instructions. When students implemented their assignments, Emma found not only students' understanding, but also the effectiveness of her online activities. Emma provided a "Digital Storytelling" assignment. The purpose of this assignment was for students to create their own 4-5 minute digital story. While the topic for their digital story was up to them, students needed to use part of a lesson or unit that they were teaching. After this activity, Emma said that she was able further to appreciate her students' content knowledge (i.e., radio waves,

mathematics, phases of the moon, writing, etc). She said, “The assignment makes sense that they’re going to ‘show what they know’ because, if they’re currently teaching, they are supposed to share it with their students, using the project as a ‘real’ teaching tool.” Emma understood her students’ contexts and their interests through examining the assignment.

Another example was a “Re-Purposed Lesson Plans” assignment. She provided this assignment for students to create lesson plans by using the technology they learned in this course. Emma said that the lesson plan assignment was important, especially in this class, because students could apply their learning to their classroom. She went on say that if they could not take what they were learning back into the classrooms in which they were teaching (at least for those currently teaching), this class was less useful and/or influential in their day-to-day thinking and teaching practices. Emma said that she found that many students were creative and were using many different technology tools and ideas to connect with their content knowledge. She said, “I gained an appreciation for many of my students’ content knowledge (e.g., chemistry, math, biology, etc.). It was clear, by and large, that my students’ knew their content, which made it easier for them to think about their pedagogy and the technology they wanted to use.” Emma seemed to believe that her prepared online opportunities made it possible for her students to apply their learning in their classrooms.

Emma’s knowledge about online teaching. Because Emma had one online teaching experience as an assistant teacher, and one online learning experience as a student, she knew what online learning and teaching look like in some parts. Emma said that she was able to differentiate online and face-to-face teaching. She indicated that teaching online is different from face-to-face in some ways, but it is the same in other ways. For example, both environments have students, content, and some technologies. Besides realizing her knowledge of online

teaching concepts, Emma also developed her knowledge about online teaching more specifically in three fields: content knowledge, pedagogical knowledge, and technological knowledge.

First, Emma believed that content knowledge is important for teaching an online course effectively. Whenever she teaches in face-to-face and online environments, Emma said that she questions herself, for example, “What is the purpose? What are your objectives? What do you want students to know and be able to do? What kinds of content do they need?” But Emma said that this online course was a little different because it did not define any specific content as other courses do, such as literacy, math, or science courses. It seemed to be difficult for her to organize what content knowledge she needed to prepare. She said, “It's not defined in the course description. [The course description did not say] that all students will learn about Twitter, Edmodo and Pinterest, for example, and then that would be my content. That would be the three things that this course is going to teach them about.” Emma went on say that whatever instructors provide and develop, the technology tools could be main the content of this online course. Emma seemed to emphasize course content, but she focused more on technology integration. In her syllabus, Emma made this point clearly, “The main purpose of the course is to provide students with ways of thinking about how to integrate technology into school subject matter and offering ideas, discussions, and tools for how to do it.” In order to develop the content knowledge of the course, Emma said that she found some important theories, key terms, and technology tools from interactions with her colleagues, participating in conferences, or doing self study.

Regarding content knowledge, Emma found and developed it from discussions with the previous instructor. When she was assigned to teach the online course, Emma contacted the previous instructors (Bob and Kate). Emma shared how she increased her content knowledge

about this online class. Emma said, “I walked through his syllabus and I asked him content questions and then asked him pedagogical questions about the online course.” Emma said that she was able to imagine her course when she saw Bob’s course syllabus and talked about it. Since that meeting, Emma developed her ideas and thoughts on the online course and course content. For example, Emma studied and developed TPACK and SCOT (Social Construction of Technology) frameworks and provided some activities related to the theories. Emma wanted her students to construct a conceptual framework for thinking about integrating educational technology with school subject matter. In addition, Emma supplemented the content by adding extra articles related to those theories, and providing applicable opportunities for students to talk about their experiences related to the theories.

Second, Emma said that content is important in the online environment, but understanding and implementing effective strategies for online learning are also important. For example, pedagogical knowledge, which is to organize, present, and manage online content and students’ learning, is important because online learning environments require instructors to have different knowledge than in the face-to-face environment. Emma said that how an online course is visually presented is important. Because students use only online platforms, the course should be visually appealing so that students are comfortable in accessing and following the course. Emma had to organize her course more simply and to be user-friendly. She structured her website into four parts as shown earlier in Table 1: three big menus in the left side and one menu in the middle. She clearly presented on the left side what students’ assignments were, how this class was going, and resources for this class. In the middle, Emma presented her weekly lesson clearly, by using four themes, “Week Goals, Reflections on Last Week, Week Resources and Readings, and This Week’s Assignment.” Emma said that she spent some time on this

presentation because she did not want her students to feel confused by the website structure or written introduction.

Regarding management, Emma's intention was to make online courses student-centered environments, which meant that the website was easier for students to navigate easily and participate in effectively. Emma used a Wiki instead of Angel or other learning management systems because she believed that the Wiki allowed for discussion posts, which was important, and for students to embed content on pages. She also credited the edit feature, so that students and she could make edits on pages easily, even though she said that "I like the Wiki and feel like it's easy to use but not sure if my students would agree, of course." Another important management practice Emma did was to allow her students to access the course schedule weekly. She developed this idea during this semester. Emma said that one student was concerned about online learning. The student said that she had some instructors who just throw out everything and they had to do it all. Emma said that she wanted her students to think about one issue deeply and apply it, rather than doing all things. She said,

I've decided not to post early because I don't want students getting too far ahead. And selfishly, I'm creating it week by week. For example, I had this week's lesson done last week Thursday or Friday. And I actually posted it, I just didn't send an email until Sunday morning. Otherwise it gets overwhelming and I don't want to do that to them or to myself. So I'm trying to figure out how to put the content on the Wiki and on the site, make it manageable, make the site friendly for them with lots of resources and ideas. So that nothing impedes their learning.

In the first interview, Emma said that she was trying to find out what was the best way to organize a page or organize a week's lesson. During the whole semester, Emma seemed to

change her management approaches for supporting students' learning, such as creating "Last weekly reflection," or "Students' pages for resources." Because Emma was teaching students online by herself for the first time, her pedagogical knowledge seemed to be growing during the semester.

Third, Emma increased her technological knowledge more apparently in two fields: wiki and new technology tools. Mishra & Koehler (2006) defined technology knowledge as "knowledge about standard technologies, such as books, chalk and blackboard, and more advanced technologies, such as the Internet and digital video" (p. 1027). Regarding a Wiki, Emma did not think of it as a good management system. She said, "We (doctoral students) used a Wiki in one of my doc classes and I couldn't stand it. I didn't like it as a user. I thought it was very unfriendly and clunky." Emma also had negative thoughts on Angel because it was not effective for students' interaction, which is important in the online environment. When she talked with Bob (previous instructor), Emma found that he was using a Wiki differently than she expected. She examined his Wiki course carefully and discussed with him about the use of the Wiki. Emma developed her knowledge of Wikis through her application of a wiki in this class, for example, when she used the edit function after her students gave a feedback, when she organized discussion threads for student interactions, and when she wanted to revise the course according to students' needs and her necessity.

Emma also built up her technological knowledge about new tools, as well as refining her previous knowledge. When she began to teach this course, she found that one student was struggling in using technology because the student did not have much experience with technology use. Emma said that

I was a little worried that he was going to be a little needy throughout the semester. I was thinking that I can't be tech support. I don't mind helping students but I don't know everything there is to know. Although I'm becoming more aware of the fact that I know a lot more than I give myself credit for sometimes.

In the beginning of the semester, Emma was concerned about her technological knowledge because there were many new technologies she did not teach in the classroom. Emma seemed to use some technologies she was familiar with, such as Skype, Digital Storytelling, Voice Thread, etc. For example, she liked using Skype for chatting so she used Skype chatting for getting to know students and for student discussions. She developed the idea of interaction to build a sense of community by using Skype tools. Emma got an idea about Digital Storytelling from Bob; thus she was able to examine and apply it before this class. Emma developed her professional learning of her beliefs and knowledge through her practice. She solidified her beliefs about...and built up her knowledge about online teaching. In the next section, I examine how Emma developed her professional learning, focusing on her learning approaches and strategies during the semester.

Emma developed her content and technological knowledge, and the knowledge influenced her practice. Emma did not have enough background for this online class; thus she did not know what technology and how she could teach in the online environment. Because she had studied and been interested in technology integration in K-12 settings for her research, Emma developed a wealth of knowledge about technology integration. Her technological knowledge made her feel comfortable using and trying new technology tools. For example, Emma used Skype tools for interacting with students, she structured her course by using a Wiki, and she provided some technology tools for her course, such as Glog, VoiceThread, and Screencast.

Emma's Professional Learning Processes

Emma considered herself as an adult learner who keeps ongoing learning for improving her professional abilities. She said that she expected to enhance her knowledge, especially her online pedagogical knowledge, her content knowledge, and her technological knowledge, through her teaching online. She also expected to enhance her practice by understanding students and contexts in the online environment, which was constructed by her beliefs. Emma reported that her professional learning was developed through experiential practices, social interaction, and self-reflection.

Emma reported her experiential practices. Emma valued her previous and current online learning and teaching experiences. As she said earlier, Emma's previous experiences improved her professional learning of her beliefs and knowledge while teaching the online course. Her online learner's experiences let her look at necessary online components in terms of the students' perspective, such as the lack of connection and interaction, the necessity of clear guidelines and simple course structure, and the balance of assignments and online discussions. Her online teaching experiences also helped her find what was missing when she was taking online classes, such as the lack of building relationships, the possibility of flexible course structure, and the necessity of sustaining a sense of community. Even though her previous experiences helped Emma prepare this online course, she mostly developed her professional learning from her experiential practices. Emma said that she learned by doing, such as planning and incorporating her ideas into her practices.

For example, Emma re-developed her concept of the TPACK framework from her actual practice. She devoted the second week to building a "conceptual framework for thinking about integrating educational technology with school subject matter." During teaching the TPACK

framework, Emma said that she wanted her students to connect the TPACK framework to their own practice by using personal narratives. From students' feedback, Emma found that her students "gravitated toward the TPACK framework, and they found it incredibly helpful as a way of framing their own development and growth." Like her students, Emma also solidified her concept of the TPACK framework from her experience. Emma shared her experiences of the process of learning the TPACK framework. She said that "I'm learning about Voice Thread, which is content, but I'm also learning about it as technological knowledge. And then I'm trying to think about it from a pedagogical standpoint – how do I incorporate this particular tool into the course and how do I use it to facilitate students' learning?" Emma said that her experiential teaching improved her concept of the TPACK framework, and she also said that she wanted her students to learn the concept from their experiences, like she did. She said, "I created a different framework that I'm going to use next semester because I want to see what my students say." Emma seemed to develop her professional learning continually through her experiential practices.

Emma reported social interactions. Emma valued social interactions as the most important factor for her to improve her professional learning in the face-to-face and online environments. Emma said that the concept of interaction and connection came from her personal beliefs and experiences. Her stance on interactions influenced her professional learning as well as her teaching. First, Emma liked to talk and discuss with other people. Whenever she had some questions and problems, Emma found some experts, cohorts, or professors to talk about them. When, as a teaching assistant, she taught graduate students online, she faced challenges in understanding and managing the Angel system. Emma said, "I used Angel the first time as a graduate assistant, and met with Richard (pseudonym). He helped me with the online platforms, and we made the course visually appealing." Emma said that the discussion with him improved

her understanding of online management systems. As previously discussed, when she prepared this online course, she also met a previous instructor, Bob, and discussed with him online course teaching. During her teaching the online course, Emma attended the Brownbag series at the university or technology conferences in order to get some ideas she could apply to her courses. Emma shared her experiences at the meetings:

Well, this (the meeting) is the first one I've been to and I'm one of three people who will talk about their course. I ask lots of questions. I've done that for a long time. So I will ask other teachers if they have taught in an online environment and what have they found useful. That's where I got the Skype office hours idea. Just like I do with face to face instructors – trying to learn from my peers and figure out what they have done that has been successful.

Emma liked the regular meetings because she wanted to see new and different ideas and methods. She said that she wanted to learn from other people and share her ideas to get some feedback. Emma continued on to say that “I do learn from my peers, but for me that’s a disposition that I have toward asking a lot of questions and engaging because I want to know.” She was satisfied with supportive school environments because schools have many instructors who have online teaching experiences and provide regular meetings. But she also shared some challenges about the meetings because of her busy schedule and school culture. I will talk more about this later.

Second, Emma said she valued interactions with students, such as students’ feedback. She liked to talk with her students by using email or online discussions. She wanted to know her students, their learning processes, and their challenges. That is why Emma provided online survey activity, email communication, and Skype chatting during the semester. Her basic teaching pedagogy was to work with students. During the final interview, Emma said that the

revision of course structure or assignments was not easy for her, but she had strong beliefs about constructing online courses with students. Emma said,

So in some respects, the course is open to interpretation. Obviously within the umbrella of teaching with technology. Integrating technology into teaching in K-12 environments needs to be flexible. So it's wide open, which is one of the reasons why I love it. It's not a static course. Technology is changing all the time and how teachers think about it and use it.

Emma said that she liked online feature because she could modify the content and structure of the course at anytime by cooperating with her students. Because this was her first full time teaching an online course, she had to learn about new content, new technology, and new methods continually. However, Emma seemed to like the challenges of her teaching and learning, and she wanted to develop her professional learning more assertively. She said, "I didn't have the whole course planned out, I planned as I went. So trying to figure out what they needed to know, what they had expressed interest in knowing and trying to be attentive to those needs, too." Thus, students' feedback and discussion with other colleagues helped Emma understand and find new technology tools, solve new challenges, and think of how to support her students.

Emma described her self-reflection. Self-reflection was more related to Emma's personal constructive learning, whereas interaction was related to her social constructive learning. During the first interview with Emma, she emphasized her social constructive learning through social interaction with her students, cohorts, and professors. Her written reflections showed that Emma reflected on her practices by herself. In her first interview, Emma said that she had developed her professional learning mainly through her own experiences and interactions with

cohorts and professors. However, after finishing the online course, Emma added another category to her professional learning. Emma said,

I would say my reflective practice is the most important factor for my professional learning. For me that means questioning and talking to my peers, engaging with my students, using their completed assignments to inform my instruction and my understanding of where they're at . It also forms how I plan. So I would say reflective practice, but that's not just me sitting around going, "Let me think about my teaching today." It's being conscious all the time – I'm in the grocery store thinking about things I could do – I have lots of ideas that I think about. But that comes naturally to me so it doesn't feel like some separate professional learning experience. But yeah, that is one of the ways that I learn. I think about it and I ask for others' input and I see what's out there for resources.

Emma still seemed to believe that interaction was her main strategy to develop her professional learning, but she valued interaction based on her reflective practice. Another example of her self-reflection was her experiences with a final project. She provided a "Re-purposed lesson plan" for students to take to their own classrooms and to apply their learning to their teaching and students' learning. Even though Emma talked with the previous instructor about this project, she did not seem to be sure whether this project was working or not. Emma emphasized the importance of students' assignments in order to encourage their learning and their participation during the semester. She also provided a sample/model ahead of time, including the rubric, and she tried to address all questions as they arose before the final due date. Emma said, "I don't

know that this assignment changed any of my beliefs; rather, it solidified my commitment to making students' projects and learning as applicable to their professional lives as possible."

Although some of the content in this course was theoretical, Emma seemed to be sure that the work students completed was applicable to their classrooms in which they taught. She did not generalize her belief because she only taught this course for the first time. Emma said that "I'm not sure – the face-to-face versus the online environment piece – given that my course focuses on technology integration in schools, in some respects I actually think that this course content is better in an online environment than it would be in a face to face environment because they need some time to play."

In summary, Emma believed that knowledge, belief, and practice were very much connected. She said that it was very difficult for her to think about the concepts separately. She went on say that "I can say what I know, how I teach, and how I respond and engage with students is connected to my beliefs. It's also connected to my practice, and it's also based on what I know." Emma often said that her belief, knowledge, and practice looked like cycling by giving influence to each other.

CHAPTER 5

JANE

Instructor Jane

In this chapter, I demonstrate what the professional learning of online instructors' knowledge and beliefs in OPD courses looks like and how this learning impacts their practice in teaching online professional development (OPD) courses. I will explore the following questions in relation to what I learned about one instructor, Jane: 1) What were her instructors' beliefs and knowledge about online teaching? 2) To what extent and how did she develop her professional learning as she taught an OPD course? 3) What was the relationship between her professional learning and her learning approaches? and 4) What factors promoted or hindered her professional learning? Before discussing these research questions, I explain Jane's experiences in teaching OPD courses for one semester, focusing on her unique experiences and professional learning.

Educational Background

Jane was a graduate assistant instructor in this higher educational institution for four years. Prior to that, Jane was a second grade teacher in the rural northeast for ten years, and a family teacher at a residential school for abused and neglected children in an urban area. She taught students from one extreme to other in those locations and situations. But through these various experiences, Jane said that she learned to love teaching struggling learners and embracing literacy. She enjoyed reading for fun and was a lover of children's literature, and she found herself spending all her spare change on great children's books. She was specializing in language and literacy. She said,

I love teaching! I love teaching children to read and write. It's my high in life. But I also love teaching teachers about reading and writing. When I can provide a toolbox for teachers full of wonderful instructional practices, I feel like I am again in the classroom teaching children how to read and write. It's a ripple effect-the more I teach teachers, the more they can do each and every year with their students. That makes me smile and feel a great deal of happiness.

Jane's personality and research interests influenced her beliefs, knowledge, and practice in teaching online classes as well as face-to-face classes. Another important factor for her teaching was Jane's online teaching experiences in this university. Jane did not have any training or professional development opportunities for her online teaching. She was given an online class for teaching the literacy course she was familiar with, but her limited online teaching knowledge and experiences made it difficult to prepare this online class. As a student, Jane had some experiences of using a content management system, but that was used as a complementary tool in her face-to-face class. When I observed her class this semester, Jane already had three years of online teaching experiences with the same subject matter. Even though she had difficulty in preparing her first online teaching three years ago, her online teaching experiences helped Jane prepare her online class during the semester that was the focus of this study.

Online Course Context

In this school, Jane taught the Literacy Methods courses for undergraduate students face-to-face for four years. She also taught the Accommodating Differences in Literacy Learners course for graduate students online for three years. This semester, Jane taught the latter course online. The online course is intended for Master's students who are teaching K-12 students, and it is required for them. Most of the students were currently teaching K-12 students, and their

subject matters and grade levels were various. The course website describes this course as “Developmental processes, instructional practices, and assessment principles that contribute to effective learning of reading and writing. Teaching methods for accommodating the different needs of individual literacy learners”

(<http://www.reg.msu.edu/Courses/Request.asp?SubjectCode=TE&CourseNumber=846&Source=SB&Term=1124>)

In her syllabus, Jane clearly demonstrated two big purposes for this course. “First, the student will demonstrate knowledge of: 1) the principles of instruction and remediation in reading and writing, 2) classroom assessment techniques for reading and writing, and 3) materials and adaptations (accommodations/modifications) for reading and writing instruction. Second, the student will demonstrate the ability to 1) critically evaluate materials, curricula, programs, and practices used in literacy instruction, 2) select, modify, and design literacy materials, tasks, and teaching techniques to meet the specific needs of learners from diverse cultural and linguistic backgrounds; and 3) identify and discuss advanced literacy instruction practices.”

Jane structured this course by using the Angel content management system (see Table 5-1). She had used Angel for three years, and she said that she felt more comfortable with it than before. In her learning modules, Jane put her syllabus, FQA (frequent questions and answers), projects, and each online module. Jane and her colleague made a course introduction video for her students, such as explaining the course purpose, students’ participation, and the original project. Jane also required her students to introduce themselves in order to know each other. Jane had seven online modules, and each module consisted of the purpose of each module,

introducing required texts, blog activity, Jane’s instructional presentations, and other resources and materials.

Table 5-1 Jane’s online course

	Course Info	Calendar	Learning Modules	Resources	Communicate	Report	
Home	Learning Modules						My notes
Q&A	TE 846: Welcome						
Log On	FAQ: Asking Questions and finding answers						
Chat	Introduction to yourself project Final Project: Literacy Learner Analysis Project Examples of Literacy Learner Analysis Projects Final Project Update 1 Final Project Update 2 Final Project Update 3 Final Project/Report: Literacy Learner Analysis Project						
Modules	Module 1: Policy & Standards Shaping Literacy Instruction Module 2: Using Assessment to Inform Literacy Instruction Module 3: Adapting & Modifying for Struggling Literacy Learners Module 4: Motivating & Engaging Diverse Literacy Learners Module 5: Comprehension Instruction & Assessment Module 6: Vocabulary Instruction & Assessment Module 7: Word Recognition Instruction & Assessment						
	Extra Resources A drop-box to share all things literacy						

Online Course Preparation

Jane had a lot of face-to-face teaching experiences with the subject matter when she taught this course in the online environment. She shared some experiences with her face-to-face teaching. In addition to her teaching experiences in K-12 settings, her learning experiences in higher education helped her prepare the course in higher education, such as taking some literacy courses in this university. She said that she was able to look at how professors organize their courses, the speed they go through the content, what activities they want to do, etc. She recalled that those experiences helped her think about developing courses in different ways. She continued to say that

When I started teaching face-to-face courses, and was given the opportunity to observe or shadow an instructor in the classroom, I had the chance to sit down with other instructors and talk about the course. So when you stepped into the classroom you felt confident that you knew what was happening.

However, Jane said that online teaching was quite different. Jane shared her challenging experiences from when she began teaching an online class for the first time. Jane did not have a lot of information to the point where she felt ownership. The online format was not familiar to her, and she did not know how to teach online, what technology she needed to learn and use, and how she should organize the course. Even though preparing the online course was a challenge to her, Jane said that her plentiful literacy teaching experiences and content knowledge helped her prepare for her first online teaching. For example, she mentioned that her course content knowledge was helpful for explaining concepts to students and for extending conversation in a meaningful way for students, even in the online environment.

Jane's three years of online teaching experiences let her approach the current online class differently compared to Emma, who relied on her limited online learning and teaching experiences. First, this year before she began the new semester, she communicated with her colleagues who were teaching the same subject. Luckily, Jane had some colleagues with whom she was able to discuss the course. Jane and her colleagues reflected on their previous teaching, and they revised some content, projects, and online activities, which will be discussed later in this chapter. This cooperation helped Jane prepare the online class more effectively. Second, from her own reflections on her online teaching experiences, Jane planned her course differently. She had tried various methods to encourage meaningful online discussion, but she said that she was not satisfied with previous online discussions because most of the online written discussion seemed not to be authentic. This year, she would use the new methods which she learned in the Brownbag series of meetings where ideas were shared among online course instructors the previous year. In that seminar, Jane said that she learned how other instructors used synchronous chats in the online environment. The starting point for preparing and planning the online course was different than that of Emma. Jane already knew the content, challenges, and teaching process clearly. Based on her experiences, Jane prepared this online class even though she later found that online teaching did not always go as she expected.

Jane's Professional Learning

Professional learning is refining your practice as an educator through opportunities to talk to other people, other teacher educators. Informally planning with them, talking about course development, reading literature that's significant to your field. I think it's just you taking the time to learn and be better and to refine your practice. (Jane, in the second interview)

Jane said that professional learning includes talking to peers, actually finding out what is happening in schools, and reading the research and connecting all those together. Jane seemed to focus on refining her professional learning because she already had three years of teaching this online class. Therefore, the purpose of this section is to understand how Jane developed or changed her professional learning of her beliefs and knowledge through her practice.

Jane's Beliefs about Online Teaching

Some researchers have shown how teachers' beliefs influence their practices (Belbase, 2012; Pajares, 1992), and they have also examined how their practices solidified or changed teachers' belief and knowledge (Fishman et al., 2003; Wood & Bennett, 2000). Some researchers have emphasized the importance using reflective practice (Wood & Bennett, 2000). Wood and Bennett (2000) examined teachers in order to recognize how the teachers changed their thoughts and activities based on their practice. They showed that teachers' practices and experiences helped them develop new knowledge and theories. Similarly, the results of this study show that Jane had beliefs about online teaching, and her beliefs influenced her online teaching. Jane's beliefs about teaching an online course were presented in three ways: valuing discussions, connections, and clear communication (Emma: valuing relationships, interactions, and connections).

First, Jane said she valued discussions between instructor and students, and between students and students, in the online environment, as well as in face-to-face classes. Jane had a belief that discussions with each other can improve students' learning. However, she said that the online environment has limitations for interactive discussions because the environment does not provide face-to-face interactive opportunities. Rather the online environment stresses individuals' self-learning. She said, "I think the disadvantage really is that everything is done and

presented and then they [students] do all the learning themselves.” Because Jane believed that discussion is the means of sharing ideas and learning from each other, Jane often emphasized the importance of online discussion during the semester. In the first interview, Jane not only provided many opportunities for students this semester, but also played some roles in the discussions. Jane valued not only students’ roles, but also instructors’ roles in the online environment, such as facilitating students’ participation. She said that this class always had discussions for each module, and her role was to sustain the interactive discussions among students.

Second, Jane said she valued that students need to connect their learning to the contexts in which they teach. Emma and Jane both emphasized connections in the online environment, but they had different approaches to the role of connections in online environments. Jane emphasized the connection between students and their resources and classrooms, whereas Emma stressed the mutual connection between instructors and students. Jane also mentioned the importance of mutual connection, such as developing a sense of community, but she indicated more the importance of connecting students and their resources. She said that this course is required for Masters’ students, and they already knew what they would learn from this course. Thus, she thought that her students were interested in knowing how to teach literacy skills, where they can find resources, and how other teachers are teaching. Therefore, Jane seemed to value her roles in connecting students’ needs to multiple resources. Jane said,

It's a lot of content for the teachers to learn and understand, and some of them have no background in literacy. Not that I want to teach them to be literacy instructors, but I want to give them the information so they can take it and apply it in their classroom in whatever way it fits and they can also see where it fits.

Third, Jane valued that instructors need to communicate with students clearly for students' learning in the online environment. Jane had taught the Literacy Methods course face-to-face, which was similar to this online class. When Jane recalled her undergraduate teaching, she felt some limitations in teaching online. In teaching undergraduate students in face-to-face classes, it was easy for her to catch what students did not know and what students needed. She said, "I can see facial expressions and the way you talk about it face-to-face. So in the moment I can catch if you didn't understand that, and I can clarify." But in the online environment, Jane said that she did not know whether students understood or not until after her students had posted. Jane said that she was struggling with catching students' comprehension of online teaching. She also said that some students posted and responded to other people with their misconceptions. Jane said that clear communication can correct students' misunderstanding and their mistakes. Jane said that the lack of social interaction can cause miscommunication between instructors and students in the online environment. She said that "It is very hard to teach literacy fully online because a lot of literacy learning is social. When you don't have that social component, sometimes it's hard to connect all the pieces together." Her previous challenges of communication with her students made Jane adapt thoughtfully her practice this semester, a topic I will discuss later in this chapter.

Jane's Professional Learning of Beliefs and Practice

Practice is grounded in interpretations of particular situations as a whole and cannot be improved without improving these interpretations. (Elliott, 1993, p. 18)

Jane created discussion opportunities. Jane created interactive discussion opportunities by using technology tools. Jane believed that online discussion is important for students' learning; thus she provided many discussion opportunities for students by using Angel discussion

boards. From her previous experiences, she said that the online discussions were not effective. She said, "It's kind of that standard discussion post where I give them a prompt, they answer, and then they respond to each other. That's the one that I have the hardest time with because it seems to be very artificial." After teaching the online course for three years, Jane said that she tried to use different strategies this year, such as providing interactive discussion opportunities by using technology tools. She clearly explained the process of the interactive discussions: (1) Jane offers a prompt that is related to the course readings; (2) students are allowed to delve deeply into application or discussion of the ideas; and (3) students must make efforts to integrate important points from the required readings in their posts or chat conversations. This interactive discussion is different from the previous one in that students had more flexibility of choosing discussion tools and discussion time. For example, with the new approach, for small group live chats, students could choose social media, such as live chat tools, and time that was workable for everyone in the group. Students needed to retain a written record of conversations or audio recording/screencast of live chats. Even though students could not meet face-to-face, Jane wanted her students to feel and discuss as if they were in the same classroom.

Second, Jane provided common discussion topics that all students could participate in. For making interactive discussion happen, Jane believed that students need to have common issues and their own problems in a similar context. After finishing an introductory activity in the first week, Jane found that most of her students were teaching K-12 students, and their grade levels and subject matters were various. Jane said that one of the difficult aspects for her teaching this online class was grouping and organizing students because there were a variety of students' experiences and expectations. Therefore, Jane provided some activities to find common and interesting discussion topics for all students; for example, discussing how policy

and standards shaped their literacy instruction in the first week, adapting and modifying struggling literacy learners in week 3, and motivating and engaging diverse literacy learners in week 4. Even though students had different teaching contexts (different grade level and subject matters), they all had similar challenges with the above issues. Rather than discussing their ideas and opinions on the books and articles in the syllabus, students discussed their current challenges in classrooms by using live chat discussions. Jane was sure that her students really enjoyed the discussions because they were able to discuss with other students who may or may not be experiencing the same things, and to get ideas from these discussions.

Third, Jane said she created supportive discussion environments. Jane said that it was difficult for her to develop a community where students could communicate and keep that line of communication open. Jane believed that instructors need to structure supportive online discussion environments for students to discuss their challenging issues or some sensitive problems, such as social justice. Jane wanted her students to discuss their issues more seriously, not just respond to her questions artificially. She said, “So going beyond requirements and getting them to actually engage in conversation online is necessary.” In order to construct supportive discussion environments, Jane showed her presence through regular email and interactive online modules. She said that regular email was used as a tool to fill in the blanks for students, to let them know what they were doing in class, and to help her track their learning progress. Jane sent individual emails because she wanted to use email for communicating with students as well as connecting with them personally.

Another idea Jane had to make supportive online environments was to show her presence to students. She said,

Online presence is —sort of my personality or teaching style coming out in the course for the students to see. For this course, I feel like I am still developing my online presence. My students know I'm visible and active in the course...I believe it (online presence) is getting better. The incorporation of voice-overs and screencasts are starting to show my online presence more. I believe it is a work in progress that will continue to show I am with them online.

Jane believed that students need to feel that their instructors were helping their learning. Jane believed that instructors need to give ongoing and prompt feedback to students in order to make them feel supportive environments.

Another important thing in order to sustain supportive online discussion environment was to keep encouraging students, such as by using email. Jane said that “As far as encouraging participation, I continually do that in the weekly emails and at times on a one-on-one basis with a student who is having trouble in that area. I also tend to pool their responses and use them in my emails and comments to them about their posts.” By using regular email, Jane not only encouraged students' participation, but also provided the extra connection for them to feel a sense of community, which was a factor of meaningful participation.

Jane provided connection opportunities for her students. Jane believed that students could learn effectively when they connected their learning to their classrooms. First, Jane provided various activities that students designed and applied a lesson plan in their classrooms. Jane said that her intention for this activity was to shift students' viewpoints of teaching, from talking about their students' personal lives and educational needs to digging deeper into what the students really needed to learn through this activity. She also expected that her students would find what they missed as they taught students by connecting their learning to their classroom

teaching. Jane said that “This [Teach the lesson to your student activity] is the application aspect of their learning. The students have read about different ways to assess and teach; now they are applying it directly to a specific student. They will learn by doing.”

Jane had a strong belief about not only herself, but also about students who learn by applying their learning to classrooms. She said that her students were concerned about this assignment at the beginning of the semester. However, while learning and discussing the issues related to the “Teach the Lesson” assignment, students came to have confidence in the assignment. She said, “By the time they teach the lessons to their students, my students are gaining confidence in the topic and their own abilities to teach it.” Jane reported that her students opened their eyes to teach literacy in their classrooms by applying their learning to their contexts, and sharing their ideas with others.

Second, Jane created discussion opportunities for students to connect their experiences to other students. Jane designed this online class with three big forms: studying online modules, applying their learning to the classroom, and sharing and discussing their learning by using online discussion boards or live chat. In week 3, Jane gave an assignment, “Literacy Learner Analysis Planning.” The assignment was that students would select students who had difficulty in learning literacy skills, and they would choose pre/post assessments to use with their students. For this assignment, Jane provided some articles related to literacy analysis topics. During this time, Jane also made an online module that explained how teachers can notice some students who are struggling with literacy issues, and how to define those students.

After applying their learning to their classrooms, students shared their experiences by using live chat discussion in module four. Jane was sure that her students enjoyed the chatting and learned many things, because the students’ feedback showed their applications related to the

topic. She said, “My students tended to have deeper understanding of the literacy content, and were able to incorporate it into their practice.” She continued on to say that “I find it very beneficial for the students and also for myself in what the students are learning about the content. It was a great way to see how the students understood the readings and their deeper understanding of their chats.” Jane believed that the application opportunities helped her students understand their learning and improve their practice. Her students also understood about literacy analysis planning by applying their learning to their classrooms.

Jane adapted her practice. In the early studies of literacy, many researchers have argued the necessity of thoughtful adaptive teaching because it can help teachers change their professional thoughts and practices for meeting students’ needs or instructional contexts (Duffy, Webb, Kear, Leiphart, Parsons, & Miller, 2006). These researchers believe that thoughtful adaptations are related to instructors’ practices, which are presented in the assignments or activities they offer. Unlike Emma and Dan, Jane had three years of online teaching experiences, and had evolved her interpretations of the experiences for her next online teaching. Jane said, “I can safely say that from the start of teaching this class three years ago, I have changed a lot in the way I look at the course, in the importance of it, in my practices in doing it.”

First, regarding online discussion, Jane adapted thoughtfully different approaches she had not done before. Instead of having her students do the traditional post and reply, Jane provided an opportunity for students to chat synchronously with each other to share across experiences. She said, “The purpose of the live discussion forum is to generate thoughtful and critical conversations on various issues surrounding accommodating differences in literacy learners, much like what would happen if we were meeting in person or on a regular basis.” Jane also adapted a rubric for live discussion for the first time. Because online discussion and live chat

were the major interactive parts of the course, Jane weighed students' participation the most. In the first week, Jane clearly indicated the rubric for written and live discussion in the discussion guideline paper. She said, "It might also be helpful to remind them of the discussion guideline paper on our site so they are clear about expectations." Jane detailed the rubric for written discussion activities as the following.

Rubric for written discussion interaction activities:

- 1) 4 points: Initial posts thoroughly address the question; initial post and/or required number of follow-up posts demonstrate THOUGHTFUL/DYNAMIC integration and synthesis of related course material with teaching experiences.
- 2) 3 points: Initial posts thoroughly address the question; initial post and/or required number of follow-up posts demonstrate FAIR integration and synthesis of related course material with teaching experiences.
- 3) 2 points: Initial posts thoroughly address the question; initial post and/or required number of follow-up posts demonstrate LIMITED integration and synthesis of some course material with teaching experiences.
- 4) 1 point: Initial posts barely address the question; initial post and/or required number of follow-up posts demonstrate SHALLOW integration and synthesis in that they focus mostly on opinion and teaching experience but LITTLE or NO course material.
- 5) 0 points: Didn't participate.

Second, Jane clarified the purpose of each activity. She knew the importance of clarification for activities, assignments, and other guidelines. Unlike her previous teaching, Jane added a FAQs (Frequently Asked Questions) section. She constructed the FAQs section from students' feedback and their evaluation. She mentioned the purpose of the FAQs:

While I have done my best to clearly communicate course expectations, there are invariably things that are not as clear as they need to be, and posting these clarifications here saves all of us time -- anyone who has the same question will encounter the answer long before they have to move to the e-mail or phone stage of the course questions procedure. At other times, these FAQs will be insights or scaffolds that I discovered during my previous attempts to teach this course.

Jane believed that the FAQ section would solve students' questions, and also emphasize the key issues in the online class. Jane did not mention the effect of the rubric for written and live online discussions, but she said that she was able to explain the assignments and grading in a way that anyone can do it through the explanation that she gave. Jane went on say, "So being able to articulate your ideas clearly in writing, a step by step procedural way so that a student who has no computer skills could follow what you want them to do in class." Jane adapted thoughtfully written guidelines for interactive discussions, and she also kept informing them of what they needed to do by regular email.

Third, Jane clearly indicated that her students needed to construct literacy content knowledge through their learning. Because of the course's features, such as the structure and the content already in place, Jane had limitations in organizing them. Another limitation she had was that her students' understanding of literacy was diverse. She said that teaching this class was very difficult because she had such diversity in her learner's understanding of what literacy is. She went on say, "You know? The art teacher, who understands that literacy is important but doesn't see how it is important to her art class. It is really hard to help them understand [the importance of literacy teaching]." Thus, Jane had to scaffold her students to construct their own

rationale and abilities for teaching literacy in their classrooms. She clearly showed the purpose of the course in the syllabus: constructing their awareness of 1) cultural and linguistic differences, 2) individual motivation differences, 3) neuropsychological differences, 4) instructional arrangements to accommodate learning differences, and 5) required components of effective literacy instruction. During her teaching this course for three years, in order to scaffold students' construction of content knowledge, Jane solidified her roles in this class, rather than changing her roles extremely.

Jane said that "It [My experiences of this course] just made me realize that, while our courses are completely different in content, they are somewhat related. My focus of my course is to engage my students in literacy practices." Each module had different activities for constructing students' understanding of and application of the above five purposes. Through scaffolding students to construct these concepts, Jane wanted her students to feel more comfortable and confident in teaching literacy in their classes. She said, from students' feedback, that her students realized that literacy is not a traditional skill for only reading and writing. She was sure that her scaffolding of students in understanding literacy influenced students' positive feedback.

Fourth, Jane kept emphasizing the importance of discussion in order to make the purpose of the discussion clear at the beginning of the semester. Jane said, "I explained why it's important that we have this community of conversation, this culture of talk online, and that we continue to push back on each other's ideas because that's where the real learning comes in." Jane more assertively asked her students to participate in the online discussion, instead of just asking them to post their ideas. In her syllabus, Jane clearly mentioned the criteria of their participation: one was for written discussion participation and the other one was for synchronous discussion

participation. For example, as she did with written discussions, Jane set up the rubric for live discussion in five scales (4 points: Actively participated without taking over; demonstrated thoughtful/dynamic integration of course readings with conversation; 3 points: Actively participated without taking over; demonstrated limited or fair integration of course readings with conversation; 2 points: Actively participated without taking over; demonstrated little or no integration or demonstrated shallow integration course readings with conversation; 1 point: Barely participated or overbearingly participated; and 0 points: Didn't participate). Jane said that grading online takes more time, but evaluating participation is important and a good motivator for students to participate in the online discussions.

Jane's Professional Learning of Knowledge and Practice

Teacher knowledge is "the sum total of the teacher's experience." (Connelly, Clandinin, & He, 1997, p. 667)

Jane's knowledge in this study was not based on her beliefs, but rather her practices and experiences as she taught online classes. Jane reported that she developed her knowledge of students, content, pedagogy, and technology. This section explains how Jane understood and developed her knowledge of students, online teaching, content, pedagogy, and technology through her practices during this semester.

Jane's knowledge about students. Because Jane had taught the same online course for three years, she said she knew the purpose of the course and the students who were taking this course. According to program information, "This section is for Graduate Degree Candidates only. Course meets the [State] Department of Education's requirement for completing an additional reading instruction course in order to qualify for the [State] Professional Teaching Certificate." This means that the course is required for students who want to get the Professional Certificate.

Most of the students were currently teaching K-12 students or had access to them. From her previous experiences, Jane knew that her students taught at various grade levels, and taught various subject matters. The ways Jane came to know and understand her students were by examining an introduction activity, online discussions, and assignments.

First, Jane used the introduction activity for understanding who her students were. She put some questions to the activity for providing a basic frame: a) a brief introduction of yourself that is not academically focused, b) a brief synopsis of your academic and recent work/teaching history, c) your experience with struggling readers and writers, d) literacy related challenges you face in your teaching situation, and e) what you hope to learn in this class. Jane wanted her students to talk about their concerns and interests related to this course as well as their normal lives. Jane found that her students had various educational backgrounds in various subjects and grade levels. However, Jane felt that her students did not fully share their experiences in the introduction activity. It seemed to me that her students did not build rapport yet in order to share their personal and professional experiences. Jane said that she would like to improve this activity in the next teaching, such as using technology or encouraging their participations.

Second, because she valued discussion activity in the literacy class, Jane seemed to find students' understandings and their difficulties from observing their discussions. Jane provided a blog discussion activity in the first week, and she let her students discuss how they connected policies and standards to their classroom and teaching. Jane said, "It was the first opportunity for the students to write and respond to their peers." After observing their discussions, Jane found that her students had a lot of different experiences with literacy in their classrooms as well as in their attitudes toward literacy. In order to promote a chat discussion activity, Jane attempted to build a learning community through students' interactions with their peers from different schools

and contexts. Jane said that her students felt more comfortable with that discussion and chat because she found that the students shared their experiences more openly.

Third, the most valuable activity for knowing students' understanding of literacy was to examine their assignments. Jane said that her follow-up feedback also helped her understand students' learning process, such as email communication. Jane provided a blog activity for every module. According to each module, students were required to study online modules, read required texts, and respond with their opinions in the blog section. In module 5, Jane provided a blog activity, which was a way of getting at the students' current comprehension practices in their classrooms, by having them think about what they did with a specific text and why, then how the readings in the module helped them refine their thinking and practice. After observing their posts, Jane said that she knew her students' teaching practice and the impact of comprehension on their students' learning. She said, "I am learning a great deal about my students' knowledge of the literacy content." Jane recalled her experiences:

In the beginning of the semester, I found that my students had limited knowledge of comprehension. But through the readings and their reflection, they learned a lot about comprehension instruction. It also helped me understand a bit more about comprehension instruction across all grades and content. It appears that elementary teachers have more confidence in teaching comprehension, and teachers of other contents (especially at the secondary level) don't have a lot of confidence teaching comprehension strategies to their students or feel that it applies to their teaching.

If blog activities were used to know students' learning process in formative ways, a final project was used to know their summative knowledge of literacy. From her previous experiences, Jane said that "I found the students waited until there was no time to finish the final project. Their

work and learning suffered because of that. Therefore, the updates were implemented to help students structure their assignment and manage the timing of it.” This semester, Jane asked her students to keep updating their final projects three times, from a draft to an updated paper, and then a final outcome. Through their update for the final project, Jane knew their progress on the final project as well as their understanding of literacy in this course.

Jane’s knowledge about online teaching. Jane described her knowledge of online teaching in this course as developed in three fields: content knowledge, pedagogical knowledge, and technological knowledge. Jane developed this knowledge from her previous teaching experiences, and she evolved her knowledge through this semester. First, Jane believed that content knowledge was most important for instructors to teach in this online class because they could explain the concepts to students, and extend the conversation in a meaningful way for them, or clear up discrepancies for them. Jane said, “I think the instructors who teach this course who don’t have a strong foundational knowledge of literacy and literacy development have a hard time teaching this course.” Jane’s content knowledge of literacy was constructed before teaching this class in three ways. First, Jane had more than ten years of teaching experiences with literacy in K-12 settings. She also had various literacy teaching experiences at the senior level and the internship level in this university, by using online and face-to-face formats. She said that such experiences solidified her content knowledge. Another important factor for improving her content knowledge was taking literacy courses in higher education. When she took such courses, she was able to prepare for her future teaching. In this online class, Jane said that she was not sure that her content knowledge was improved. In the final interview at the end of the semester, Jane said, “I wouldn’t say my content knowledge of literacy improved this semester.” However,

through reading books and articles related to literacy, Jane said that she developed, in some sense, her content knowledge this semester.

Second, Jane said that she improved her management skills, which she used to balance the amount of assignments and activities according to students' understanding. She said, "I think my content knowledge of course organization was improved. It's not really pedagogy, it's not really technology. It is the kind of knowledge about how to organize the content with my content knowledge." Jane said that she developed how to explain literacy content in a way that anyone could do it through the explanation that she gave in online environments. She believed that instructors should be able to articulate their ideas clearly in writing, in a step by step procedural way so that a student who had no computer skills could follow what instructors wanted them to do in class. Compared to her previous course, Jane designed many activities and changed online discussion more variously. Some examples Jane created in this semester were as follows.

- 1) Operational Features of Angel: explain how to use Angel
- 2) FAQ: asking questions and finding answers
- 3) Introduction to Yourself: provide technology sources
- 4) Final Projects Process: explain and guide how to develop the project
- 5) Online Modules (Screenshot)
- 6) A Dropbox to Share All Things Literacy: post links and articles that students want to share

Third, Jane said that she developed her technology skills and knowledge for this online teaching. She said that understanding Angel and what it offered her in her course development helped her with the things that she could do with it. She went on say, "If you don't use Angel, you should know how to deal with a Wiki or a course website type of thing." She believed that having the

knowledge of various technologies was important because she could use them for her students. Jane shared her experiences with using content management systems. She said that instructors need to learn about their management programs, such as Angel or Blackboard. She went on say, “[learning management programs] was part of my biggest struggle to begin with. I just don’t know all the tricks to Angel.” However, with several experiences of using Angel, Jane said that she felt comfortable with using the management program. Jane continued on to say that she incorporated technology into the course in different ways.

Jane’s Professional Learning Processes

Jane thought of herself as an adult learner. She said that instructors all have their core beliefs and practices of what they do, but they cannot always stay consistent with that. Therefore, instructors need to learn, just as they expect their students to learn. Jane developed her professional learning through social interactions and self-reflections.

Jane described social interactions. Jane valued social interactions for improving her professional learning. Jane said, “I think that [social interaction] is probably where most of my professional learning has come through.” This study shows Jane’s two ways of social interaction: instructor meetings and students’ feedback. First, she said that sitting down and talking to others who had teaching experiences with the same course was very important for developing her professional learning in the beginning. Through these experiences, Jane said that she thought about her practice, and what she needed to change, and where she was going to go from there. She went on say that “So just having that opportunity to talk to them and thinking about, like I said, the students' responses and feedback on what they liked and what they didn't like and why. That's always very helpful for my professional learning because then I can think, ‘Why didn't they like that? What do I need to do?’”

This semester, Jane participated in a couple of brownbag meetings to learn about other instructors' thoughts and their experiences online. When Jane looked at what other instructors were doing and the responses that they were getting from their students, this made her reflect on what she can do. She also presented her course organization and the things her students did. Through these experiences, Jane said, "I sit back and reflect on the overall effectiveness of the course, and where I wanted it to go and what I wanted the students to get from it." She went on say that the meeting helped her much to broaden her views on her teaching. For example, Jane had an opportunity to listen to how Emma engaged her students with technology. Jane not only thought she developed new technology and its use, but also reflected on the purpose of her course. Jane said,

It [The Brownbag discussion] just made me realize that, while our courses are completely different in content, they are somewhat related. My focus of my course is to engage my students in literacy practices. How was I doing that and was it effective? It made me revamp some of the blog prompts and it also made me think about next semester and how do I want to convey that information to my students and get them to be active consumers of it. I think when the prompts and things were changed to focus more on their teaching and their learning, in comparison to that, there was better understanding from the students. Therefore, she said that the Brownbag meetings were very informative and helpful in improving her teaching of this course. In addition, Jane said that she developed many parts of her activities from her students' feedback and discussions with them. For example, regarding a final project, Emma interacted with students and developed the process of the project. Because many students in her previous online class were struggling with finishing by the due date, Jane this semester checked continually on her students' progress in their project and helped them keep working on

the project. She said that if she taught this course again, she would continue to use the updates because it helped her know who was struggling and needed extra support. Jane also communicated with her students by using email in order to learn their needs and difficulties.

Jane described her self-reflection. Jane developed her professional learning through her reflections on her practice. Even though she revised many activities based on her previous online teaching experiences, Jane kept reflecting on her revised practice for her next teaching. Jane revised her practices differently this semester in three ways: the introduction activity, online discussion, and the final project. After finishing those activities, Jane shared her reflection experiences in her written reflective journals. Every semester, Jane said she had an introduction activity before the semester began, in order for students to know each other. From her previous experiences, Jane found that some students liked to use technology for introducing themselves. Jane said, “When they're introducing themselves to the class they have a specific set of things they have to talk about, but it's very open and left to them to decide how they want to introduce themselves.” Jane discussed with other instructors and gave students opportunities to present themselves with whatever technologies they wanted to use. Jane thought that it was not necessary to give direct instruction on certain technologies that they could use. But later she found what some teachers did not know how to use and where to find technology tools. In order to help students, last semester she provided her own example.

When she provided her example as the first thing that they saw, she found that they all gravitated towards that. Even though the activity was not closely related to the literacy course, Jane wanted them to be creative, as teachers expect their students to be creative. This semester, Jane modified the activity again by mixing in her previous experiences. She gave students the options they could choose, and she did not provide a specific example to start with. Instead, she

gave them some resources they could use because she thought that her previous examples narrowed the students' creativity too much. After this activity, Jane reflected, "The introduction activity was improved. I'd love to say it was all me. I think you could see the personalities of the students much stronger this semester because of the modified form." Jane seemed to believe that her various teaching experiences improved her practice and her students' creativity.

In summary, Jane believed that knowledge, belief, and practice are all intertwined. It seems to me that they all influenced her professional learning interchangeably. Jane said that she had a belief about online teaching, and the belief influenced her practice. She also said that her pedagogical knowledge, content knowledge, and technology knowledge (course management and technology skills) also influenced her practice. She went on say that her practice solidified her beliefs, too. Jane said, "So I think it really is this continuous intertwining. One thing impacts another, which then goes back to impact something new. I don't think you can isolate them. If I had one set of beliefs that coincided with my practice, then I really don't have that set of beliefs." Jane' professional learning of belief, knowledge, and practice was processed a little different compared to that of Emma. Because Jane had many online teaching experiences, her reflective practice more influenced her online teaching, and her professional learning of belief and knowledge.

CHAPTER 6

DAN

Instructor Dan

This chapter will follow a similar structure as the previous ones. I explore the following questions in relation to what I learned about one instructor, Dan: 1) What were his instructors' beliefs and knowledge about online teaching? 2) To what extent and how did he develop his professional learning as he taught an OPD course? 3) What was the relationship between his professional learning and his learning approaches? and 4) What factors promoted or hindered his professional learning? Before discussing these research questions, I explain Dan's experience in teaching OPD courses for one semester, focusing on his unique experiences and professional learning processes.

Educational Background

Dan had been a graduate assistant instructor in the College of Education at a Midwestern university for four years. Before Dan came to this university, he was a public school teacher for about ten years. He taught middle school French in two different districts. Besides teaching foreign language, Dan also had a lot of experience with learning languages, such as French, Italian, and Portuguese. He said, "I feel like I have those experiences of being a second language learner myself that I can draw from as well." Because of these teaching and learning experiences, Dan knew very well how foreign language learners feel about and learn English or other languages. Dan said that "I've been there [learning foreign language] and I know how that feels. I know how it feels to just be exhausted at the end of the day because you've been thinking in another language and you're frustrated because you can't express yourself the way you'd like to."

Dan described himself as an outgoing person who likes to support other people, learn language, and meet and discuss with people.

At the higher education level, Dan had various teaching and field supervising experiences. He taught the World Language Methods course face-to-face for two years; he then taught one online class for one year, which dealt with English as Second Language (ESL) issues. He also taught the Field Experience online course for one semester for students who wanted to learn how to work with ESL students. During the semester of my study, Dan had to be a field supervisor as well as teach online classes. Dan said that he was too busy that semester because he had to teach classes face-to-face and online, do field instructor jobs, and deal with personal research and assignments. Unlike the other two instructors, Dan said in his first interview that he had much pressure on managing his time in the beginning.

Dan did not have any training for his online teaching, but he did have some experiences in using Angel or Wiki when he took doctoral classes. He had never taught online classes before he taught the class the previous year.

Online Course Context

Dan's K-12 educational background was related to ESL/FL learners. In the first interview, Dan seemed to be confident in his teaching because he had many experiences with not only teaching ESL/FL learners, but also studying foreign languages as a learner. When I observed his class, Dan was supposed to teach "Reflection and Inquiry into Teaching Practice." He already taught the same online course the previous year. Here is the purpose of the course: "Classroom management for the teaching of English as a second language and foreign language in K-12 settings will be examined. Lesson planning and materials development, adapting authentic materials, and microteaching will be focused"

(<http://www.reg.msu.edu/Courses/Request.asp?SubjectCode=TE&CourseNumber=892&Source=SB&Term=1124>). According to program information, “This section is for Graduate Degree Candidates only. The online course (Reflection and Inquiry into Teaching Practice) was primarily focused on Master's students who are teaching or want to teach World Languages and ESL. ” The course is required for students who want to teach ELLs.

Because this course aims to support K-12 teachers who have or teach ELLs in their classrooms, Dan in his syllabus clearly mentioned his expectations. For example, students needed to discuss classroom management about ELLs, they needed to create classroom materials and lesson plans in order to promote ELLs’ learning and their participation, they needed to utilize technology to assist their teaching, and they needed to know how to create a safe and caring classroom environment. Dan said that most of the students were currently teaching K-12 students or had access to them. Regarding the course process, Dan explained, “Since it's about people that want to teach English as a second language, I had one book that was about working with ESL students that they read and posted on.”

With his basic expectation of students’ discussion and activities, Dan structured this course by using the Angel content management system (see Table 6-1). In his learning modules, Dan organized his syllabus, materials, project samples, and online discussion menu (book reviews). During his pre- and post interview, Dan often said that he did not want his students to feel burdened by their online structure and assignments. He seemed to want to make his use of Angel be simple. It was easy for students to know what they should do on his Angel site.

Dan’ main activities consisted of book and article discussions (organized by week). He said that the course was split into two teams. One team did a post one week and the other team responded. Then they did one book on classroom management that is fairly popular. His

students had to select one book and do a short review of it. Then they had to do a unit plan for their final project, including a classroom management plan, and they had to show evidence of working with English language learners.

Table 6-1 Dan's online course structure

	Course Info	Lessons	
Home	Syllabus first draft		My notes
Q&A			
Log On			
Week	Week of September 10 Week of September 17 Week of September 24 Week of October 1 Week of October 08 Week of October 15 Week of October 22		
Resources	Unit and Classroom Management Plans Book Reviews Final Projects		

The students had to include 12 to 14 different resources which they collected from other sources. Dan's online teaching preparation began with his own learning experiences as a language learner, and with plentiful content knowledge with foreign languages, whereas Emma's online teaching preparation began with her beliefs about teaching, and Jane began with her online teaching experiences and practices. I will explain how Dan thought his previous

knowledge and his practices influenced his preparation of his online course, his current teaching practices, and his professional learning.

Online Course Preparation

Before he taught the online class, Dan had many face-to-face teaching experiences in K-12 and higher education environments, but he felt that teaching online was a little different. He said that online environments require instructors to have different knowledge and skills, such as how to manage student work, design curriculum, and respond to students' needs online. Dan also felt that he did not have enough opportunities to learn about teaching online classes in higher education. Dan said that when he was teaching K-12 in public schools, he always had professional development as part of supporting his teaching:

We had, for example, professional development about reading and the content areas or something like that. In the university, it's much more incumbent on you to do it on your own. I think that there are committees and stuff you can participate in but most of those kinds of things, you have to do on your own. Through your own reading for your own stuff, for your classes, meeting up with people to get ideas, I think.

Even though he had some experiences in teaching and learning foreign language (FL), he was struggling with preparing and teaching an online class for the first time. Dan found that he was not the first instructor who taught the online class, so he was able to find some previous instructors and to follow their prior syllabi by structuring the course along the lines of another online course he had taught before. He said, "Because I haven't really had any training on teaching online courses, so I kind of followed a template of a course that had been taught several times online." He went on say that the College of Education likes to have some kind of consistency so that they can make sure the students get adequate preparation through a patterned

format. Dan's online teaching seemed to follow the previous model because of the influence of Dan's first online teaching.

Dan's one year of online teaching experience and his teaching experiences with FL learners let him approach the current online class a little differently compared to the two other instructors. First, Dan seemed to have confidence about his content knowledge and his experiences in ESL/FL teaching and learning. Dan often talked about his strengths and about his ESL/FL background during his interviews. He knew what his students wanted to know and what they needed to teach ESL/FL learners. His content and context knowledge seemed to help Dan organize the online course structure more simply, such as focusing on discussion for sharing their experiences and needs. Second, Dan believed that previous instructors already knew what was important and what they wanted to cover from their experiences. Thus, Dan made a decision to follow their syllabi and online structure, which were structured simply. Because he did not have much online teaching experience, Dan thought that designing or structuring an online course himself would take too much time and effort. Dan kept saying that it was difficult for him to completely reinvent a class because program designers had expectations for the program and schedule. Therefore, rather than changing the online course structure drastically, he seemed to be more interested in organizing his content knowledge and experiences into pre-structured online modules.

Dan's Professional Learning

I think professional learning can be about learning about things that are going on in education generally. I think everything that you learn is all professional learning, in a way. Everything that you learn helps in some way. (Dan, in the second interview)

Dan considered himself an ongoing learner. He said that he wanted to improve his professional learning in many areas. For example, Dan said that he was interested in second language education and world language education. So he should be doing reading and going to conferences about things like that so he could learn more, which would help him in his profession as a professor. He also wanted to improve how he could share his learning with his students effectively. The results of this study show that Dan thought he developed his beliefs and knowledge through implementing his practice.

Dan's Beliefs about Online Teaching

Some researchers have shown how teachers' beliefs influence their pedagogical and content decisions (Pajares, 1992). These researchers have argued that belief is an important factor for teachers, not only to drive their activities, but also to make decisions on knowledge applications. The results of this study show that Dan had beliefs about online teaching which influenced his teaching in this course: valuing online discussion, connections, and balancing (Notice, Emma: valuing relationships, interactions, and connections; Jane: valuing online discussions, connections, and clear communications).

First, Dan said he valued written discussions between students and students in the online environment, as well as in face-to-face classes. Dan had a belief that sharing their opinions and discussing with each other were important for students' learning. But, he believed that online instruction was not as beneficial as face-to-face-instruction for students' interactions. Dan said that the flow of information and building a sense of community in class was much richer in a face-to-face class than in an online class. He said that he felt more disconnected from his students in the online environment. Dan explained,

When you teach a course face to face you do find out some of that stuff online when you talk to students. I feel like I have a better sense of them as individuals. You can talk with them and see their facial expressions. You hear about their lives and what's important to them. You don't have as much opportunity for that in an online course.

Nonetheless, he said that online learning is important and could be perceived as the way of the future for education. Therefore, Dan believed that instructors need to find effective methods for students discussing with each other. He seemed to believe that online written discussions was a good method, and he provided the opportunities for students to share and discuss their ideas and opinions online.

Second, Dan believed in connections, as the other two instructors did. Whereas Emma valued the mutual connection between instructor and students, and Jane valued the connections between their learning and their practice in classrooms, Dan valued the connections between their classroom experiences and their online discussion. Dan often talked about his learning experiences with FL learners because he said that such experiences helped him understand ESL/FL learners. He seemed to believe that instructors need to go into the classroom to see what is going on for themselves. By connecting their classmates' experiences to their learning, Dan thought that students learn from each other.

Third, Dan reported that he valued balancing. The workload of online learning has become a major concern for students as well as teachers who are teaching online courses (Lehman & Conceicao, 2010). He said that he wanted the online course to be meaty, but he did not want his students to feel burdened. Even though he wanted the course to be useful and purposeful, Dan did not want to give his students busy work. But he also thought that instructors should not let students think online learning is easy. To Dan, balancing busy and easy work was

important. He said that “I was trying to balance expense for them and expectation, too. I don't have as much of a sense of how much is too much for a Master's class and how much is not enough.” He said that he felt like his students had a good amount of reading to do and weekly interactions and stuff.

Dan's Professional Learning of Beliefs and Practice

Teachers' beliefs can influence not only pedagogical choices but their content choices as well. (Schmidt & Kennedy, 1990, p. 2)

Dan wanted to know and learn by discussing different learning methods or techniques that he could use to improve either his face-to-face or online instruction. During his teaching this online class, Dan strengthened his beliefs about online teaching.

Dan encouraged asynchronous online discussions. Dan valued asynchronous written discussions in the online environment. In the face-to-face environment, synchronous interactions are useful because students can see each other. But in the online environment, Dan seemed to believe that asynchronous written discussions can substitute for live in-person classroom discussions. Because students could have more time to reflect on their ideas and other's opinions, Dan preferred asynchronous discussions in his online class. Dan often said that he did not like synchronous video chats because he thought that the video chat was not easy to implement, and it was not so effective. Dan said that “I don't like the idea of synchronous discussions so much because, for example, I had students who were here, I had a student in Indonesia, I've had students in Korea and it's just not very practical for me to tell someone they have to get up at 2:00 AM to participate in the discussion.”

Dan said he valued and encouraged students' participation in the asynchronous written discussions. He provided a “Critical Analysis of Readings and Discussion” activity for a whole

semester. He believed that the discussion was an important motivator for students to read some chapters, and discuss them with other students. Each student was required to read a different chapter, and then each student analyzed and shared the chapter with other classmates. In order to make the discussion effective, as discussed earlier, Dan split his class into two groups. Dan said that one team wrote posts about the readings, and the next team responded to them so that everyone had a brief synopsis of potential resources. He believed that the activity was actually pretty helpful because students had time to think and respond to other posts. At the beginning of the semester, he gave them guidelines on how to do a post. In his first written reflection, Dan said, “They have done a really nice job with it. They have a lot of good insights. Since it’s only about a page or so to write, it’s not too burdensome either.” He kept saying that asynchronous written discussions were a lot easier than doing synchronous chats because of time issues, especially when students were scattered all over the world.

Dan also said that the discussion solved some issues, such as feeling disconnected. He said that the challenge with an online course for him was feeling disconnected from the students and not being able to drive discussion. However, Dan said that the book discussions were effective in the way that his students were connected to him. He also felt that his students had a great dialogue with each other, from students’ feedback about the book discussions. He said that the chapters for the discussions seemed to have been good choices for helping them think more about their own practice and teaching ELLs.

Second, Dan valued timely feedback for encouraging students’ discussions. Dan said, “One of the things you have to be careful about is giving timely feedback.” He said that he gave his students a lot of feedback on their assignments. He wrote comments on them, and sent his feedback to the students, encouraging their work, such as “you did a good job, I like your idea,

and I am willing to talk about it with you.” Dan went on say that instructors need to use email as a tool to communicate with students, or give feedback. Dan said,

It’s the best way to interact with students when you want to make sure that everyone gets the feedback that they’re supposed to receive. If I tell them that I just posted it, they might not go back and check it. They might not read it when I email it, but at least it gets their attention briefly. I do answer questions a lot via email too.

Based on his previous online as well as face-to-face teaching experiences, Dan realized that he really had to be on top of the feedback and do it every week. He said that his students needed that feedback because they did not actually get the personal contact with him. During the middle of the course, he kept asking his students to encourage their participation, and to sustain connections with him. For example, “How's this working? What are you thinking? Do we need to change things up?” Dan tried to interact with students by giving feedback and asking their opinions and ideas on course processes.

Dan provided experiential learning opportunities. In order to connect students’ learning to their own practice, Dan provided experiential learning opportunities. Dan required his students to design a “Unit Plan” project. The purpose of the project was for students to develop a unit to teach ELLs that they could use in their teaching careers. Because students already had discussions about ELLs with their classmates, he said that it seemed appropriate for the project to have them put their learning into productive use rather than just writing a course paper. Dan said,

I thought it was effective in a way because they were drawing from the work they had done earlier in the semester. They had to include a classroom management plan to show, even if they were already teaching or had some strong opinions about classroom management, I felt like that book kind of helped them articulate some things. So they

had to have that piece, they had to have a piece where they were showing teaching for ESL students, which brought in the first book.

Dan also asked them to use other resources that they found, such as anything from books to websites to units from other teachers. The other instructors, Emma and Jane, also valued experiential learning, but Dan seemed to emphasize more how students connected their learning from their own research to their practices.

Another example was to have students create an online portfolio for a final project. Dan knew that students wanted to develop, accumulate, and use their products in the future. He did not want his students to design a unit plan for the final project; rather, Dan wanted his students to synthesize their readings and discussions in this class, to include classroom management they discussed, and to include educational and technology resources they shared. It seemed to me that all classroom activities were designed to contribute toward the final project: Dan and his students talked about ESL/FL content by using book discussions, they discussed what challenges and support they as ESL/FL teachers experienced, and the students searched and shared educational resources and information during the online class. Dan's knowledge made it possible for him to structure this online class in that way (book discussions, sharing, and designing lesson plan).

Dan balanced students' learning. In order to keep students from busy work, Dan designed his course structure simply, but with concentration. For example, when Dan provided the "Critical Analysis of Readings and Discussion" activity, he required his students to post a short response to the week's readings. Rather than asking them to read many chapters, Dan wanted his students to read a short chapter and connect it to their classrooms. By pointing out connections or contradictions between the readings and their opinions, Dan wanted his students to sustain their discussions. He also limited students' responses to others to two or three because

he did not want his students to feel burdened by the assignment. Dan said that students' comments sometimes were too artificial, and they just wrote their thoughts without thinking deeply if they had to do many comments. Dan said, "I never want to give students busy work. If they are not doing weekly assignments they are not engaging with each other as much." When Dan talked about balancing, he also shared his concerns about his time and work management because of his own personal issues. Dan seemed to make his online class simple, and he concentrated his efforts on his class rather than on doing many activities.

Dan's Professional Learning of Knowledge and Practice

Dan's knowledge in this study was increased by his experiences with ESL/FL learners. This section explains how Dan developed his knowledge of students, online teaching, content, pedagogy, and technology through his practice during this semester.

Dan's knowledge about students. Dan valued his learning experiences with ESL/FL learners as well as teaching ESL/FL subjects. Dan said that he was a former French teacher, so he had experience in teaching languages. He said that he had really learned a lot more about working with FL learners. He thought that it helped him articulate more his own thinking and beliefs about teaching ELLs. Dan said that he knew how ELLs felt in their classrooms, and he knew how to help teachers who have ELLs. In this university, Dan had taught several face-to-face and online courses related to ELLs. This teaching experience solidified his knowledge of his students who had ELLs in their classrooms. Even though Dan assumed what and how to teach students who had ELL learners, he said that he needed to understand his students more clearly in order to teach them effectively. In order to know his students, Dan used two main activities during the whole semester.

First, Dan strongly believed that social interaction was effective for students' learning in the online environment. Dan seemed to find his students' understandings and their difficulties of learning from reading their written discussions. Dan provided online written discussion opportunities every week. At the beginning of the discussions, it did not seem easy for Dan to know his students because he did not have a specific introduction activity or survey related to this course. Thus, during the first to third week, Dan asked basic questions related to this course based on their readings. Dan found that his students were struggling in dealing with ELLs. He realized that his students needed scaffolded instructions that addressed all four language skills (listening, speaking, reading, and writing), as well as social goals, to ensure that ELLs were not outsiders in their own schools. His knowledge of his students, based on the written discussions, helped Dan think of the final project, which was to apply their learning. When his students finished their answers and responses in the discussions, Dan gave timely feedback to them in order to check their understandings and to correct misconceptions of the discussions. Sometimes he pushed their thinking by asking questions.

He said that he was using email as a tool to communicate with students quite a lot, especially in online courses. Dan went on say that "It's [emailing] the best way to interact with students when I want to make sure that everyone gets the feedback that they are supposed to receive. If I tell them that I just posted it, they might not go back and check it. They might not read it when I email it, but at least it gets their attention briefly." Through examining their discussions and providing timely feedback, Dan developed his knowledge of students in this class. But he also felt limitations in his attempts to know his students. Dan said that he tried to do follow-up communications with students, but it did not occur easily. When Dan offered chatting

and face-to-face meetings, there were no responses. There are some possible answers for this that I will address later in the discussion section.

Second, like the other instructors, Emma and Jane, Dan also said he understood his students by examining their assignments, especially the final project. Dan had his students develop a unit to teach ELLs and later revise it. During observing the process of developing a unit plan, Dan knew that his students showed better understanding of ELLs and their progress. He said that “They [My students] did a lot of learning, thinking, and individual research to show their learning and improve or enhance their teaching. I also learned more about the circumstances that my students teach in, which is valuable to keep me fresh and informed about the realities that teachers face every day.”

Dan also found that his students had trouble with some things that he was not expecting, such as creating lesson objectives. When he found unexpected problems, Dan helped such students by emailing them. He also found that some students were not sure about how to apply the resources they accumulated. Dan said that the students seemed nervous about having flexibility and choice. Therefore, he encouraged his students to make some lists of resources, and to apply some of them rather than using all resources. Dan said that “I did expect that my students knew how to do some things that I took for granted like writing objectives, identifying standards, using resources, etc.” After examining their assignment process, Dan said that he provided assignments and projects more clearly by using email.

Dan’s knowledge about online teaching. Dan had one year of online teaching experience, but he said that he was able to think of his teaching online seriously after this study. Dan shared his experiences in teaching this online class in his written reflections. Dan said that his knowledge of online teaching in this course was challenged in three areas: content knowledge,

pedagogical knowledge, and technological knowledge. Dan constructed this knowledge from his previous learning, but he challenged his previous knowledge through his practices this semester.

First, Dan said that he increased his pedagogical knowledge, such as managing students' activities and giving timely feedback. Dan clearly said that the purpose of this course was to improve students' content and pedagogical knowledge related to ELLs. Based on the examination of a previous syllabus, Dan understood what content he should teach. However, Dan felt that teaching the language content online was not effective because "language is something that is utilized in a social environment." He said that he could teach language content, such as how to write, read, speak, and listen, but it is difficult to create situations where students communicate with people online. Dan said that teaching language is not only to teach language content, but also to teach how to communicate in social relations. Dan did not seem to improve his content knowledge in this semester; instead, he challenged his thoughts about whether he could teach content knowledge in the online environment. Dan's challenge let him think of his pedagogical knowledge in this course.

Second, Dan believed that technology offers unique ways to extend learning beyond a typical classroom environment. During his first interview, Dan seemed to acknowledge the necessity of improving his technology knowledge this semester. He said, "I think I had to have technology skills as well, those were important because Angel isn't always easy to work with." Dan said that once he got the hang of it, it was easy, but he did not always know where to go for certain things. This semester, Dan challenged his previous technology skills, such as using only Angel. When he provided online written discussion opportunities, Dan wanted the discussion to be more authentic and comfortable. He considered Facebook to extend the discussions. Dan said that "I would consider using a Facebook page again because that's working in the other class that

I'm teaching that's a hybrid online and face-to-face.” He went on say that he was not really good with Facebook, but the previous online discussion made Dan think of using it. He said that discussing with a Facebook page was going well in his other class, and the social media was effective for them to create a sense of community. Dan said that he wanted to credit the use of Facebook in his other class, so Dan planned to use Facebook for this class the next time. He said that “I might even still try to use a Facebook page again this time because I think it's a technology they're already using and it's more of an organic way for them to just talk to each other.”

Another activity for Dan to challenge his technological knowledge was related to dealing with an online management system. Dan said that Angel could be useful, but it was limited. He said that he was glad it is getting replaced. He said, “I’m sick of trying to figure out which browser will actually work with it because it stops working from time to time. Also, the training modules leave steps out, and that’s super irritating.” This frustrating experience made him think of a new management system, such as a Wiki or Desire to Learn (D2L). He said that he volunteered to be part of the university’s change next semester over to the new online course management system – D2L. He went on say that he would be learning a lot more about that, and he wanted to challenge himself on that. Dan said that “Whatever course management system we have, ways to utilize that and also ways outside of that that you can try to build a sense of a learning community with your students so they're talking with each other and with you.” During this semester, Dan not only challenged his previous technological skills and knowledge, but also thought of new technology tools and skills for improving his class.

Dan had been told about Wikis, and he knew the functions of Wikis. From his previous experience as a learner, Dan did not want to use a Wiki as a learning management system for his class. He said that Wikis are so disorganized. He went on say that

You have to be super duper specific with students and give them step by step instructions about where to post things and where to look for things because things can just get lost. I know that part of that has to do with Wiki organization but I've just not had the best experiences with knowing where to go to find things and students knowing where to go to find things and where and how to post things. So there's a whole learning curve with Wikis.

Dan's knowledge and his experience seemed to influence his resistance to using a new content management system, such as Wiki. His professional learning of knowledge on using other technology tools could influence his selection of content management system. But this study shows that he did not have any professional learning opportunities to challenge his technology knowledge of content management systems.

Dan's Professional Learning Processes

Dan often said that instructors need to develop continually their professional skills and to participate in professional development opportunities, such as workshops, conferences or research meetings. Dan said that "Because if you don't do any professional learning, you're kind of stagnant. You're not growing or moving or being as productive. There are always more things that you can learn and different ways to push yourself. If you're not doing professional learning, I think you're kind of stunting your own growth." Dan developed his professional learning through his own study, social interaction, and self-reflection.

Dan described his own study. Dan valued his own learning in order to improve his belief in professional learning in the online environment. He also liked to talk with other people and participate in seminars or conferences in order to get some information related to online teaching. But this semester, Dan had to learn by himself because of his busy schedule. He said that “There were a couple of brown bag sessions this semester but I couldn't go to them because I had to be in field instruction those days. So I didn't get to participate in a couple of brown bags that they had. So really, I don't think I really got much of an opportunity to do professional learning.” Dan said that he wanted to improve his online teaching; thus he kept developing his professional learning through his own research. He said that he has been shopping around for a couple of books about online teaching and how to make that a more meaningful experience. Because of his personal issues, Dan had to learn by himself, but he thought that his self-learning was helpful for teaching this online class this semester.

In his final interview, Dan said that “I'm finally getting a really good feel for it. The first time, you're just kind of getting experienced with it. This time I feel like I've got a lot more and I would make changes because I have a better feeling now that I'm doing it a second time. So a lot of it was learning on my own – learning by doing.” He often said that he gave students much feedback and had meaningful email communication compared to last year. In addition to learning by doing, Dan wanted to take an online course himself. He said, “I think that the experience of taking an online course can teach you things you like and things you don't like.” Dan said that he learned FL learners' feelings and their needs when he took some FL classes as a learner. So he wanted to take some online courses to support his online teaching.

Dan described social interactions. Dan said that he was much more interactive in face-to-face environments. But when he teaches online courses, it is not easy for him to interact with

other people. When he prepared his online class, Dan followed the previous format. But he still wanted to talk with previous instructors about the online class. Dan seemed to have a preference for self-learning, but he also valued the importance of social interaction. At the beginning of the semester, Dan said that he talked to senior faculty about online teaching. He said, “We have some really smart people here who are very approachable. Talking to other graduate students. I know people who have worked with Michigan Virtual High School – so talking to them about things, just going over and talking to them.” Dan said that he also discussed the course structure with other teachers to see what they thought of it and what they might keep or do differently.

However, Dan said that he had few interaction opportunities this semester because of his busy schedule. Even though Dan liked to attend professional meetings and seminars and to interact with other colleagues, he mostly missed meetings because of his work and personal issues. Thus, Dan said that he wanted to have more options to attend Brownbag meetings, such as uploading the meeting videos or having several meetings at different times. He also said that “An ongoing professional development where you are exploring different tools and ideas that other people have tapped into could be great.” Another practice related to social interaction for Dan was to talk with his students. During the middle of the course, Dan communicated with his students by using email or discussion boards. He read their emails and tried to listen to the comments that they made. Through discussion with his students, Dan developed his professional learning.

Dan discussed his self-reflections. Dan’s self study is a little different than his self-reflection. Dan’s self-study means that Dan studied articles and books by himself, whereas self-reflection means that Dan reflected on what he did in this online class. It was not clear whether Dan had been reflecting on his class, but he said that his self-reflection was important this

semester. He went on say that “I think part of it [self-reflection] is about looking back over things you’ve taught, for example, and trying to find ways to make it better. Another component is reflecting with the help of others, such as utilizing student feedback or talking to other professionals to get their thoughts.” In the final interview, Dan said that “I think that I will look for an additional book for them to read next time. I think that the current texts are OK, but I might also substitute in a book about managing the ELL classroom specifically instead of *Teaching with Love and Logic*.”

Dan felt that there may be some more articles specifically about differentiation or maybe about advocacy or things like that. He said that one of the challenges was how to organize the course according to students’ needs. He shared his idea: “I understand students need time to get books and stuff and they have to be able to know if they want to register for the course. But I would like to, in the future, have a very loose kind of skeleton and then ask them, ‘What topics do you feel like you need the most help with?’” He went on say that if he could not organize the course like that he would condense it a little bit. Thus he wanted his students to have different topics that they wanted to discuss peppered throughout.

Dan developed his beliefs about online teaching through his self-reflections. Dan said that he did not have a very high opinion of online teaching prior to his teaching an online course. He said,

I think of online learning as a bandwagon that people just jump on because it can bring the university more money or we could reach more people and they could take our classes. And it's just a substitute so people don't have to drive in. Okay, I understand that saves people gas, but is that really your reason for doing an online course? There has to be more to it than that.

While engaging in this course, Dan challenged his previous beliefs about online learning. He said that he saw where it could be very beneficial for people who maybe did not have the opportunity or the ability to come to this school. He gave an example: “Let's say that I do live nearby in a college town but it's a small college and they don't have the same kinds of facilities or opportunities. What can I do?” He went on say that he would need access to a wider range of opportunities, such as online learning. After finishing this semester, Dan seemed to believe that online learning could be useful not only for instructors, but also for students who cannot access quality teaching near their hometown.

In summary, Dan believed that knowledge, belief, and practice all influence each other. He said, “It’s like a little triangle. My knowledge influences my beliefs and my beliefs influence my practice.” He went on say that “I think that kind of thing is always happening. I don't think that beliefs and knowledge are static things. If you're open to learning, which I am, I think those things kind of naturally.” Dan said that he could find out something that challenged his beliefs, and so he had to adapt it from his practice.

CHAPTER 7

RESULTS AND DISCUSSION

In the previous three chapters, I examined how the three instructors developed their professional learning of beliefs and knowledge through their practices as they taught online classes. I also examined what professional learning processes the instructors experienced for their professional learning. In order to examine their professional learning and their learning process, I analyzed their online modules, written reflections, and pre- and post-interviews. In chapter 2, I constructed a professional learning growth model that included three learning theory perspectives (constructive, social constructive, and transformative). In this chapter, I examine the three instructors' professional learning processes in terms of these learning theory perspectives, in order to explain their supports and challenges in developing their beliefs, knowledge, and practice in teaching OPD (online professional development) courses. As the results of this study show, the instructors' professional learning cannot be understood separately from their knowledge, beliefs, and practice.

Before examining the instructors' professional learning supports and challenges, I will clarify the definition of professional learning in this study. This study drew on Mike's (2011) definition of professional learning. He said that professional learning is "the application and use of different sources of knowledge, often derived through engagement in professional development" (p. 2). Mouza (2009) emphasized that the ultimate goal of professional learning is to create demonstrable changes—changes in beliefs, changes in understanding, and changes in instructional practice. According to these researchers, professional learning can lead to changes in instructors' beliefs, knowledge, and practice, separately or inter-connectedly. I defined professional learning in this study as "any demonstrable change, growth, or evolution in

instructors' beliefs, knowledge, and practice through their engagement in any professional practice in online courses.” By examining the three instructors' professional learning processes in terms of the three learning theory perspectives, I describe what types of learning processes were used for their professional learning preparation and growth, and how we can understand supportive and challengeable factors for their professional learning processes.

This chapter is organized as follows. First I summarize the findings of this study, focusing on the three instructors' beliefs, knowledge, and practice before and during the semester. Second, I discuss the three instructors' professional learning supports and challenges based on the learning theory perspectives. Third, I look back at my professional learning growth model drawn from the results of this study.

Summary of the Three Instructors' Professional Learning

The results of this study show that the three instructors developed their professional learning of beliefs, knowledge, and practice by using various professional learning processes. Based on their educational and online teaching/learning experiences and their subject matter, the three instructors maximized their own professional learning even though they did not have formal training opportunities.

What the three instructors learned showed some interesting patterns. First, they solidified their prior beliefs through their practices: 1) Emma built close relationships by using Skype chat and email communications; she created and sustained connections between students and herself by sharing her personal and professional life; and she encouraged students' interactions by using group work and group projects. 2) Jane provided connection opportunities for students to apply their learning to their classrooms by providing blog discussion activities, encouraging students' interactions and interactive discussions by using synchronous chat, and making clear

communications with students by giving timely feedback. 3) Dan provided connection opportunities for students to share their learning experiences with other students by using discussion boards, created interactive discussion opportunities by sharing their experiences, and kept balance for making students feel comfortable in their learning.

Second, in the case of knowledge, the three instructors showed that they increased or built up their knowledge about students and online teaching. They especially improved their content, pedagogy, and technology knowledge: 1) Emma developed her pedagogical knowledge in managing her online courses and integrating technology into students' classrooms; she improved her technological knowledge, such as using Wiki, Skype video chatting, and other technology tools; but she was still developing her content knowledge because the course did not have specific content that was already specified 2) Jane developed her pedagogical knowledge in managing online discussions and students' assignments; she improved her technological knowledge, such as using Angel or Blog discussions; and she continued to strengthen her content knowledge that she had already developed because she taught the course for three years, and she knew the content very well. 3) Dan strengthened his content knowledge that he had, and he knew the content very well from his teaching and learning experiences with ESL/FL learners; he sustained his pedagogical knowledge because he mostly kept his previous teaching strategies; but he challenged his technological knowledge because he found that social media could be good discussions tools for students.

Third, the three instructors changed, adapted, or sustained their practices when they faced challenges. In the cases of changing or adapting their practices, this study showed that 1) the instructors had supportive opportunities from the department, such as participating in a Brownbag meeting, and having opportunities to discuss how to use technology; 2) the instructors

had interactive mentoring opportunities, such as meeting and discussing with previous instructors about designing and teaching their online course; and 3) the instructors had self-study opportunities, such as examining books or articles related to online teaching, instead of participating in seminars or workshops. Even though the three instructors felt challenged to change or adapt their practices, the results also showed that they felt limitations in changing or adapting their practice.

The results of the cross case analysis also show that the three instructors developed their professional learning with various learning processes. I identified their professional learning processes, in terms of the learning theory perspectives; constructive, social constructive, and transformative. The three instructors mainly constructed their professional learning through constructive learning processes, such as following their own and/or others' prior work, learning by self-studying, and learning by teaching. They also used social constructive processes, such as interacting with their colleagues or previous instructors, or getting feedback from their students.

However, after beginning the semester, they had few social constructive learning opportunities. Emma and Jane participated in professional development workshops in order to share and learn online teaching experiences, but it seemed to be limited because only a few participants and less experienced online instructors participated in the workshop. This limitation of social constructive learning opportunities limited the instructors' transformative learning opportunities. Researchers have said that transformative learning can occur through doing self-reflections, facing challenges, or interacting with others. But this study showed that the three instructors had mainly to rely on their self-reflections in challenging their own practice. In the next section, I discuss what supports and challenges the three instructors faced as they taught the OPD courses.

The Three Instructors' Professional Learning Supports and Challenges

Many researchers have argued that online instructors need formal supports, such as online course training, workshops or seminars, and mentor systems that help instructors teach online courses (Kang, 2011; Brookfield, 2006; Pankoski, 2004; McQuiggan, 2012), and informal supports, such as encouraging experiential learning, self-study, and self-reflection (Opfer, Pedder, & Lavicza, 2011; Rovai, 2004). On the other hand, some researchers have reported the challenges and difficulties for teachers' professional learning. The challenges include 1) inconsistencies in policy trends and research, 2) lack of time for teachers to engage with new ideas and their implications for practice, 3) lack of experts who can promote teacher engagement, 4) lack of opportunities to engage in learning activities, and 5) lack of a professional community that supports new ideas and practice (Timperley, Wilson, Barrar, & Fung, 2007). Feeney (2011) argued that the lack of support, time, and open communication are also barriers to professional learning. He also said that school culture can impede teachers' professional learning, such as resistance from others or from policy. The supportive and challengeable factors for professional learning in this study are summarized in the Table 7-1, and these ideas are discussed in the sections below.

Table 7-1 Supports and challenge for the three instructors' professional learning

Stage	Support professional learning	Challenge to professional learning
Preparation supports	Have a previous course as a model Classroom teaching experiences Understanding online course context	Lack of ongoing professional development Lack of time/busy schedule Lack of technology knowledge and skills
Ongoing supports	Discuss with previous instructors Collaborate with co-instructors Students' feedback Workshop/seminar	Lack of support (mentor) Lack of discussion opportunities Lack of collaboration

Table 7-1 (cont'd)

Follow-up supports	Opportunities for reflection Course flexibility	Lack of follow-up professional development
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Supports and Challenges in Preparation

This study shows that the instructors' preparation for online teaching influenced their professional learning as they taught their online classes. Research shows that instructors can improve their knowledge and practice about online teaching through their preparation, such as using online course management systems, understanding online course features, or learning how to interact and give feedback online (Brookfield, 2006; McQuiggan, 2012). However, researchers have pointed out that many online instructors teach online classes without enough preparation for teaching online (Kang, 2011; McQuiggan, 2012; Seaman, 2009; Skibba, 2011). Skibba (2011) indicated that online instructors do not have enough opportunities to understand and create online components or course content. Some researchers have reported in their studies that instructors want more preparation for how to offer an online course, such as training for teaching online classes, learning how to teach student by using online formats, and taking some online classes (Kang, 2011; Pankoski, 2004; Wolf, 2006). Kang (2011) examined seven online instructors' training experiences by using a phenomenological approach. She found that the instructors developed their professional learning through the training program, such as by improving online instruction knowledge and skills.

Online teaching experiences. Instructors' previous online teaching experiences, such as teaching or participating in online courses as co-teacher or assistant teacher can help them develop their professional learning while preparing their online classes. Conceicao (2006) said that instructors can develop their professional learning and their satisfactions about online teaching when they personally engage in designing and teaching students in the online

environment. In her article, Mantyla (2002) also suggested some ideas for supporting online instructors in order to prepare their online classes. She said that instructors can reduce their negative mindsets before they teach online classes, such as skepticism, fear of using technology, or lack of control. She continued on to say that understanding online course advantages and disadvantages, having hands-on learning experiences, and taking online classes would be helpful for online instructors develop their professional learning in the beginning.

This study shows that Emma had good opportunities for having online teaching experiences before she taught her online class. Her experiences helped Emma develop her knowledge and practice about online teaching. When she assisted an online class, Emma experienced some challenges of building relationships and communicating with students. Because of this experience, Emma, in her role as instructor of an online course, searched for alternative tools and methods for improving her responses to those challenges.

However, Jane and Dan did not have any online teaching experiences when they taught their online classes for the first time. They shared their confusions and challenges in developing their professional learning at that time. For example, When Jane was supposed to teach online courses for the first time, she did not have any online teaching and learning experiences as well as not having professional development opportunities. When I asked her about the challenges of preparing her online class, she recalled her lack of experience in the online environment. Jane went on say that “we cannot just expect instructors to do online teaching because they are teacher educators, because they have been in the classrooms, and because they have knowledge of the content.” She said that instructors need support, especially in teaching online courses.

Mentoring and exemplar models. Having meetings with mentors or experienced instructors is important support for instructors to develop their professional learning

(McQuiggan, 2012; Puzziferro & Shelton, 2007). McQuiggan (2012) argued that instructors can change or develop their knowledge and practice when they have discussion opportunities with experienced online instructors, because instructors can reflect on their experienced colleagues' successful and challenging instruction as well as their own course structure and activities. Puzziferro and Shelton (2007) examined how to support instructors in teaching online courses. They pointed out seven principles of good practices for online teaching, which included providing mentoring systems to help instructors develop their quality of online teaching. Palloff and Pratt (2009) also said that "Many institutions formally or informally assign more experienced online faculty to mentor or coach new faculty as they design or deliver, or both, their first online classes" (p. 29). They went on say that the mentoring support could facilitate instructors' transition to the online environment and their professional learning.

The three instructors did not have any mentor provided by their department, thus; they had to construct their own knowledge and practice. Luckily they had the previous online modules which they could follow as models for their courses. The three instructors basically kept the previous course structure by following the same content, resources, assignments, and evaluation methods. Emma's online course was about teaching school subject matter with technology. The course content was different from what she had taught in K-12 and higher education. In order to teach the new subject matter online, Emma needed some platform on which she could develop continually. Emma said that having previous online modules which included course content, assignments, and syllabus was the most important support for her. Emma thought that she found the perfect example, and she tried to follow the previous instructors' approaches. Emma said,

If you're teaching an online class, I would say, first and foremost figure out who has taught the class before, if possible. Figure out who has taught it and if you can get access to their syllabus, their materials, their management system. From there, just spend some time looking at what they've done. And then I would meet with them to get feedback and I would also spend time talking to some online instructors about questions that you know you have and then also asking if you can contact them later if you have other questions. I really think seeing what other people have done is a great springboard. I can't copy someone else's stuff entirely, but if I have a framework, it's really helpful. Even just a syllabus.

Emma did successfully construct her first online class, and she modified the previous' classes to fit her current class.

Dan also valued following the previous class as a model. Dan shared his experiences of preparing his first online teaching. Dan said that he tried to access his new course early, and then he examined the course carefully. He met previous instructors to discuss the course. Dan said that "Instructors need to see what other people have done for that class and really think about ways, not just based on Angel or whatever." He went on say about his experiences how he followed the previous course, for example, using a new management system. Dan said, "Whatever course management system I have, I can try to learn and build a sense of a learning community with my students so they're talking with each other and with me. Otherwise, it's like self teaching modules and I think it needs to be more than that." Dan's knowledge and practice were constructed through meeting previous instructors and following their teaching and structures. Having a good example or a model for their online classes seemed to help the three instructors have confidence about preparing their online teaching.

However, the three instructors felt that they needed more support beyond good examples, such as providing mentoring programs. Jane mentioned the necessity of mentoring supports. She said that if instructors have opportunities teaching online together as face-to-face teaching does, then it could be more effective. She said that some schools provide those mentor-mentee opportunities for future online instructors, but she did not have those experiences in this school. Jane went on say that

Like a mentoring type of approach. I think that would be good. It could be very effective.

I know there's stuff out there, outside of the university. I'm not 100% sure, but at one time, one of the professors had spoken to me when I was completely befuddled about online teaching and she just said, "This is what I do and this is why I do it." To me, that mentoring process was really helpful. But to see it happen throughout a whole semester instead of a five minute tutorial would have been really effective. But I think they're doing better at realizing that we need that support and we need to learn what is out there.

Jane added some technology issues because not all instructors are from a strong technology background; thus, she said that mentors who have technology experiences could be helpful for new instructors who are struggling with technology.

Training or professional development for online teaching. Some researchers have suggested that online instructors need formal training for their preparation, for example, providing professional development workshops or seminars (Dziuban et al., 2011; Eliason & Holmes, 2010; Susan, 2005). Moore and Kearsley (2012) indicated that professional learning experiences as students can help instructors prepare online teaching. Eliason and Holmes (2010) examined fifty one instructors who were teaching online courses. Before they taught the online courses, the instructors participated in one certification course for online teaching. From course

evaluations, the authors found that the instructors developed their professional learning through taking the professional development course, such as improving their online teaching practices and pedagogical skills. Conceicao (2006) said that instructors can develop their professional learning and their satisfactions when they personally engage in designing and teaching students in the online environment. Before they teach students online, having online professional development opportunities can help instructors feel what online teaching looks like. Researchers value such mandatory training and mentoring programs (Palloff & Pratt, 2009; Susan, 2005).

However, the three instructors did not have any training for their online teaching. The three instructors wanted professional development and mentoring programs, because they could help new and experienced instructors prepare their online classes. It was not clear whether or how the lack of professional development opportunities influenced their professional learning. But the three instructors often said that taking professional development courses would help them prepare their online classes, especially their first online courses. Dan said that his participation in a workshop helped him develop his professional learning. He also suggested that taking an online professional development course for online teaching could be another option. Because face-to-face professional development has some limitations for understanding online teaching, having experiences in online environments or computer labs could be more effective.

Jane pointed out that she did not have training opportunities before she taught her online class for the first time. She said,

I think we need to have opportunities for new instructors to learn what it is and how it works. So we frontload their understanding and continue to do it while they're teaching, but we don't rely on it while they're teaching only to give them their professional learning. That we help them build that framework and foundation so that it's strong and

they can go on. I think that's where I got in trouble. I didn't have a very strong foundation of online teaching and I'm learning as I go. Because I don't have that strong foundation, it's a little shaky sometimes. We do it with other classes – if you're going to teach face-to-face you have to take certain courses. I don't know if it's the same with online teaching. That would be my biggest suggestion.

Emma pointed out the necessity of online professional development opportunities. Even though Emma liked face-to-face Brownbag series and experienced many things from those meetings, having online experiences of teaching could have helped her prepare and teach online classes more effectively. Dan also said that he wanted to have some courses in which he could talk and ask about online teaching.

Supports and Challenges in Ongoing Professional Learning

Some researchers have reported that many instructors learn or continue to learn through their experiences, in other words, learning by teaching (Chism, 2004; Conrad, 2004; Lawler, King, & Wilhite, 2004). Researchers have argued that online instructors develop their professional learning by implementing and reflecting on their practice while teaching online classes. This study also shows that the three instructors developed their professional learning while teaching the OPD courses.

Learning by teaching. Many researchers have said that professional learning can be developed when learners (here instructors) actively participate in teaching experiences (Armstrong, 1999; Peruski & Mishra, 2004), and when they connect what they learn in their contexts (Fenwick, 2004; Skibba, 2011). Peruski & Mishra (2004) examined three instructors who were designing and teaching online courses for the first time. The authors found that the instructors experienced the transformations of their technology use and comfort level. They said

that the instructors developed their technology knowledge while teaching their online classes, and it helped them develop their professional learning. Armstrong (1999) “conducted a qualitative study that found that faculty participants relied heavily on learning by doing (teaching the course) and it is in the doing that they primarily assessed the quality of their learning” (as cited in Skibba, 2011, p. 63).

This study shows that the three instructors developed their knowledge and practice while teaching their online classes. For example, when Emma taught what she planned, she faced many unexpected things, such as access problems for having Skype discussions, technical issues for the Wiki structure and technology projects, and students’ misunderstanding of the TPACK survey. Emma did not expect these issues before the semester, but she reported that she understood the concept from such challenges through teaching students online. Emma shared her experiences of how she challenged and constructed the TPACK framework concept from the process of teaching: (1) Content Knowledge: Before this class, Emma examined her syllabus in order to apply Glogster to her content. She had to know what content should be included in using the technology. (2) Pedagogical Knowledge: After deciding what the content would be, Emma introduced the tool, and she provided opportunities for students to use and apply it to their subject matter. (3) Technological Knowledge: Before introducing the tool, Emma had to become familiar with the tool. She said that she created some products with her daughter in order to test the tool. Emma said that her teaching experiences with Glogster improved her concept of the TPACK framework, and helped her teach students and develop this framework more effectively. From students’ feedback, Emma found that her students “gravitated toward the TPACK framework, and they found it incredibly helpful as a way of framing their own development and growth.” Because Emma experienced how the TPACK framework was developed through her

own teaching, she encouraged her students to understand and implement the TPACK framework in their classrooms.

Jane constructed her online discussion practice by using online discussion as a way to teach her students, and she came to value online discussions as a way to support students' learning. In her previous semester, Jane grouped students for their online discussions, but she recalled that the discussions looked artificial. She found some reasons for why there were problems with their discussions. As described in Chapter 5, this semester, after finishing an introductory activity in the first week, Jane found that most of her students were teaching K-12 students, and their grade levels and subject matters were various. Jane said that grouping and organizing students is very difficult because there are a variety of students' experiences and expectations as well as grade levels and subject matters. Jane also found that her students did not understand why literacy is important to teach as a subject. She said, "Some teachers see literacy as a traditional skill that is only reading and writing." It is not clear whether Jane felt the same problems in her previous semester, but this semester she surely said that she wanted to manage online modules according to students' common interests and experiences, and to group students at their level and subject matter. During her teaching, Jane understood students' level, their needs, and their interests. For making meaningful discussion happen, Jane provided common issues and their own problems for her students to share those issues in a similar context. She also kept encouraging her students to think about how literacy matters in their teaching in online discussion.

However, the three instructors had challenges in learning by teaching because of their limitations in implementing technology. They needed ongoing support about technology use, but they did not get any support about using technology during the semester. They had to find the

solutions by themselves. Emma said that she experienced some challenges with developing her technology skills. She said that “the thing that is my biggest challenge is particularly if students experience a technological challenge.” When she implemented new technology tools, some students did not know how to use them. Emma did not expect her students’ challenges with the technologies because it was her first online teaching. She gave an example. When she asked her students to do a final project by using VoiceThread, Emma found that her students would not complete the task because of the technology issues. She wanted to help her students, but Emma did not know how and what to do. She said,

I need to see someone else log in, show me what they can do, and then realizing that they can't do it. That was difficult because I thought I had done enough research so that things were going to work well. I still realized that I hadn't learned enough. So some of it is just trial and error and implementing it in your practice. I wasn't sure how the digital stories were going to go because I wasn't sure how technologically savvy my students were. I had created them and I knew what I was doing. I don't use Mac products; I use an Ipad. So some of the stuff that students use for video creation or audio creation on a Mac is just different than a PC. I know Movie Maker but I don't know Garage Band, for example. I'm not going to kill myself to learn, although I'm happy to Google it and figure it out. A lot of it is just doing more research.

Emma said that when she does not know technology functions, she usually tries to figure it out before she tells her students. But in some cases, Emma did not know how to correct and change some technology problems, such as malfunctions in specific computer settings. Emma wanted to know and discuss the problems, whether she expected them or not, but she did not have such support. Emma did not mention why she did not get support from the department during the

semester, but she seemed to feel more comfortable when she had discussions with her friends. She said that the conversation with her friend was helpful for her because she was able to test the technology at anytime.

Jane did not use many technologies for her online teaching this semester. Jane shared the difficulties of her online teaching. Jane said, “I think the issue that I've had the most difficulty with is just the fact that I didn't have a lot when I started teaching. This is a lot of learn as you go – which is okay – but I felt very unprepared and now I'm playing catch up all the time to get to this competency level that I can then spring forward from. So I think that's been the most difficult aspect.” The most concern for her teaching an online class was managing Angel. Because she did not have enough opportunities to develop her skills and knowledge on Angel, Jane experienced difficulties in organizing and teaching course content in her previous teaching. This semester, Jane said that “It’s been surprisingly good this semester. I have only had a few technology issues. Overall it is working better than it has in the past.” She had more confidence in using Angel. Jane seemed to develop her technology skills through her experiences, but she said that she still did not know how to develop and apply new technologies. Jane said that “when I went to try something new and they talk about it but I can't picture what it looks like.”

Dan did not use much technology for his class, either. However, he felt that he needed to work on developing technology knowledge and skills. He said that “I think that's something you can always do because it seems like every time I turn around, there's another technology that I don't know anything about. It changes so frequently and so fast. I still don't like them very much because I find that they get really unruly really fast.” Dan said that he wanted to use new technology tools if the technology is available and effective for his students, and he can learn them. But when Dan wanted to use new technologies or social media tools for his class, he said

that he needed more time to get used to it. Dan often said that he is not a tech-savvy person, so he needed some support from other experts.

Regarding constructive learning challenges, the three instructors seemed to expect some supports in three ways: first, they needed more online teaching/learning experiences for their online teaching, whether in apprenticing other instructors' classes or having online learning experiences; second, they needed professional development opportunities provided in both online and face-to-face formats; and third, they needed ongoing and comfortable professional support in order to improve their technology skills.

Self-reflection and self-study. Many researchers have argued that reflection is one important factor for instructors' professional learning growth (Boud & Walker, 1998; Cranton, 1996; Kreber, 2004). Boud and Walker (1998) indicated that reflection is an important learning process from learners' experience, arguing that "reflection needs to be flexibly deployed, that is highly context-specific and that the social and cultural context in which reflection takes place has a powerful influence" (p. 191). They emphasized the environment in which reflections can occur as well as stressing reflective activities. They stated that creating a conducive environment for reflection is important. They suggested that using reflective journals and having discussions could be effective practice for improving learners' reflections. McQuiggan (2012) stated that reflection can help learners change their previous thoughts and beliefs. However, without considering course context, course purposes, or discussions with others, reflection for learners could become "self-referential, inward looking outcomes and implications" (Boud & Walker, 1998, p. 193). Even though reflection is important, not all reflection leads to professional learning. Tillema (2000) pointed out that reflection in teaching has more positive effects before teaching or after finishing courses. In sum, reflection was a main learning process in the three

instructors' teaching experiences during the semester. In order for the reflection to be effective, the instructors needed to keep reflection activities, such as writing reflections journals, discussing with other instructors, and applying their reflective practice.

This study shows that the three instructors reflected on their teaching with their written reflections, students' feedback, and evaluating students' assignments. After writing each reflection that I asked for, the three instructors reflected on their knowledge or practice. For example, after reflecting on her online discussion activities this semester, Jane changed her practice. She assumed that asynchronous discussion would be limited and not meaningful, and she confirmed that from her reflections this semester; thus, she modified her practice into synchronous chat. From her students' feedback, Jane supported her students' final project. Emma showed her reflections on her practices many times. After finishing every activity, Emma wanted her students to reflect on the activities. She gathered their responses for her next class. Emma also showed the importance of reflection in teaching. When she gave an assignment by using a technology, she found that the technology did not work well because of technical issues. Emma had difficulties in solving the problems, but she was able to provide alternative methods with the help of her friend. Dan's reflections seemed to be limited because he did not have many activities. But after reflecting on his practice, Dan said that he would apply new social media and new books in the next semester.

However, time has always been a big issue in online teaching and learning, for both students and instructors. This study also shows that the three instructors were struggling with developing their knowledge and practice because of time issues and their busy schedules. Emma said that she had some challenges in developing her knowledge and practice this semester because she had to do a lot of things for her students, such as having one-to-one Skype chatting,

giving feedback about students' reflections on each activity, and evaluating students' assignments. Because this was Emma's first full time teaching online, she seemed to check whether her prepared knowledge and practice were effective with her online class.

To Dan, time was also a big issue because he had to deal with many things as well as teaching online classes this semester. He wanted to participate in several Brownbag meetings, but he could not go there because of time issues. So, Dan wanted to have online professional development opportunity. Dan said that "Well, I think it [online professional development workshop] would be nice, but I also know it costs money and that's not something any college has a lot of. And I also realize that people get really busy. So do I expect it? No. Would I like it? Yes. My experience has been that there are people you can go to and ask." He said that an online professional development course could be another option. He went on say that there are some courses where people meet together, but generally the courses are face-to-face and they have to learn by themselves. He wanted to have natural environments in which he can ask and share online teaching experiences. Dan talked about the flexibility of time and content in workshops. He said that "maybe once a month... I mean open once in the morning and once in the evening to give more people the opportunity to go. And they could sign up for the professional development workshops. Having a schedule laid out ahead of time so people have plenty of notice and they can sign up." He also suggested that a system, where instructors somehow can earn some sort of professional development credits, could be possible for supporting instructors' time issues.

Interaction and collaboration. Mayes et al. (2011) argued that "online pedagogy usually focuses on collaborative learning, peer collaboration, and reflective discussions" (p. 156). They stated that participants need such opportunities in order to improve their online

pedagogy. Even though their studies focused on students' online pedagogy challenge opportunities, I think that instructors also need to have such opportunities to challenge their online perspectives. Mike (2010) also indicated that instructors need collaborative learning and reflective discussion opportunities for their professional learning in order to challenge their previous thoughts, ideas, and practices.

However, this study showed that the three instructors had few learning opportunities to challenge their online perspectives, such as a few Brownbag meetings. Even though instructors can develop their professional learning from their trials and errors, their reflections, or their self-study, many researchers were concerned about replicating their previous instruction and strategies in face-to-face classrooms. As Boud and Walker (1998) indicated, instructors' own reflections could limit their professional learning, such as sustaining teacher-centered approaches or lecture-based approaches (Knapper, 1995; Skibba, 2011). During the semester, Emma said that she participated in a Brownbag meeting a few times. She presented her ideas and online teaching, and got some feedback from the participants. However, Emma seemed to expect more critical discussions. For example, Emma wanted to see many experienced instructors' online teaching experiences, but she was a main presenter and most of them were beginners. As she discussed with Bob (the previous instructor) about her online class, Emma wanted to discuss online teaching issues. But there were few participants who shared their experiences in the meeting. Emma said that she really enjoyed the meeting, but she would want to see instructors who have more teaching experiences.

All three instructors seemed not to have opportunities to discuss their experiences and problems with their teaching. Emma expected the meeting opportunity very much because she wanted to see how other people were teaching online classes. In her first interview, Emma said

that “I’m excited about the brown bag meeting, because I’m looking forward to seeing and learning what other people are doing in their courses and sharing my ideas so I can learn from other people. I do learn from my peers, but for me that’s a disposition that I have toward asking a lot of questions and engaging because I want to know.” Emma went on say that the meetings would be good opportunities for her to listen to some problems she could find in the online environment.

Jane said that she was glad to have a meeting for online teaching. She said that the meeting was helpful because it was a great opportunity for her to learn by seeing how others are doing it:

Well, at the university level it’s been through a workshop class where you talk about teaching and you talk about teacher educators and what that means and define those things with your peers. And also attending any informational meetings like the brown bags and lit calls and all of those things to learn about what’s happening in the field and what others are doing. Now I’ve had the opportunities with the brown bags to sit and see what other people are doing. Kind of that modeling from others.

She went on say that she presented her online teaching and got some ideas from other instructors’ online teaching. Even though she liked the meeting, Jane wanted to know more than their experiences. For example, rather than seeing other people’s online instructions, she said that we need to discuss the “kind of history behind online, how to be a really effective online instructor, what do you need to know to teach this online class.” Jane seemed to want to discuss not only online teaching skills, but also the philosophy or pedagogy behind online teaching.

Dan said that he liked to interact with other people to learn, but he is more a self-study person. He said that “This is only the second time I’ve taught these classes. I’m finally getting a

really good feel for it. The first time, you're just kind of getting experienced with it. This time I feel like I've got a lot more and I would make changes because I have a better feeling now that I'm doing it a second time. So a lot of it was learning on my own – learning by doing.” This semester, he did not participate in any professional meetings because of his personality and his busy schedule. Dan said that “The problem with the brown bag sessions was I didn't find out about them until later and I already had appointments scheduled to go out in the field and see the student teachers that I'm working with. So we could have more consistent offerings at alternating times or something.” Dan wanted to have more flexible workshop opportunities he could choose. He also wanted to have various meeting opportunities, such as virtual lab meetings where instructors can practice and see other people’s online teaching.

Emerging Challenges

Many researchers have identified challenges in the online environment, but their focus has been on external viewpoints, such as the technology interface or instructors’ teaching environments (Lin & Dyer, 2013; Moore & Kearsley, 2012; Pratt & Palloff, 2009). Recently, some researchers has examined instructors’ challenges from the instructors’ perspectives, and they have discussed instructors’ internal challenges, such as their challenges with their own learning process, or their perspectives. Cranton (1994) explained the process of transformative learning. When learners face unexpected events, they challenge their ideas and practice. Then they examine the situation, and try to "fully and freely participate in critical discourse and the resulting action" (p. 73). The final process would be revising their ideas or practices. He also said that presenting challenges, thinking of alternative processes, giving feedback, testing new assumptions, fostering group interaction, and encouraging learner networks could occur in transformative learning. This study shows that the three instructors solidified their beliefs and

built up their knowledge, rather than changing them. In the case of practice, the three instructors showed many changes because of their experiences or their professional learning in this semester. However, they were also struggling with changing their perspectives or practices about online teaching because they experienced challenges in their online classes. The next section discusses the instructors' emerging challenges in terms of their internal perspectives: 1) instructors' flexibility of transformation, 2) instructors' perspectives about online teaching, 3) students' perspectives about online learning, and 4) school culture about online courses.

Instructors' flexibility of transformation. I discussed how the instructors constructed their professional learning during the semester, such as from teaching, reflecting, and interacting. However, based on what was learned about the instructors' perspectives, the lack of social interaction influenced the three instructors' transformation of their professional learning about online teaching. Neuman (2005) indicated that transformative learning “involved the personal and shared construction of knowledge; it involves coming to know something familiar in different ways, or to know something altogether new, from within one's self and often with others” (p. 65). Mayes et al. (2011) said that transformative perspectives help instructors transform or change their perspectives, which leads them to use innovative strategies and resources. There are some possible reasons for their minimal transformations in this study. Hawekes (2002) said that a transformative approach to online learning can occur when instructors have reflection opportunities through writing their journals and peer interaction.

This study shows that the three instructors did not change their beliefs much; rather they solidified their beliefs, such as valuing the importance of discussions, connections, and interactions. They also showed that their content and pedagogical knowledge improved. They adapted their practice rather than changing rapidly. They still sustained their original strategies

and practice in many ways. It was not clear that the three instructors will change their practices when they teach in the next semester. In this study, the three instructors showed some changes in their practices, but this did not mean complete transformation of their professional learning, because rather than transforming their practice or using new technologies, they seemed to think how to adapt.

Jane said she preferred face-to-face interactions, but she acknowledged that online instructors need to have a more progressive view. She said that many educators still do not learn in this online format, so they do not have their own personal experiences to use. Jane was concerned that current educators do not have as many opportunities as teacher candidates do in the online environment. She said that “I still think I have that traditional view of online teaching and it's changing. It's just taking me awhile to change it. I'm not going to say it's going to be like night and day; I think I'll still have more of traditional views.” As many researchers have reported, it is true that the online environment has limitations for students’ successful learning. But online classes also have a lot of advantages as well as strategies for reducing the limitations. Jane seemed to believe that she was transforming her negative perspectives on online classes while teaching them.

Instructors’ perspectives about online teaching. The three instructors had strong beliefs about their online courses, such as the subject matter’s effectiveness in an online class. Palloff and Pratt (2009) examined best practices in online environments and suggested that instructors need to change their previous beliefs or practices in order to reduce challenges and to achieve the best practices: 1) the balance of power needs to change, 2) the function of content needs to change, 3) the role of the instructor needs to change, 4) the responsibility of learning needs to change, and 5) the purpose and process of assessment and evaluation need to change (p.

6). They maintained that online teaching demands not only changing learning environments, but also challenging instructors' perspectives about their online teaching. Fein and Logan (2003) argued that "instructors can be faced with internal resistance to change, which often occurs when we fear a new way of doing something or a lack of knowledge or skills to make that change" (p. 46). In their previous book, Palloff and Pratt (1999) also mentioned that new and different pedagogy and approaches are necessary for instructors who teach online classes. Examining and supporting instructors' challenges as they teach online courses in terms of external and internal perspectives are important in order to provide balanced support. This study shows that the three instructors were challenged in changing their perspectives about online teaching because of two reasons.

First, instructors still think that online teaching is not effective for classes in which social interactions are needed. Jane and Dan had doubts about the features of the online environment, such as the lack of face-to-face interaction and connections. Some researchers are concerned that online learning cannot provide the quality of education that face-to-face learning provides, for example, interaction between teachers and students, hands-on experiences, collaboration, and quick feedback (Dziuban, Hartman, & Moskal, 2004; Kirtman, 2009). Jane said that it was very difficult for her to teach the literacy course fully online. A lot of literacy learning needs social interaction, but the online environment has limitations in providing those opportunities. She said that when students do not have the social component, they cannot connect all the pieces together. Jane went on to say that she cannot have a lot of control over authentic learning opportunities in the online environment. Dan also thought that ESL/FL practices needed interactive conditions, such as face-to-face discussions and interactions. But within the online environment, it was difficult to create the connections which lead to meaningful interactions. Even though they seemed to be

satisfied with their students' learning and their instruction, Jane and Dan said that they still favored face-to-face instruction. Emma was different because she was sure that if her students could have enough time and opportunities, they could apply their learning to their classrooms; thus this online class would be more effective for her students, who are busy with their professional and personal issues (I will discuss this later).

Second, some researchers have pointed out that online instructors have misconceptions about online teaching (Bocchi, Eastman, & Swift, 2004). Santilli and Beck (2005) indicated that online teaching needs more time and effort for instructors to prepare and teach. Palloff and Pratt (2009) said that some instructors think that simply putting the syllabus, video resources, or powerpoint materials online is their main job. Ramasamy (2009) said that online instructors often assume that students have prerequisite knowledge, so they often face unexpected problems. This study shows that the three instructors had difficulty in changing their misconceptions about online teaching. The three instructors were all concerned about managing time, such as giving feedback, evaluating students' assignments, and participating in discussions. Dan often said that he balanced the course content and assignments because he believed online learning takes time for students. He seemed to limit students' responses in online discussions and the book discussion assignment, so that he could concentrate on his job, such as giving timely feedback. Jane assumed that her students were familiar with the literacy topics and would discuss current literacy issues. But she found that many of her students did not think that literacy is important for a general course, so they could not discuss the issue assertively. Later, Jane said that she did the activity in the face-to-face class, so she assumed that her students could understand the topic and participate in the discussion.

Students' perspectives about online learning. The three instructors commonly said that their students were not ready to take online classes. Online learning environments require different knowledge, skills, practice, and attitudes for students as well as instructors. The instructors also said that their students seemed to believe that online courses were easy because they did not spend more time on their tasks and discussions. Some researchers have pointed out online students' misconceptions about online learning (Bocchi et al., 2004). They said that many students still think that online courses require less work than traditional courses. However, online courses need more time and effort for students' preparation and participation (Park & Choi, 2009; Santilli & Beck, 2005). Susan (2005) argued that students need to change their attitudes and practice habits in order to make their online learning successful. Without changing students' perspectives in the online environment, it is difficult for instructors to change their online instructional strategies and their beliefs about online teaching success.

This study showed that students' preparation for online learning hindered the three instructors' professional learning growth. For example, they all experienced that their students did not respond to their emails, such as asking questions, providing feedback, or noticing task and assignment due dates. With no face-to-face interaction, the instructors and students had to communicate by online discussion tools or email. Because of this, the instructors experienced challenges to their beliefs on the effectiveness of online communication and interaction. Emma said that her students were not good at participating in online discussions and in responding to her emails, which can be important communication tools in the online environment. Emma taught her students how to respect other students' opinions in the online discussion, such as calling their names or writing appropriate comments. Emma also said that some students did not respond to her email in a timely fashion. Because Emma could not meet her students face-to-

face, she wanted to communicate with them by using email or other tools. But when her students did not respond to her, she could not do anything for them.

Dan also had similar problems with that. When he tried to communicate with some students, they did not respond to his email. That is why Dan wanted to use Facebook, because most of the students are using the social media and it is easy to access. Dan used the social media tool in other classes, but he did not mention clearly the effectiveness of the social media tool for his communication. When Jane communicated with her students by using email, she found that they did not read her email carefully. She said that in face-to-face courses, she can correct their misunderstandings and respond to their challenges in her class. Because of the limitations of face-to-face interaction in the online environment, communication was not easy for Jane and her students. But her students were still passive communicators in the online environment. Jane had to send emails again to confirm and notice what they had to do.

School culture about online courses. Palloff and Pratt (2009) indicated that “many campuses, administrators have determined (often with good reason) that it is imperative to move instruction in order to attract and retain students” (p. 31). However, many instructors are struggling with their online teaching because of their increased workload, altered roles, lack of technical and administrative support, the low quality of the course, and negative attitudes (Clay, 1999). In addition, this study showed that the three instructors faced challenges related to school culture. Galbraith and Jones (2010) argued that “the importance of developing a cultural setting that positively contributes to student learning is paramount” (p. 7). They went on say that online instructors need acceptable meeting opportunities in order to share and discuss their learning. This study shows that the three instructors created acceptable cultures in their online classes, but they faced some challenges in creating such online culture.

First, higher education still provides online classes with technology and course experts. As this study showed, having and following the previous model was good for instructors to prepare and develop that course. But in some ways, instructors' flexibility was limited because of that. Gabriel & Kaufeld (2007) were concerned that "some of the online courses developed by instructors who tended to have a transmission perspective on teaching" (p. 320). If schools do not give flexibility to instructors, instructors could face challenges in teaching these courses. Jane and Dan could not change course content easily because the courses were required for some teachers who wanted to receive specific certificates. They could change pedagogical approaches, but not content, whereas Emma had more flexibility in organizing content and structure. Some researchers found that OPD can be effective when instructors have more flexibility in designing and organizing their courses (Collins et al., 2002; Garrison & Cleveland-Innes, 2005). Emma showed more transformation of her knowledge and practice compared to the other two instructors.

Second, online environments need more sharing of culture than face-to-face environments do. This study showed that the instructors were still reluctant to share their lives with students. Jane and Dan had short introduction activities, but they never continued the activities from which they could know and understand each other. Emma tried to break off the culture she knew in this school. Emma said that "I think it's a cultural thing at this university. I've asked some faculty members about it and they've said that yes, that's just generally not how things roll here." She wanted to change the culture related to the relationships between instructor and students in her online class. She said that "I realized that this is not how I want to roll. I've brought my students into my classes. They've Skyped in to say hello. I share silly stories about what my kids have done. I ask for them to tell me what they're up to, too. So that was the one

thing – that instructor to student connection. I want to do a better job at fostering the student to student connection, too.” It seemed to me that her efforts to share her lives with her students made it possible for them to create a sense of community which led to more assertive interaction and discussions.

Third, in order to support successful professional development in the face-to-face and online environments, many researchers have suggested ongoing learning opportunities, such as follow-up practices after finishing the semester (Carlson & Gardio; Green & Cifuentes, 2008; Joyce & Showers, 1988). Green and Cifuentes (2008) examined school librarians in order to understand the effects of follow-up professional development workshops after finishing online programs. They found that follow-up online interactions with their colleagues positively affected their attitudes toward the program. Joyce and Showers (1988) examined successful professional development programs factors, emphasizing follow-up coaching. However, research on the necessity of follow-up discussions and activities during the semester has not been identified (Green & Cifuentes, 2008).

This study also shows that school culture focuses on professional workshops during the semester, not preparation or follow-up activities. The two instructors who had OPD teaching experiences did not have any follow-up learning or reflection opportunities with their colleagues after finishing the semester. The three instructors said that they got evaluations from students, and would think of their suggestions and evaluations in the next semester. This study did not follow their next professional learning. However, in their first interviews, the three instructors said that they did not have preparation meetings or follow-up meetings the previous semester. The schools’ and instructors’ busy schedules seemed to be one of the reasons for that. Having

reflection during and after the semester is important, especially when instructors have such opportunities with their colleagues.

Looking Back on the Theoretical Framework

Instructors' Professional Learning Growth Model

This study looked at instructors' professional learning with learning theory processes. As discussed in Chapter 2, learning theories such as behaviorism, cognitivism, and constructivism have been used to explain learners' knowledge construction. By using the nature of learning constructed from prior experiences, constructed from social interactions, and transformed from reflections, this study adopted learning theory processes for investigating how instructors developed their beliefs and knowledge through their practice.

The results of this study show that knowledge and practice influenced each other a great deal, and knowledge and belief influenced each other little, as shown in Figure 7-1. The figure also shows the three instructors' professional learning growth: it shows instructor's professional learning growth in terms of learning theory processes: constructive, social constructive, and transformative. The inner circle shows the relationships among instructors' belief, knowledge, and practice as a result of his/her professional learning (dotted line means influenced each other little). During their professional learning growth, each instructor's beliefs, knowledge, and practice influenced each other either much or little. The three instructors used the three learning processes in order to develop their professional learning, but the relationships among the three learning processes seemed to be different. The three learning process influenced the instructors' professional learning, but the transformative learning process influenced little, as shown in figure 7-1. Each learning process also influenced each other, but the relationships between constructive

and transformative, and between social constructive and transformative was low (dotted line means influenced each other little).

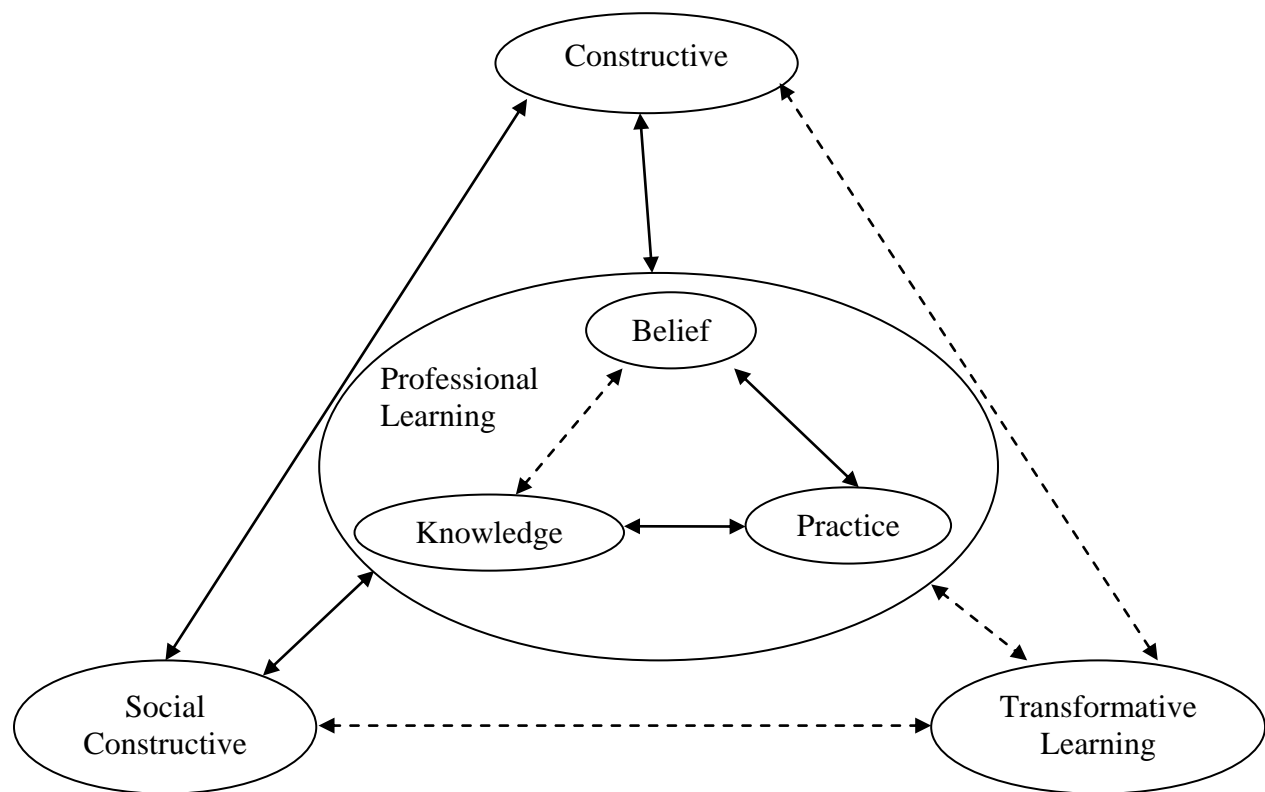


Figure 7-1 The three instructor's professional learning growth

The results of this study show that the three instructors' professional learning was not balanced well. They relied on a specific learning process. For example, Dan experienced constructive, Emma chose social constructive, and Jane was closer to the social constructive and transformative learning approach.

From my literature review, I found that the instructors constructed and developed their beliefs, knowledge, and practice through their professional learning opportunities. However, with the constructive and social constructive learning processes, it is difficult for me to examine and explain the instructors' professional learning growth in the online environment. Because the online environment requires instructors to challenge their previous beliefs, knowledge, and

practice, I thought that the instructors needed a different learning process, such as the transformative learning process. Based on my literature review, I constructed a professional learning growth model in order to confirm my arguments.

However, as the figure 7-1 shows, the three instructors' professional learning growth was not balanced across the three perspectives. I clarified the reasons for this, for example, the lack of formal support, the lack of discussion opportunities, and the difficulties of changing online culture. Based on the results of this study, I found that my previous conceptual framework needed to be modified. First, the three instructors did not integrate the three learning processes. Their learning processes remained individual. For example, Dan did not integrate constructive and social constructive learning process. He examined research and articles, but he did not share or discuss his learning with his colleagues. Thus, I revised my conceptual framework in order to show integration among the three learning processes. Second, the instructors' professional learning could be different because they preferred their own learning styles. However, in order for instructors to develop their professional learning, I assume that they need to develop their professional learning with balanced support for each learning approach (Figure 7.2).

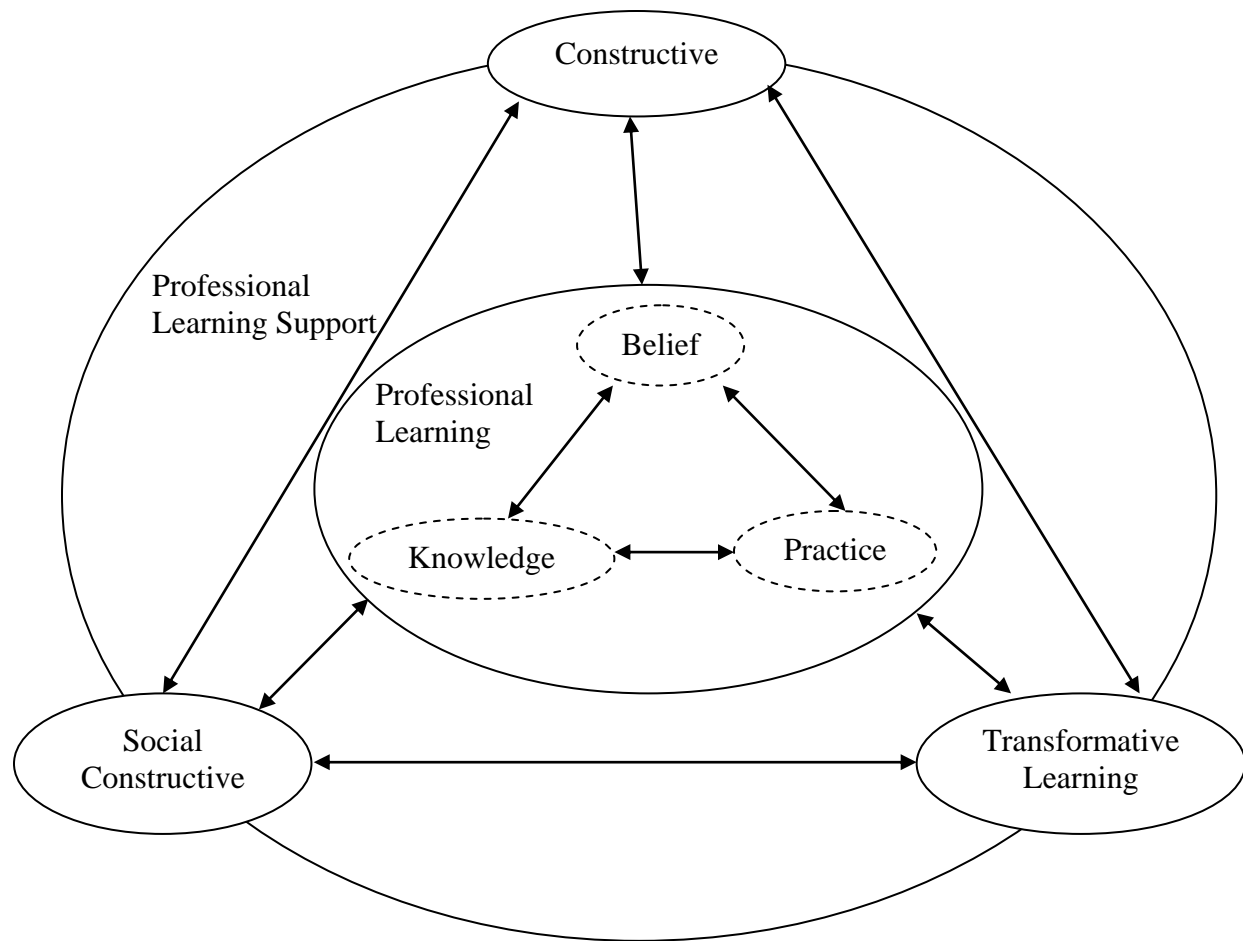


Figure 7-2. Instructor's professional learning growth and support model

The figure 7-2 shows two types of professional learning (inner and outer circle). The inner circle professional learning focuses on instructor's internal growth, such as belief, knowledge, and practice whereas the outer circle professional learning focuses on instructor's support, such as constructive, social constructive, and transformative support. In order to support instructor's professional learning, the following opportunities could be created and provided to them. For example,

- 1) Constructive (C) and social constructive (S): instructor participates in workshops (S) and develops/constructs his/her professional learning (C).

- 2) Constructive (C) and transformative (T): instructor does self-study, such as reads articles and books (C) and challenges his/her previous knowledge and practice (T).
- 3) Social constructive and transformative: instructor participates in workshops (S) and challenges his/her previous knowledge and practice (T).
- 4) Constructive, social constructive, and transformative: instructor participates in workshops (S), challenges his/her previous knowledge and practice (T), and constructs/develops his/her own professional learning (C).

Another important aspect I revised in my previous conceptual framework is to give more flexibility to instructor's belief, knowledge, and practice. The results of this study showed that the three instructors not only developed their beliefs, knowledge, and practice but also challenged and changed them. According to their instructional experiences and professional learning, the three instructors' beliefs, knowledge, and practice seemed to be changeable (the dotted line means that they are not fixed). Based on the results of this study and the revised conceptual framework, I suggest some implications for future research in the next chapter.

CHAPTER 8

IMPLICATIONS

This study examined how instructors developed their professional learning as they taught OPD (online professional development) courses, focusing on their learning processes, their supports, and their challenges. This study showed that the three instructors solidified their beliefs, built up their knowledge, and challenged their practices. By using learning theory perspectives, I examined their professional learning processes in order to identify their supports and challenges. The results of this study showed that the three instructors developed their knowledge and practice with informal and formal supports, such as meeting previous instructors or participating in workshops. The study also showed that the three instructors experienced challenges in improving their professional learning because of external factors, such as the lack of support, the lack of interaction opportunities, and the lack of time. In addition, this study pointed out instructors' internal perspectives, such as negative perspectives about online teaching, students' unpreparedness, and online culture.

Implications for Practice and Future Research

What do I want to argue from this case study? What did I learn from this study? What do I want to study more? Before suggesting implications for my study, I go back to my research interest when I began this study. I had various professional experiences, as a professional development coordinator and instructor in face-to-face and online environments in Korea and with participants in America. My positive and negative experiences challenged my research interests, such as how instructors develop their knowledge, beliefs, and practice; what challenges instructors face; what support instructors need; and are we ready for providing OPD programs and courses, and teaching instructors who will teach them.

Implications

The current study examined for one semester the three instructors' professional learning as they taught OPD courses at a Mid-Western university including how they developed their professional learning while preparing and teaching their OPD courses. The results of this study suggest practical implications for supporting online instructors' professional learning while preparing, teaching, and reflecting on their OPD courses that require further research to examine whether and how they actually support professional learning.

Implications for online instructors. Online environments require instructors to have flexible values, knowledge, and practices in teaching online classes. As discussed in chapter 2, Palloff and Pratt (2009) argued that online instructors need to challenge their previous values, knowledge, and practices about online teaching by experiencing, reflecting, and discussing. Baran et al. (2011) indicated that instructors also need to adapt or modify their structure, instructional strategies, or plans more flexibly according to students' feedback, their own reflections, and their professional learning before, during, and after teaching online courses. This study shows that the three instructors seemed to rely mainly on their informal preparation. Further study of a larger number of online instructors is needed to understand whether and how reliable and supportive relationships between instructors and students should be built, sustained, and improved.

This study showed similar results with the findings of Duncan and Young's (2009) study. They examined what challenges instructors have as they teach online classes. The participants in their study were struggling with creating supportive online learning environments for students' participation and their connections and interactions. However, Duncan and Young indicated that the participants adapted their online courses creatively and friendly for their students. As Duncan

and Young argued, instructors need to know and implement how they can create such positive, supportive, and reliable online learning environments. My study shows that the three instructors created their online learning environment differently, such as having video chatting, synchronous written discussions, and asynchronous discussions. Further study can investigate how various online environments influence students' learning and their participation in such environments.

Second, instructors are adult learners who need to develop continually their professional learning (Mezirow, 1991; Taylor, 2008). Baker, Boggs, & Arabasiz (2003) argued that instructors need to participate in discussion opportunities because discussions help the instructors challenge their prior thoughts and generate new ideas and approaches. Cranton (1996) also valued discussions with colleagues because the discussion leads to instructors' own critical reflections which help them challenge and modify their perspectives. In order to develop their values and practices about online teaching, the three instructors needed to have transformative learning opportunities, such as having meetings and collaboration opportunities, and by participating in workshops or seminars. Instructors can reflect on their online instruction, and share their reflections in the online website which only instructors can see. This study did not examine how transformative learning opportunities influenced instructors' beliefs, knowledge, and practice which could lead to students' learning because the three instructors had few those opportunities. Further study needs to study what opportunities are effective for transformative learning in online environments.

Implications for OPD coordinators. Based on what the three instructors reported might have been beneficial to their professional learning, OPD coordinators and designers should provide formal supports, such as preparatory training programs, ongoing support systems during the semester, and follow-up reflection opportunities. OPD coordinators need to know what

online instructors need and what support they want. OPD coordinators could ask the new online instructors to have online teaching and learning experiences before they teach OPD courses. New online instructors could have online co-teaching experiences with experienced instructors. Many institutions have provided these opportunities in face-to-face courses; online instructors also need such experiences. OPD coordinators should find some volunteers for supporting new online instructors, and they also need to think about the volunteers' encouragement, such as reducing their responsibilities or providing them financial support. These days, many new instructors already have online learning experiences in higher education, but many experienced instructors still seem not to have online learning experiences. Having instructors take an online course could be a good strategy for them to understand online learners. Further study can examine the effectiveness of online, face-to-face, or blended (the combination of online and face-to-face) professional development programs. Face-to-face professional development programs could be effective, but as Dan said in this study, taking OPD courses could be better than taking face-to-face professional development.

Second, while Puzziferro and Shelton (2007)) have argued that matching mentors and mentees before and during the semester is also important for their preparation and growth, the context for this study did not provide the opportunity to examine this issue. While teaching online classes, online instructors could face difficulties which they may want to discuss with experienced instructors. Parscal and Florence (2004) discussed the effectiveness of online instructor mentors to support new or novice instructors beyond formal professional development. They reported that the mentors helped the new or novice instructors improve their online instruction by interacting with and coaching them. This study showed that the three instructors wanted mentoring systems for their professional learning. They did not have any formal

mentoring systems before they prepared their online classes. Further study can compare students' satisfactions or learning taught by online instructors who have or do not have mentors.

Third, many researchers have argued that it is important to provide various workshops and to encourage online instructors to participate in those opportunities before, during, and after their online teaching (Green & Cifuentes, 2008; Joyce & Showers, 1988). However, most of the opportunities are limited to workshop or seminars. OPD coordinators could design the professional development variously, such as self-paced online tutorials, individualized and specific workshops, or mentor-mentee programs. Instructors are busy teaching and managing students as well as doing school work, so they need more options from which they can choose. Therefore, future study can compare instructors' satisfaction and their professional learning according to their engagement in an online professional learning community.

Fourth, OPD coordinators also need to provide follow-up workshop opportunities. Follow-up workshop opportunities could help instructors reflect on their teaching, discuss their experiences with other colleagues, and revise their courses in the future. Smith (2005) argued that follow-up workshops could produce positive outcomes because the instructors could reflect on their teaching and have students' evaluations. By having follow-up workshop opportunities, OPD coordinators can understand the effectiveness of their support programs and online instructors' experiences and opinions. OPD coordinators also can prepare their professional development programs or preparation programs for the future. Further study can examine what instructors learn or how they develop their beliefs, knowledge, and practice before and after having follow-up reflection opportunities.

Fifth, some researchers have said that creating and sustaining a professional development program costs a lot. Instructors are also busy seeking such support or engaging in programs.

Thus, creating online websites for instructors could be an alternative method for OPD instructors and coordinators. If the website has exemplary online teaching structures, online learning theories and resources, and students' feedback and evaluations, instructors can use it easily. Jane and Dan had a syllabus they had to teach, which was constructed by experts. Dan said that his course was designed by EFL/FL experts; thus he followed their course structure, assignments, and their suggestions. Emma did not have a specific syllabus constructed by experts. Because Emma did not have any formal support from the department, she had to prepare her class by herself. Nonetheless, the three instructors prepared and taught their online classes by taking advantage of their own resources and informal support opportunities. This study showed that the three instructors chose their own learning process. Further study can examine the differences between formal and informal support related to instructors' professional learning of their knowledge and practice .

Implications for Korean online professional development programs. Although this study was conducted in an American context, it also has implications for Korean online professional development programs and for future research. Professional development programs for Korean K-12 teachers have been provided as ways for teachers to improve their knowledge and skills, and to upgrade their teaching certificate (Ann, 2010; Kwon, Park, & Choi, 2008; Yang, 2009). Ann (2010) said that Korean English teachers have developed their instructional perceptions and practices through professional development programs. Yang (2009) examined English teacher learners' experiences when they took professional development courses in the Korean context; he found that the participants developed their English knowledge and practice, but he also found that they were challenged in developing their experiences because of time constraints and lack of skills or training. Since 2007, the Korean Ministry of Education has

required every teacher to take 90 hours a year of professional development after they have experienced three years of teaching (Kwon et al., 2008). Korean teachers should show evidence of taking professional development courses in order to satisfy the government's demands (Kwon et al., 2008).

Korean distance education for teachers has been provided since 1972, but internet-based professional development programs started in 2000 (Lim, Lee, & Lim, 2005). Lim et al. (2005) said that the number of teachers taking OPD programs will keep increasing. But many of the OPD programs have been provided by local governments. Lim et al. (2005) examined current Korean online professional development programs from 2003 to 2005, and they found that local government-based programs were increasing, but private and public higher education-based programs were declining. In addition, they reported that many OPD programs still had a lot of problems, such as the lack of an effective curriculum, the challenges of technology and systems, and the lack of support. Even though current OPD programs have some limitations, some Korean researchers have reported the effectiveness of the programs. Kim (2009) examined how teachers experienced their professional learning opportunities by doing action research. She indicated that online distance learning is one of the best practices for their professional learning. She went on say that the participants developed their practices when they participated in action research during their professional development.

This study has some implications for current Korean OPD programs in several ways. First, this study focused on instructors' professional learning and how to support them. As the results of this study suggest, the balances between formal and informal supports could be effective for Korean OPD instructors, but further research would be needed to understand more fully what this would look like and how it would influence professional learning in Korea. Most

Korean OPD programs have been provided by local governments rather than by higher education. This means that most OPD instructors are K-12 teachers who participate in designing and teaching OPD programs. When OPD instructors have preparation, ongoing learning, and follow-up reflection opportunities, the OPD programs can be more effective. Korean local governments need to prepare and provide formal and informal supports for their OPD instructors in order to understand what types of supports are effective and easy to provide.

Second, this study focused on instructors' thoughtful adaptations and their transformation about online teaching. Many Korean OPD programs have been provided in self-study modes; thus there are few interactions between instructors and teachers, and between students. As current research shows, Korean OPD programs need to create interactive online learning environments and challenge previous OPD formats and OPD instructors' thoughts about the programs in order to interact with and learn from each other. Third, because of self-study modes, many Korean OPD programs do not have online instructors who can be in charge of the programs and support K-12 teachers. Therefore, Korean local governments need to provide various OPD opportunities, such as self-study modes, lecture style modes, interactive modes, or hybrid (online and face-to-face meeting) modes. Further study can investigate what types of OPD opportunities are effective, why participants choose certain OPD opportunities, and how their choices influence their satisfaction or their students' learning.

Implications for current research. This study provides further insight into how instructors develop their beliefs, knowledge, and practice as they teach OPD courses as well as identifies their challenges and necessary supports. This study has some implications for current research. Current research on OPD has mainly focused on four issues: 1) it studies how to develop technology resources and instructional strategies in online environments by using

content classroom management systems; thus, researchers need to pay attention to participants' creative use and learning, 2) related to the first issue, current research focused on examining students' satisfactions, attitudes, and beliefs about online learning; thus, researchers need to examine instructors' professional learning and growth, 3) it studies mostly online courses for pre-service teachers; thus, researchers need to look at in-service teachers' contexts because pre- and in-service teachers have different context, such as educational backgrounds or their status, and 4) studies of instructors' experiences by using summative evaluation methods, such as conducting a final interview or a survey; thus, researchers need to triangulate their findings, such as by using interview, observations, and document analysis (Clary & Wandersee, 2009; Conceicao, 2006; Dirkin & Mishra, 2010; Maguire, 2005). This study had some contributions to reduce some gaps and limitations current research has.

First, this study extended the topic of research on online learning from technology issues and students' experiences to instructors' experiences and perspectives in online environments. There were some studies focused on instructors' experiences in OPD context, but their studies had some limitations. For example, Dirkin and Mishra (2010) examined three instructors who were teaching OPD courses. They investigated how instructors' beliefs and values played out in their online courses when they taught a school-provided content management system (Angel). They investigated the three instructors' lessons by using a triangular method, such as semi-structured interviews, written discussions, and course materials. They indicated that a standardized online course format, such as a school based content management system could impede instructors' creative and unique instruction in online environments. But in their study, Dirkin and Mishra found that the three instructors adapted the same online course format to their

own contexts. The authors concluded that instructors' previous beliefs and knowledge with online learning made them re-purpose their classes.

The findings of their study were consistent with my study in that the three instructors' previous beliefs and knowledge influenced their practices. For example, my study showed that Emma believes that making relationships with students impacts students' learning; thus, she implemented Skype, allowing for more interpersonal types of interaction. Dirkin and Mishra's study also focused on the instructors' adaptation, not describing what challenges or motivations made them adapt their instruction and what supports made it possible. My study examined how instructors described what challenges motivated them to change their practice. For instance, my study showed that Jane changed her communication tool from asynchronous to synchronous chat in order to avoid artificial discussions.

Russell et al. (2009) examined what types of supports teachers need as they take OPD courses, and how the supports influenced their learning outcomes, such as their beliefs, practices, and understanding of their courses. They found that a well standardized online course and high quality learning materials were effective in OPD courses. Their study explained the necessity of support, and compared the differences between standardized and free-developed online courses. But they focused on the design format of online courses and teachers' learning growth rather than instructors' perspectives.

Glass (2013) examined sixteen instructors who were teaching undergraduate online classes. He investigated instructors' professional learning and growth by using survey and interview methods. He divided the instructors into three groups according to their online teaching experiences. He analyzed the instructors' professional growth based on their engagement, such as engaging their own work, engaging their own values, and engaging discussions with others.

Glass noted that instructors' professional growth was improved through social interaction. His study described instructors' professional learning in terms of instructors' own learning and social interactive learning, but this study did not explain instructors' creative modification or transformation of their instruction. I added one more learning theory, transformative learning, in order to explain the process of challenging and modifying their learning. My study showed that the three instructors developed their beliefs, knowledge, and practice through their own reflections and social interactions with other colleagues. In addition, they challenged and changed their previous beliefs, knowledge, and practice when they faced unexpected things in their online classrooms.

These three studies (Glass, 2010; Dirkin & Mishra, 2010; Russel et al., 2009) focused on how instructors' beliefs and values played out in teaching online classes, however, they did not explain what challenges they experienced in playing out their beliefs and values, and what supports they wanted. In my study I showed not only how instructors' beliefs and knowledge played out in their practices but also what challenges and supports they wanted during their instruction. For example, Emma played out her beliefs (human connections) and knowledge (TPACK) as she taught her online class. In addition, this study showed that Emma wanted professional development opportunities for learning technology tools for human connections and developing technology related theory for TPACK framework before and during the semester.

Second, I extended the participants' level from undergraduate to graduate online courses, especially online professional development courses. This study examined the professional learning of instructors who are teaching in-service teachers. Instructors' instructional approaches could be different based on whether their students are pre- or in-service teachers because they take classes with different purposes and knowledge. This study examined instructors who were

teaching OPD courses. The instructors' students were mostly in-service teachers who were teaching K-12 students. Thus, this study showed that the three instructors seemed to use the students' contexts, such as designing and applying lessons to their classrooms and sharing their educational experiences with other cohorts. Emma stated the purpose of her course clearly. She said, "I'm working with teachers and if they can't take what they're learning and apply it into their classroom with their students, I feel like I'm not doing a good job serving them. That's why they're here – to learn and be better teachers." Emma provided assignments her students can apply and discuss, such as 'tech tools' (share technology use experiences after applying them in classrooms). This study implied the possibility of using in-service teachers' resources and experiences in OPD context.

Biro (2004) examined 24 instructors in order to examine their perceptions and expectations when they teach online courses by using interview and survey methods. Based on her findings, Biro suggested important implications, such as the necessity of training, mentoring, and professional development. Biro's study is important in that she examined instructors' challenges, and suggested some possible supportive programs for reducing such challenges even though her study was conducted in an undergraduate online course context. My study also showed that the three instructors experienced challenges when they prepared, taught, and reflected on their online classes. As Biro's study showed, my study showed that the three instructors wanted continuous support, especially during and after their teaching.

Third, this study is a case study that used a triangular research method, such as integrating observation, written documents (reflection notes), and interviews rather than doing a single research method, such as survey or interview. Lao and Gonzales (2005) interviewed six instructors in order to understand their attitudes, perceptions, and experiences about online

instruction. From analyzing the interviews, the authors indicated that “a more structured guideline for training and recruiting” (p. 470) prospective online instructors is needed (p. 470). Even though they found that instructors need support, such as training and providing guidelines for online teaching before, during, and after the semester, they did not explain what challenges the instructors experienced and why the support is needed. Because their studies relied on the instructors’ final interview only, they did not explain their practices related to their challenges as they were in the process of teaching. My study followed the three instructors’ learning and experiences over time. For example, my study showed that examining their reflections on their teaching is necessary in order to understand the instructors’ learning and challenges as they teach online classes. This provided me with an opportunity to see what came up for them as they were teaching.

As another example, Lackey (2012) examined six instructors in order to understand how instructors prepare their online teaching. By using purposeful sampling strategies, she selected and interviewed 6 instructors. She found that the instructors wanted collaboration with colleagues, one-on-one assistance, and training for their preparation. In addition, she found that the instructors faced technology challenges, and it influenced their course development. Lackey pointed out the necessity of preparation for instructors’ online teaching, but she did not explain instructors’ support during and after the semester. Instructors need ongoing support because they could face challenges before, during, and after their teaching. In order to understand instructors’ learning and challenges over semester, my study examined their preparation, and also their ongoing learning during and after their teaching.

Hurt (2008) and Santilli and Beck (2005) investigated instructors’ experiences focusing on their challenges and difficulties. But they did not explain where they experienced such

challenges and how they modified them. Because they (Hurt, 2008; Lackey, 2012; Santilli & Beck, 2005) relied on one data source, one interview, which asked their preparation, these authors did not identify instructors' ongoing support after their preparation. In this study, I triangulated my data by using three data analysis, such as observation, written reflections, and interviews. This study showed that the three instructors experienced challenges in their preparation, during their teaching, and after finishing their courses. In addition, this study explained what types of supports the three instructors wanted; they wanted mentoring, professional development opportunities, and training in their preparation, they wanted ongoing learning opportunities for updating and sharing their information and resources and transformative learning opportunities for challenging their ideas and instructional strategies during the semester, and they wanted follow-up reflecting opportunities on their teaching after the semester.

Limitations of the Study

This study implied that researchers need to study instructors' professional learning in online classes and their challenges and supports (Bolliger & Wasilik, 2009; Conceicao, 2006; Lawless & Pellegrino, 2007; Peruski & Mishra, 2004). This case study selected three instructors because they can show new and experienced instructors' various professional learning experiences; for example, they taught different subject matters, used different content management systems, and utilized different technologies. Although this study provided some findings about the instructors' professional learning processes, their challenges, and support, more research is necessary for supporting OPD programs and OPD instructors. Future research could be focused on six areas.

First, this study examined three participants (one new and two experienced instructors) from one department at a single university. It is possible that the findings could be different based on different programs in a single department. In addition, examining instructors who do not have any online teaching and learning experiences could also be interesting. Examining how new instructors or experienced instructors prepare their online courses is also a good research topic.

Second, this study focused on online instructors' professional learning, but it also could study online students because the students are K-12 teachers who are teaching K-12 students. The K-12 teachers need to understand K-12 students' online learning because students are important factors for online learning. K-12 teachers need to understand that online students also need to change their attitudes and practice when they take online classes. Online environments also require students to have different knowledge and skills, such as online communication skills, showing etiquette and respect online, and independent and cooperative learning styles. Therefore, future study should examine how instructors' professional learning influences students' (K-12 teachers) knowledge and practice.

Third, this study was conducted for only one semester. The long-term effects of participating in online teaching could influence their professional learning. This study did not examine the participants' follow-up professional learning because they did not have those opportunities, and this study was limited to one semester. As I discussed, instructors' follow-up professional learning opportunities could influence their preparation in the future. Therefore, examining their preparation, teaching, and follow-up practices could provide information about and insights on instructors' professional learning processes in more detail.

Fourth, this study implemented a multiple case study. Merriam (1988) mentioned that “the case study offers a means of investigating complex social units consisting of multiple variables of potential importance in understanding the phenomenon” (p. 41). Even though this case study identified the three instructors’ complicated contexts, and various factors for their professional learning and challenges, a mixed method study could measure instructors’ professional learning, especially changes and construction in their beliefs, knowledge, and practice.

Fifth, this study selected samples by using convenience and purposeful sampling strategies. In order to understand how instructors’ professional learning influences their practice, researchers can select samples by using various sampling methods. For example, this study selected three instructors, who used different content management systems, who taught different subjects, who have different online teaching experiences, and who were assigned to teach online classes. Therefore, future study could select samples considering other variables in order to examine instructors’ professional learning, their challenges, and their transformation. For example, researchers could study 1) instructors who have never had online teaching experiences in order to understand how new instructors develop their beliefs, knowledge, and practice with their own professional learning process, 2) instructors who teach the same subject and use the same content management system in order to examine how their previous beliefs and knowledge influence their online instructions, and 3) instructors who teach pre-service and in-service teachers in order to understand how such teachers’ background and learning purposes influence the instructors’ online teaching and professional learning.

Sixth, this study examined online instructors in the American context. Future research could expand to include other countries. I would like to investigate Korean OPD programs, OPD instructors' experiences, and their professional learning.

Conclusion

Much research has been interested in designing OPD course models and technology tools, but few studies have focused on participants' creative use of technology and their contextualized professional learning process. Therefore this study tried to find some gaps from my literature review. First, this study focused on instructors' professional learning rather than students' learning or experiences. Second, it followed instructors' professional learning from their preparation to their follow-up learning. Rather than doing surveys or interviews at the end of the semester to ask about their reflections, this study tried to follow the three instructors' professional learning process before and during the semester. Third, it paid attention to the three instructors' professional learning supports and challenges as they taught OPD courses. It especially investigated their challenges in terms of learning theory perspectives, focusing on the challenges of transforming their internal perspectives, such as online culture.

This study shows that the three instructors did not change their beliefs much; rather they solidified their beliefs, such as valuing the importance of discussions, connections, and interactions. They also showed that their content and pedagogical knowledge improved. They adapted their practice rather than changing it rapidly. They still sustained their original strategies and practice in many ways. It was not clear that the three instructors will change their practices when they teach in the next semester. In this study, the three instructors showed some changes in their practices, but this did not mean complete transformation of their professional learning,

because rather than transforming their practice or using new technologies, they seemed to think how to adapt.

The results of this study also show that the three instructors experienced challenges in developing their professional learning, such as the lack of support and collaboration, the lack of time for reflection and self-study, and the lack of technology development opportunities. Tang (2003) said that “challenge and support are complementary” to teachers’ professional learning. Examining and supporting teachers to overcome these challenges are necessary for understanding teachers’ professional learning.

This study also showed some challenges of instructors’ professional learning. One of the important purposes of professional learning is to change learners’ frames of reference, which refers to previously held assumptions, beliefs, or core structure and methods (Mezirow, 1996). In this study, two instructors (Jane and Dan) had passive thoughts about learning and applying technology online because they did not like using technology online. Even though OPD environments require teachers to shift their learning process from a linear to a multi- and integrated process, it seemed not appropriate for the three instructors to change or challenge their previous knowledge or practice.

Tye (2000) also points out this challenge with another term, deep structure. She defined deep structure as “a barrier that inherently makes it difficult to change curriculum” (p. 3). She explained that deep structure has two sides: one is “the complex of accepted educational policies and practices existing at any given historical moment in a culture.” and the other is “conventional wisdom that impedes innovation and progress in the curriculum” (p. 37). Deep structure in this OPD context provides strong and stable structures for instructors and teachers, but it also hinders participants’ creative teaching and learning. This study suggests that educators and teachers need

to discuss further what a ‘culture of deep structure’ is in OPD courses, and how to transform the barriers. In order for instructors to challenge and transform their beliefs, knowledge, and practices, they need preparation, ongoing support, and follow-up reflection opportunities for using critical reflection, practice, and discussion.

APPENDICES

APPENDIX A First Semi-Structured Interview Questions

Background Information

Hello, my name is Jung-Jin Kang. I am a doctoral candidate in the Teacher Education at Michigan State University. I am working on my doctoral dissertation entitled “*Instructors’ Transformation Learning Process on Their Beliefs and Practices in Online Professional Development Courses.*” My study examines what professional learning in Online Professional Development (OPD) courses looks like from the instructor’s perspective.

General Information

Thank you for participating in this research. Today, I will ask about your previous OPD course experiences. Then we will explore your learning to teach OPD courses.

1. Could you tell me your name and your teaching experience in K-12 and other universities? (K-12 and other university. We will talk about your MSU teaching experience soon)
2. Could you tell me about your face-to-face teaching experiences in this university? When and what courses did you teach?
3. Could you tell me about your online teaching experiences in this university? When and what courses did you teach?
4. What is your current position? How long have you been in that position?

Online Master (OM) Course Experience

5. When you think of your teaching experience in the OM course you taught in the past

5-1) What were important elements (skills or knowledge) for your online teaching? (e.g., course content, teaching experience, technology skills, online teaching skills, management skills and so on).

5-2) What was the most difficult aspect of teaching the OM course?

5-3) Why? How did you know? How did you solve it?

5-4) Could you tell me about one of the most effective lessons? Could you tell me about it in terms of course content, teaching experience, technology skills, online teaching skills, and so on)?

5-5) Could you tell me about one lesson you would improve in your online teaching? Could you tell me why and how did you change it?

6. Could you describe the structure of the course you are currently teaching?

6-1) How is this different from the face-to face course(s) you have taught in the past? (e.g., instructional strategies, group work, assignments, participation, grading and so on)

6-2) How is this different from the online master course(s) you have taught in the past? If it is different, why did you change it?

7. How and why did you design the current course the way you did?

7-1) Did you design the course by yourself, or were you expected to follow a course design created by a previous instructor or institution?

7-2) What did you add to or delete from the current course? How did you do that? Did you get any meeting or support?

7-3) If you remember the important elements for your online course, what would be the most difficult element for teaching this course? Why do you think so? What is your plan?

7-4) When you think of your current course, do you have any activities you are concerned about? Why do you think so? What is your plan?

Instructor's Professional Learning

I would now like to talk about your professional learning from the OM courses. Researchers have said that instructors, as learners, develop professional learning from their teaching experiences. Here is the definition: ***“Professional learning is the application and use of new and different sources of knowledge, often derived through engagement in professional development in order to develop belief and practice”*** (Pedar et al. 2007).

8. Considering your learning from the course you are teaching now, or from those you have taught in the past, what and how are you learning? Could you give me one example?

8-1) Did you learn by yourself? For example, studying research or reading articles or journal. How did this learning help your professional learning?

8-2) Did you learn by discussing with your students, cohorts, or instructors? How did social interaction help you your professional learning?

8-3) Did you change your beliefs or practice after reflecting on your teaching? How did your reflection help your professional learning?

8-4) What other ways did you learn?

9. What impact has this professional learning had on you?

9-1) Did you change your beliefs about teaching (technology, literacy, or foreign language) in online environment? How did you change it?

9-2) If not, are there any reasons for not changing your beliefs about teaching (technology, literacy, or foreign language) in online environment? How did you solve the issues?

9-3) Did you change your practices about teaching (technology, literacy, or foreign language) in online environment? How did you change it?

9-4) If not, are there any reasons for not changing your practice about teaching (technology, literacy, or foreign language) in online environment? How did you solve the issues?

10. What professional learning process do you prefer? What supports (from your institution, your department, your course instructors/cohorts/program designers, or others) do you have, are missing, do you wish for your professional learning and your online teaching?

I appreciate your interviews. At the end of the semester, I would like to meet and interview you one more time. I will contact you. Have a good day.

APPENDIX B Second Semi-Structured Interview Questions

Background Information

Hello, [name]. I appreciate your support this semester. Congratulations on finishing your teaching this semester. Today, I would like to talk about your professional learning in teaching this course. I also would like to ask some questions regarding your written reflection and your online instructions.

Reflections on your OPD course

1. Could you take me on a tour of your OPD course?

1-1) what was the structure of your course like?

1-2) how and why did you structure the course in that way?

1-3) when you taught this OPD course, how was it different from your previous OPD courses?

(e.g., planning, group work, assignments, participation, grading and so on)

2. When you think of your OPD teaching:

2-1) what instructional strategies have you found to be effective or ineffective? (Start from one effective strategy, assignment, and tool)

2-2) what assignment have you found to be effective or ineffective?

2-3) what tools (Angel, Wiki, or Blog) have you found to be effective or ineffective?

2-4) how did you engage in that course for responding to students' discussion or work?

Ok, let's talk about your professional learning. Beforehand, I would like to remind you of professional learning.

Instructor's Professional Learning

Could you look at the definition of professional learning in this research context again?

“Professional learning is the application and use of new and different sources of knowledge, often derived through engagement in professional development” in order to develop their belief and practice (Pedar et al. 2007).

3. If you adapted/changed course content (or if you thought you needed to adapt/change course content), could you tell me one example?

3-1) what content was it?

3-2) why did (do) you think that you need to change that?

3-3) how did you know that you needed to adapt/change it ?

3-4) when you adapted/changed the where did you get support for the adaptation/change?

3-5) anything else you decided to adapt/change, such as deliver methods?

3-6) what can help you adapt/change your decision in the OPD course?

4. How do the following activities influence your adaptations?

4-1) online discussion

4-2) learning communities for instructors?

4-3) written reflection for this course?

5. Could you tell me whether this adaptation was new or different from your prior experiences?

5-1) if so, how was it different?

5-2) if not, did you experience the same challenges?

6. Compared to your initial thoughts in the beginning of this OPD course,

6-1) have you changed your beliefs from this OPD experience? If yes, how and why?

6-2) have you changed your practices from this OPD experience? If yes, how and why?

6-3) how will you think your changed beliefs and practice influence your next OPD course?

7. What do you think of your professional learning development after finishing this OPD course?

7-1) in which way did you develop your professional learning

7-2) did you have any opportunities to talk about your OPD course? Could you tell me about them?

8. What suggestions might you have to facilitate professional learning for instructors in OPD course?

I really appreciate your cooperation. Please let me know if you have any questions about this interview

APPENDIX C Written Reflection

Table C-1 Talk about course activities

	Why did you this?	After doing this I learned...
Online surveys in Week1		
“Go to Group” in week 2		
“Skype chatting” in week 4		

Table C-2 Talk about instructor’s activities

	Your answers
In week3, no students responded to other students’ opinions. What do you think of this? How did you solve it?	
In week4 email, you said “I tried to provide a variety times/dates in the upcoming weeks, in order to accommodate different schedules and time zones” What did you learn from this?	

Table C-3 Reflection on instructor's teaching

	Can you think of one lesson which was good?	Can you think of one lesson which wants to improve
What was the lesson or activity/assignment? Why do you think this lesson was good (or need improvement)?		
What expectations did you expect this lesson? How did they influence what you did?		
I learned this when/by/through/from... (e.g., reading articles, discussing with someone, participating in workshops, and so on)		
How did this learning/experience transform/modify your prior beliefs and practice?		
Can you explain the problems and your suggestions?		

APPENDIX D Written Reflection Example (Emma)

Table D-1 Emma's talk about course activities

	Why did you this?	After doing this I learned...
Online surveys in Week1	To get to know my students, their backgrounds and what they already know/do related to technology. I also wanted to know what they wanted to learn more about, so that I could tailor some of my instruction and some of the information I provided throughout the course to meet their needs. This class, from my perspective, should provide students with theoretical and applicable learning and tools. If I know my students, who they are and what they're interested in learning, I think I can do a better job of providing resources and instruction that will meet their needs and promote learning.	I realized that I had a diverse set of students (i.e., they live all around the world; they have varying levels of teaching experiences; they teach different levels of students, etc.). I also realize that many of them didn't know as much about different technology tools as I had anticipated. This was good for me to know/realize, so that I could be sure to build in examples and tutorials when/where necessary. This survey also allowed me to get a "sense" of each individual as well as the class as a whole before we officially started the semester.
"Go to Group" in week 2	I realized that many of my students know a lot about technology and have some good ideas. One student, in particular, helped me figure out an issue we were having with the wiki (i.e., students accidentally deleting others' posts on a page) and she gave me some feedback. I also realized that I didn't want to be the only person students asked, when they had questions – that's a lot of questions, potentially, to answer and I wanted my students to interact with each other, outside of discussion posts and other assignments. I also value connections between students and teacher/students, and the go-to-groups were one way I could foster these connections.	That I'm glad I did this. ☺ In talking with my students via skype and via email, many indicated that they were using these groups and appreciated having someone else to ask before asking the instructor (a couple of students indicated that they didn't want to ask me, their instructor, a lot of "dumb" questions and that they felt more comfortable asking their peers). Because I had assigned them to groups and encouraged them to use these groups, I think it makes it an easier entrée into the group and using the group; since it's "assigned," it's now "ok" to contact others. A lot of online classes focus on student-teacher interactions and I want to be sure that this class has as much student-student interaction as possible. The go-to-groups are one way to do this.

Table D-1 (cont'd)

<p>“TPACK narrative survey”</p>	<p>This assignment was created by a previous TE 831 instructor and follows the assigned reading for the week. So, this became a good follow up assessment for students. I also followed this previous instructor’s format and ideas (making it a pass/fail assignment to relieve possible pressure students may feel to “inflate” their TPACK if the assignment was graded. Because it’s pass/fail, then they could answer the questions (hopefully) honestly without worrying about what I (or their peers) thought. I also wanted to include an element of reflection after reading about theory – something that takes time to think about and develop an understanding about, so the narrative survey was one way to do this and connect the course content to each student and their context(s)/learning.</p>	<p>I learned that I shouldn’t have called it a “survey” (which is what the previous instructor called it); students were confused b/c they thought that they had to take a survey. It should’ve been a “response” – and while this is a minor thing, it’s something I need to think through (in terms of what/how I label assignments, especially since I’m not able to always talk to students in person, as in a face-to-face class, to clarify misunderstandings).</p> <p>I also learned that my students, by and large, felt most comfortable with their PK and TK, more so than their CK. At the same time, some of them also talked about how their TK needed to be improved/expanded so that they could more readily meet their students’ needs. And, they noted that their TK, in some cases, was limited by the technology available to them. Overall, this was a helpful assignment – not only for students (b/c they had to think about this theory in relationship to their own lives/teaching/learning) but also for me, as their instructor. It offered opportunities for me to respond individually to their ideas/thoughts as well as learn more about what they believe to be their strengths and weakness, at least as it connects to the TPACK framework.</p>
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Table D-1 (cont'd)

<p>“Skype chatting” in week 4</p>	<p>I had a couple of “short” email interactions with students that frustrated me (i.e, a student emailed me an hour before as assignment was due and told me that he was gone for the weekend and didn’t have Internet connections so he wouldn’t get to the assignment until later; I also had a couple of students not respond to emails I sent). I also realized that I didn’t have a very good “sense” of my students, individually. I missed the face-to-face, real-time interactions with my students (which I’ve always had in face-to-face teaching). This is one of the things I love about teaching: meeting and connecting with students, learning about who they are and what they’re learning and, when necessary, helping them with things they struggle with. I wasn’t able to do this with the way I set up this class. So, I talked to another online instructor and she told me that she has, in the past, required students to attend one office hour at some point in the semester, usually via Skype or online chatting. I decided to go ahead and require each student, within the span on two weeks, to participate in a 1:1 Skype conversation with me. I used a doodle poll to set up times and students then selected a time that worked for them (I tried to pick times that worked for multiple time zones).</p> <p>This also allowed me to check in with each student before the first “big” assignment (i.e., digital story) and also to see how the class is going for them, as well as connect with them on the things they noted that they wanted to learn (info they filled out in the initial survey, before the class started)</p>	<p>I learned that not all of my students had used Skype before, which shocked me (I use it weekly, at least, for a lot of meetings and to connect with family/friends). I also realized that not all students have great connectivity, so this is something I want to address before they meet in small groups via skype in a couple of weeks to discuss Davidson’s book. This will, hopefully, make this group skype call more successful and less frustrating – they can work out any problems before they meet with their group (i.e., connectivity, audio issues, etc.). Otherwise, it’s possible that some students wouldn’t have used skype before this group call and that could’ve been a disaster, which I’d like to avoid.</p> <p>I have a much better sense of my students as individuals and I think – although I have no empirical evidence – that this also makes me “more real” to my students. I’m a human being and they can get a sense of who I am and my personality, rather than making assumptions based on pictures, emails, or short videos I provide. I noticed this in a couple of conversations, in particular. In both cases, the students seemed a bit “distant” or aloof at the beginning of the conversation but by the end (each lasted about 15 minutes, some longer if I had more time), both students were laughing and appeared much more relaxed, which I think is the result of interacting with me in real-time.</p>
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Table D-2 Emma's talk about instructor's activities

	Your answers
In week 2 & 3, you did online discussion. Some students did not respond to others' opinions. What do you think of this? How did you encourage their participation?	I did not require students to comment on their peers' posts, so some did and others did not. I wanted the posts/comments to be authentic and connected to the content and not b/c they *had* to comment. I've been in classes where I've been required to comment on others' posts and didn't enjoy the experience – I just wanted to get my 2 comments done and be done. So, some of this stems from my own experience. However, in a couple of weeks I will require students to comment on their peers' posts – I'm going to try and change it up throughout the semester, so that they have a variety of experiences with asynchronous discussions.
You regularly emailed to students. You already have week directions and purposes. Is there any reason for this? What do you expect from your email? (such as connecting with students?)	The email is yet another way to connect with students and let them know what's coming up; although the information in the email is similar, in some cases, to the week's lesson the email is another opportunity to introduce the week, clarify anything that may have come up the previous week, as well as offer additional information. I want students to know that I'm interested in their learning and am intentional with the course content and weekly emails enable me to direct their attention (to some degree) and make the course more interactive. These aren't modules that students simply complete and move to the next. This is an organic, student-focused course so emailing students each week to "introduce" the week is one way of helping everyone stay on the same page and get the same information in yet another way.
In week 4, you said "I've decided that I will not "listen in" and, rather, will let you have the conversation and then you will provide me with feedback afterwards" How is your idea going?	Since my students haven't had their skype conversations yet, I don't know. I spent quite a bit of time thinking this through, feeling compelled to listen in to each conversation. At the same time, I know my tendency is to direct and interject in students' conversations, which is sometimes not very helpful. I also think that students will have more meaningful conversations if I'm not listening in (at least I hope so). And, although I don't like to "give up control," this puts students in charge of their own learning, which is important – since my goal is to make this a student-centered course. I will know more about how this went after the skype conversations, when students send in their individual reflections via email.
From the week 5 (9.23), you started providing "reflection on our lass class" on wiki, is there any reason for this?	I should've included this header in earlier weeks but didn't (and am not sure exactly why). This is just a chance for me to share with students what I've learned/seen in the previous week's lesson assignments. It helps students remember what they learned/did and gives me a chance to summarize their work and ideas before moving into something new.

Table D-3 Emma's reflection on instructor's teaching

	Can you think of one lesson/activity which was good?	Can you think of one lesson which wants to improve?
What was the lesson or activity/assignment?	The tech tools post #1 went well. I learned a lot and I heard back from some of my students that they were interested to read their peers' posts b/c they found resources they could also use (which is one of the goals of this assignment).	I'd like to work on discussion threading – as stated earlier, I'm going to include different expectations (i.e., requiring comments, etc.) for different posts, just to give students different experiences. I'm still not excited about the individualized nature of these posts so far – they're posting to fulfill the requirements and there's not a lot of conversation going on (yet!). ☺
What happened? (Why do you think it was good /need improvement)?	Students could post their tech tool assignment on the wiki page set up for this assignment (they created separate pages and embedded their page on the main page). This assignment was based on their interest and they could use it as an opportunity to learn about something they were interested in and, potentially, wanted to use in their classroom.	I'm not sure how to improve this assignment – I'd like to make sure more peer commentary with these tech tools posts and with the discussion posts in general but I think that discussion post threads are more effective in weekly discussion posts, rather than the tech tools posts assignments (this is more of a “static” assignment and there's not a lot of “discussion” that occurs with these posts.
What expectations did you have for this lesson/activity?	I assume that my students want to learn about different tech tools and that they, if given time, will explore and “play” (borrowing from Mishra and Koehler's work) with various tools. I also assume that they'll see the practical, direct classroom application inherent in this assignment, which may increase their motivation for completing it and reading their peers' posts.	I assume that students want to post their ideas and be done; at the same time, when speaking with one of my students via Skype I learned that she wanted to have more threaded discussions (which surprised me); she felt like there wasn't much peer interaction in the course and told me about other classes in which students are required to post initially and then post an additional number of comments (as deemed by the instructor). As a student in online courses, I disliked having to post and then follow up with additional comments, so that's probably why I didn't build any of these in, at least initially. However, based on this student's comments I'm going to try and incorporate some threaded discussions and see how they go.

Table D-3 (cont'd)

<p>I learned this when/by/through/from...(e.g., reading articles, discussing with someone, attending in workshops)</p>	<p>My assumption about students wanting to learn/explore and play comes from a pedagogical stance from Peter Elbow who writes about the “believing game,” in which instructors choose to believe the best about a student – they enables teachers to work toward (and with) students, fostering ideas/education and meeting their needs (individually and collectively) at the same time.</p>	<p>I’ve learned (actually been reminded of) the fact that not all students are like me. ☺ I know this, of course. But, just because my experience with online threaded discussion posts hasn’t been positive doesn’t mean that other students’ experiences have been the same. So, I’ll add some in and see how students respond/engage.</p>
<p>How did this learning/experience transform/modify your prior beliefs and practice?</p>	<p>The tech tools posts reinforced the idea that my students are smart, creative and interested in learning about various technology tools. I am eager to read/review their posts for the tech tools #2 and #3 as we move forward in the semester.</p>	<p>It’s been a good reminder that I need to consider all of the ways students learn in an online environment which, as I stated earlier, doesn’t necessarily mean that they learn like I do. I think instructors often teach the ways they were taught and/or the ways they learned best and regardless of online or face-to-face courses, we still tend toward this type of teaching. So, it’s good to be sure that we’re meeting the needs of ALL of our students and not just the ones who learn/think like us. (reminds me of Lortie’s apprenticeship of observation and, it seems, I am prone to this like many other instructors, at least sometime).</p>

Table D-3 (cont'd)

<p>How can we (instructors) improve or develop this activity? (your opinions for supporting your suggestion)</p>	<p>I think this activity could be further enhanced if peers were required to read/comments on their peers' work – authentic audiences are important!</p>	<p>I'm going to experiment with requiring some versions of threaded discussions. For example, this week with the digital stories, I put students into groups and required them to watch their peers' digital stories and post comments to their peers. I did ask students to post follow up comments, but I didn't require these follow up comments. We'll see how many actually do this. For the next week (Oct. 21), I actually have a required threaded discussion post as one of the assignments, focused on teacher website evaluation. In this case, I provided prompts for students to answer and then they have to post two additional comments to their peers' posts. I'm interested to see how these go, as well as the type of content/length of the comments. As far as evaluation, I'm going to count the number of posts and if students meet the "number requirement" then they will receive full points (something I really abhor doing – counting up students' comments to see if they "met the # requirement; this is probably one of the reasons I've shied away from threaded discussions). But, I won't know how it goes until I do it! ☺</p>
<p>Did you have any professional learning opportunities this month? What is it? What did you learn?</p>	<p>Yes, I attended the MATC brown bag lunch meeting in September 2012 and presented my course wiki to other instructors; I also saw others' interfaces and learned some good ideas for online instruction/facilitation, such as threading discussions. I hope to attend another brown bag meeting later this fall, if my schedule permits.</p>	
<p>Your thoughts about using Wiki so far?</p>	<p>It's getting easier to navigate, which is nice. I also appreciate the edit feature, so that I can make edits on pages. I've structured it like a web page so, to me, it's also very intuitive. I've also changed the beginning of the week's format, so that it's easier – right away – for them to figure out what they have to do and what's due/when. I've had a lot of positive feedback on the wiki and after the initial learning curve things seem to be going well (most of my students have commented on its use positively). I'll know more the more I use it.</p>	

REFERENCES

REFERENCES

- Allen, I. E., & Seaman, J. (2010). *Learning on demand: Online education in the United States, 2009*. Newburyport, MA: The Sloan Consortium.
- Ann, K. (2010). Professional development through action research: A case study of an EFL teacher learner. *English Language & Literature Teaching*, 16(2), 1-24.
- Asbell-Clarke, J., & Rowe, E. (2007). Learning science online: A descriptive study of online science courses for teachers. *Journal of Asynchronous Learning Networks*, 11(3), 95-121.
- Ausburn, L. J. (2004). Course design elements most valued by adult learners in blended online education environments: An American perspective. *Educational Media International*, 41(4), 327-337.
- Baker, M. B., Boggs, R., & Arabasz, P. (2003). Student and faculty perspectives on e-learning support. *Educause Center for Applied Research*, 16(Aug), 1-10.
- Baran, E., Correia, A., & Thompson, A. (2011). Transforming online teaching practice: critical analysis of the literature on the roles and competencies of online teachers, *Distance Education*, 32(3), 421-439
- Batts, D. (2008). Comparison of student and instructor perceptions of best practices in online technology courses, *Journal of Online and Teaching*, 4(4), 477-489.
- Belbase, S. (2012). Teacher belief, knowledge, and practice: A trichotomy of mathematics teacher education. Online Submission, Retrieved April 20, 2013 from http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_ERICEExtSearch_SearchValue_0=ED530017&ERICEExtSearch_SearchType_0=no&accno=ED530017
- Biro, S. C., & Widener University. (2005). *Adjunct faculty perceptions about their preparation, support, and value as online instructors*.
- Blin, F., & Munro, M. (2008). Why hasn't technology disrupted academics' teaching practices? Understanding resistance to change through the lens of activity theory. *Computers and Education*, 50, 475-490.
- Bocchi, J., Eastman, J., & Swift, C. O. (2004). Retaining the online learner: Profile of students in an online MBA program and implications for teaching them. *Journal of Education for Business*, 79(4), 245-253.
- Bolliger, D., & Wasilik, O. (2009). Factors influencing faculty satisfaction with online teaching and learning in higher education. *Distance Education*, 30(1), 103-116.
- Boud, D., & Walker, D. (1998). Promoting reflection in professional courses: The challenge of context, *Studies in Higher Education*, 23(2), 191-206.
- Boyle, B., While, D., & Boyle, T. (2004). A longitudinal study of teacher change: What makes professional development effective? *Curriculum Journal*, 15(1), 45-68.

- Bozarth, J., Chapman, D. D., & LaMonica, L. (2004). Preparing for distance learning: Designing an online student orientation course. *Educational Technology & Society*, 7(1), 87-106.
- Brookfield, S. D. (2006). *The skillful teacher: On technique, trust, and responsiveness in the classroom*. San Francisco: Jossey-Bass.
- Burden, K. J. (2010). Conceptualizing teachers' professional learning with Web 2.0. *Campus-Wide Information Systems*, 27(3), 148-161.
- Carey, R., Kleiman, G., Russell, M., Douglas V. J., & Louie, J. (2008). Online courses for math teachers: Comparing self-paced and facilitated cohort approaches. *The Journal of Technology, Learning and Assessment*, 7(3). Retrieved April 20, 2013 from <http://ejournals.bc.edu/ojs/index.php/jtla/article/view/1630>
- Cervero, R. M. (1992). Adult and continuing education should strive for professionalization. In M. W. Galbraith & B. R. Sisco (Eds.), *Confronting controversies in challenging times* (pp. 45-50). New Directions for Adult and Continuing Education, No. 54. San Francisco: Jossey-Bass.
- Chism, N. (2004). Using a Framework to Engage Faculty in Instructional Technologies, *EDUCAUSE Quarterly*, 27(2), 39-45.
- Chitanana, L. (2012). A constructivist approach to the design and delivery of an online professional development course: A case of the iEARN online course. *Online Submission*, 5, 23-48.
- Clary, R. M., & Wandersee, J. H. (2009). Can teachers "learn" in an online environment? *Kappa Delta Pi Record*, 46(1), 34-38.
- Clay, M. (1999). Development of training and support programs for distance education instructors. *Online Journal of Distance Learning Administration*, 2(3), Retrieved April 29, 2013, from <http://www.westga.edu/~distance/clay23.html>.
- Collins, B., Schuster, J. W., Ludlow, B. L., & Duff, M. (2002). Planning and delivery of online coursework in special education. *Teacher Education and Special Education*, 25(2), 171-186.
- Compagnucci, E. R., & Cardós, P. D. (2007). The development of professor's professional knowledge in Psychology. *Orientación y Sociedad*, 7, 1-12.
- Conceicao, S. C. O. (2006). Faculty lived experiences in the online environment. *Adult Education Quarterly*, 57(1), 26-45.
- Connelly, F. M., Clandinin, D. J., & He, M. F. (1997). Teachers' personal practical knowledge on the professional knowledge landscape. *Teaching and Teacher Education*, 13, 665-674.
- Conrad, D. (2004). University instructors' reflections on their first [online teaching](#) experiences. *Journal of Asynchronous Learning Networks*, 8(2), 31-44. Retrieved April 20, 2013 from <http://www.aln.org/publications/jaln/index.asp> [Transformative Learning as a Professional Development Goal](#).
- Cranton, P. (1994). Self-directed and transformative instructional development. *The Journal of Higher Education*, 65(6), 726-744.

- Cranton, P., & King, K. P. (2003). Transformative learning as a professional development goal. *New Directions for Adult and Continuing Education*, 98, 31-37.
- Crowe, S., Cresswell, K., Robertson, A., Hubby, G., Avery, A., & Sheikh, A. (2011). The case study approach. *BMC Medical Research Methodology*, 11(1), 1-10.
- Dabbagh, N., & Bannan-Ritland, B. (2005). *Online learning: Concepts, strategies, and application*. Upper Saddle River, NJ: Prentice Hall.
- Darling-Hammond, L., & McLaughlin, M. (1996). Policies that support professional development in an era of reform. In McLaughlin, M. & Oberman, I. (Eds.), *Teacher learning: New policies, new practices* (pp. 202-218), New York: Teachers College Press.
- Day, C., & Gu, Q. (2007). Variations in the conditions for teachers' professional learning and development: sustaining commitment and effectiveness over a career. *Oxford Review of Education*, 33(4), 423-443.
- Dede, C. (2006). *Online professional development for teachers: Emerging models and methods*. Harvard Education Press.
- Duffy, G., Webb, S., Kear, K., Leiphart, R., Parsons, S., & Miller, S. (2006). Does thoughtfully adaptive teaching exist? First steps in a longitudinal study of literacy teaching and literacy education. A paper presented at the National Reading Conference, Los Angeles.
- Duncan, H. E., & Young, S. (2009). Online pedagogy and practice: Challenges and strategies. *The Researcher*, 22(1), 17-32.
- Dziuban, C. D., Hartman, J. L., Cavanagh, T. B., & Moskal, P. D. (2011). Blended courses as drivers of institutional transformation. In A. Kitchenham (Ed.), *Blended learning across disciplines: Models for implementation* (pp. 17-37). Portland, OR: Book News, Inc.
- Dziuban, C.D., Hartman, J.L., & Moskal, P.D. (2004). Blended learning. *EDUCAUSE Center for Applied Research Bulletin*, 7, 1-12.
- EL-Deghaidy, H., & Nouby, A. (2008). Effectiveness of a blended e-Learning cooperative approach in an Egyptian teacher education programme. *Computers & Education*, 51(3), 988-1006.
- Eliason, S., & Holmes, C. (2010). Reflective practice and inquiry in professional development for online teaching. *MERLOT Journal of Online Learning and Teaching*, 6(2), 454-465.
- Ericsson, K.A., & Charness, N. (1994). Expert performance: Its structure and acquisition. *American Psychologist*, 49, 725-747.
- Fein, A. D., & Logan, M. C. (2003, Winter). Preparing instructors for online instruction, *New Directions for Adult & Continuing Education*, 100, 45-55.
- Fenwick, T. J. (2004) *Learning through experience: Troubling orthodoxies and intersecting questions*. Malabar, Fla.: Krieger, 2004.
- Fish, W.W., & Bill, P.B. (2009). Perceptions of online instruction. *TOJET*, 8(1). Fishman, B., Marx, R., Best, S., & Tal, R. (2003). Linking teacher and student learning to improve professional development in

- systemic reform, *Teaching and Teacher Education*, 19, 643-658.
- Gabriel, M., & Kaufield, K. (2008). Reciprocal mentorship: an effective support for online instructors, mentoring & tutoring: *Partnership in Learning*, 16 (3), 311-327.
- Galbraith, M., & Jones, M. (2010). Understanding incivility in online teaching, *Journal of Adult Education*, 39(2), 1-10.
- Galley, M. (2002). E-training offers options. *Education Week*, 21 (35), 41-44.
- Garrison, D. R., & Cleveland-Innes, M. (2005). Facilitating cognitive presence in online learning: Interaction is not enough. *American Journal of Distance Education*, 19(3), 133-148.
- Garrison, R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *Internet and Higher Education*. (7), 95-105.
- Gibson, S., & Skaalid, B. (2004). Teacher Professional Development to Promote Constructivist Uses of the Internet: A Study of One Graduate-Level Course. *Journal of Technology and Teacher Education*, 12(4), 577-592.
- Gilbert, J. L. (2003). *Transformative learning process of one teacher*. Paper presented at the American Educational Research Association conference, Chicago, IL.
- Ginsberg, A., Gray, T., & Levin, D. (2004). *Online professional development for mathematical teachers: a strategic analysis*. National Center for Technology, American Institutes for Research.
- Green, S. K., & Gredler, M. E. (2002). A review and analysis of constructivism for school-based practice. *School Psychology Review*, 31(1), 53-70.
- Green, M., & Cifuentes, L. (2008). An exploration of online environments supporting follow-up to face-to-face professional development, *Journal of Technology and Teacher Education*, 16 (3), 283-306.
- Guskey, T. R. (2000). *Evaluating professional development*. Thousand Oaks, CA: Corwin Press, Inc.
- Guskey, T. R. (2009). Closing the knowledge gap on effective professional development. *Educational Horizons*, 87(4), 224-233.
- Hamel, J. (1993). *Case Study Methods. Qualitative Research Methods*. Thousand Oaks, CA: Sage.
- Handal, B. (2003). Teachers' mathematical beliefs: A Review. *The Mathematics Educator*, 13(2), 47-57.
- Harwell, S. H. (2003). *Teacher professional development: It's not an event, it's a process*. Waco, TX: CORD.
- Hodkinson, H., & Hodkinson, P. (2005). *Improving schoolteachers' workplace learning. Research Papers in Education*, 20(2), 109-131.
- Holmes, A., Signer, B., & MacLeod, A. (2010). Professional Development at a Distance: A Mixed-Method Study Exploring Inservice Teachers' Views on Presence Online. Retrieved April 29, 2013 from <http://www.scribd.com/doc/53311112>

- Hurt, J. (2008). The advantages and disadvantages of teaching and learning on-line: A qualitative study of one rural community. *Delta kappa Gamma Bulletin*, 74(4), 5-11.
- Jenkins, A., Healey, M., & Zetter, R. (2007). Linking teaching and research in disciplines and departments. Retrieved April 23, 2013 from http://www.heacademy.ac.uk/assets/York/documents/LinkingTeachingAndResearch_April07.pdf
- Joyce, B., & Showers, B. (1988). Student achievement through staff development. New York: Longman.
- Kabakci, I., Odabasi, H. F., & Kilicer, K. (2010). Transformative learning-based mentoring for professional development of teacher educators in information and communication technologies: an approach for an emerging country. *Professional Development in Education*, 36(1), 263–273.
- Kang, H. (2011). Training online faculty: A phenomenology study. *International Journal on E-Learning*, 11(4), 391-406, Retrieved April 20, 2013 from <http://krex.ksu.edu>
- Keller, B. (2005). Teachers flocking to online sources to advance and acquire knowledge. *Education Week*, 24, 22–24.
- Khan, S., & VanWynsberghe, R. (2008). Cultivating the Under-mined: Cross-case Analysis as Knowledge Mobilization. *Forum Qualitative Social Research*, 9(1), Retrieved April 23, 2013 from <http://www.qualitative-research.net/index.php/fqs/article/view/334>.
- Killian, R. (2003). Effective teaching strategies: Lessons from research and practice (3rd ed.). Tuggerah: Social Science Press.
- Kim, J. (2009). An analysis of effective professional development program component in teacher learning, *The Journal of Educational Administration*, 27(3), 401-421.
- Kim, K-H., Morningstar, M., & Erickson, A. (2011). Strategies for successfully completing online professional development, *International Journal of Knowledge Content Development & Technology*, 1(2), 43-51.
- Kirtman, L. (2009). Online versus in-class courses: an examination of differences in learning outcomes. *Issues in Teacher Education*, 18(2), 103–116.
- Kitchenham, A. (2008). The evolution of John Mezirow's transformative learning theory. *Journal of Transformative Education*, 6(2), 104–123.
- Kreber, C., & Kanuka, H. (2006). The scholarship of teaching and learning and the online classroom. *Canadian Journal of University Continuing Education*, 32(2), 109-131.
- Kreber, C. (2004). An analysis of two models of reflection and their implications for educational development. *International Journal for Academic Development*, 9(1), 29-49.
- Kvale, S. (1996). *InterViews: An introduction to qualitative research interviewing*. Thousand Oaks, CA: Sage Publications.
- Kwon, S., Park, H., & Choi. (2008). A study on teachers' experiences and preferences of distance training program by their background, *The Journal of Korean Teacher Education*, 25(2), 25-52.

- Lawler, P. A., King, K. P., & Wilhite, S. C. (2004). Living and learning with technology: Faculty as reflective practitioners in the online classroom. *Proceedings of the 45th Annual Meeting of the Adult Education Research Conference* (pp. 328-332).
- Lawless, K. A., & Pellegrino, J. W. (2007). Professional development in integrating technology into teaching and learning: Knowns, unknowns, and ways to pursue better questions and answers. *Review of Educational Research*, 77(4), 575–614.
- Lee, J-B., Gye, Y-A., & Jeong, D-B. (2011). Studying on the effective cyber IIETTP for enhancing teaching skills, *Modern Studies in English Language & Literature*, 55(2), 179-202.
- Lehman, R., & Conceição, S. (2010). Creating a sense of presence in online teaching: How to “be there” for distance learners. San Francisco, CA: John Wiley & Sons.
- Levine, A., & Sun, J. C. (2003). Barriers to distance education. *American Council on Education/Educause*, 5(2), Retrieved April 21, 2013 from <http://emoderators.com/wp-content/uploads/BarriersK-12.pdf>
- Lim, T., Abas, Z.W., & Mansor, N. (2010). Online In-service Teacher Professional Development in Malaysia: A New Possibility? In Z. Abas et al. (Eds.), *Proceedings of Global Learn Asia Pacific 2010* (pp. 4025-4034). AACE.
- Lim, J., Lee, J., & Lim, B. (2005). A study on effective distance professional development program, *Korean Education Research Information Service*, 23.
- Lin, H., Dyer, K., & Guo, Y. (2012). Exploring online teaching: A three-year composite journal of concerns and strategies from online instructors, *Online Journal of Distance Learning Administrators*, 15(3), Retrieved April 23, 2013 from http://www.westga.edu/~distance/ojdla/fall153/lin_dyer_guo153.html
- Lock, J. (2006). New image: Online communities to facilitate teacher professional development, *Journal of Technology and Teacher Education*, 14(4), 663-678.
- Lowes, S., Lin, P., & Wang, Y. (2007). Studying the effectiveness of the discussion forum in online professional development courses. *Journal of Interactive Online Learning*, 6(3), 181-210.
- Maguire, L. L. (2005). Literature review –faculty participation in online distance education: Barriers and motivators. *Online Journal of Distance Learning Administration*, 8(1). Retrieved April 29, 2013 from <http://www.westga.edu/~distance/ojdla/spring81/maguire81.htm>
- Mantyla, K. (2002). How to select and train distance learning instructors.” *Quiet Power*, 2002. Retrieved April 29, 2013 from <http://www.quietpower.com/article3.asp>
- Mayes, R. (2011). Themes and strategies for transformative online instruction: A review of literature and practice. *Quarterly Review of Distance Education*, 12(3), Retrieved April 21, 2013 from <http://www.readperiodicals.com/201110/2581146771.html>
- Mayes, R., H. Ku, C. Akarasriworn, J. Luebeck and Ö. Korkmaz.(2011). Themes and strategies for transformative online education: A review of literature and practice. *Quarterly Review of Distance Education*, 12(3): 151-166.
- McCray, E. D. (2012). Learning while Teaching: A Case Study of Beginning Special Educators

- Completing a Master of Arts in Teaching. *Teacher Education and Special Education*, 35(3), 166–184.
- McNamara, J., & Field, R. M. (2007). Designing reflective assessment for workplace learning in legal education. Retrieved April 21, 2013 from <http://eprints.qut.edu.au/12576/>
- McQuiggan, C. (2012). Faculty development for online teaching as a catalyst for change. *Journal of Asynchronous Learning Networks*, 16(2), 27-61.
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies. Retrieved April 21, 2013 from <http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>
- Merriam, S. B. (1998). Qualitative research and case study applications in education (2nd ed.). San Francisco: Jossey-Bass.
- Meyer, K. (2012). The influence of online teaching on faculty productivity. *Innovative Higher Education*, 37(1), 37–52.
- Mezirow, J. (1996). Toward a learning theory of adult literacy. *Adult Basic Education*, 6(3), 115-126.
- Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco, CA: Jossey-Bass.
- Mike, A. M. (2010). *Determining the Impact on the Professional Learning of Graduates of a Science and Pedagogical Content Knowledge-Based Graduate Degree Program*. Unpublished doctoral dissertation, Montana State University, Montana.
- Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017–1054.
- Moore, M. G., & Kearsley, G. (2012). Distance education: A systematic view of online learning (3rd Edition). Belmont, VA: Wadsworth Cengage Learning.
- Mouza, C. (2009). Does research-based professional van development make a difference? A longitudinal investigation of teacher learning in technology integration. *Teachers College Record* 3(5), 1195-1241.
- Neumann, A. (2005). Observations: Taking seriously the topic of learning in studies of faculty work and careers. *New Directions for Teaching and Learning*, 102, 63–83.
- Opfer, D. V., Pedder, D. G., & Lavicza, Z. (2011). The role of teachers' orientation to learning in professional development and change: A national study of teachers in England. *Teaching and Teacher Education*, 27, 443-453.
- Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research*, 62, 307–332.
- Palincsar, A. S. (1998). Social constructivist perspectives on teaching and learning. *Annual Review of Psychology*, 49(1), 345–375.
- Palloff, R. M. & Pratt, K. (2009). *Assessing the online Learners*. San Francisco, CA: Jossey0Bass

- Pankoski, P. (2004). Faculty training for online teaching. *T.H.E. Journal*. Retrieved April 24, 2013 from <http://thejournal.com/Articles/2004/09/01/Faculty-Training-for-Online-Teaching.aspx>
- Parscal, T., & Florence, G. (2004). Many cooks may sweeten the broth: A collaborative Encyclopedia of Distance and Online Learning: Enterprise Model 7 approach to online faculty training, support, and development. Paper presented at Educause, Denver.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Pedder, D. (2007). Profiling teachers' professional learning practices and values: differences between and within schools. *The Curriculum Journal*, 18 (3), 231-252.
- Pedder, D., James, M., & MacBeath, J. (2005). How teachers value and practice professional learning. *Research Papers in Education*, 20 (2), 209-243.
- Peruski, L., & Mishra, P. (2004). Webs of activity in online course design and teaching. *Research in Learning Technology*, 12(1), 37–49.
- Puzziferro, M., & Shelton, K. (2008). A model for developing high-quality online courses: Integrating a systems approach with learning theory. *Journal of Asynchronous Learning Networks*, 12(3-4), 119-136.
- Ramasamy, R. (2009, August). Mathematics in online-learning: The difference in its approach compared to face-to-face teaching. Paper presented at ICI9-International Conference on Information, Kuala Lumpur, Malaysia.
- Ray, J. (2009). Faculty perspective: Training and course development for the online! classroom. *MERLOT Journal of Online Learning and Teaching*, 5(2). Retrieved from: http://jolt.merlot.org/vol5no2/ray_0609.htm
- Reihlen, M., & Apel, B. A. (2007). Internationalisation of business service firms as learning – A constructivist approach, *International Journal of Service Industry Management*, 18(2), 140-151.
- Reushle, S. E. (2008). A practitioner's journey exploring transformative approaches to the professional development of online educators, *International Journal of Pedagogies and Learning*, 4(2), 15-28.
- Richardson, J. (2002). E-learning potential: Online staff development has great possibilities and pitfalls. In A. Thorson (Ed.), *By your own design: A teacher's professional learning guide* (pp. 12–13). Columbus, OH: Eisenhower National Clearinghouse for Mathematics and Science Education.
- Rienties, B., Brouwer, N., & Lygo-Baker, S (2013). The effects of online professional development on higher education teachers' beliefs and intentions towards learning facilitation and technology, *Teaching and Teacher Education*, 29, 122-131.
- Rockoff, J. E. (2004). The impact of individual teachers on student achievement: Evidence from panel data. *American Economic Review*, 94(2), 247-252.
- Rolheiser, C. (2009). *Partnerships for Professional Learning: Literacy & Numeracy Initiatives*.

Retrieved April 23, 2013 from

http://utoronto.academia.edu/DouglasMcDougall/Papers/797463/Partnerships_for_Professional_Learning_Literacy_and_Numeracy_Initiatives

- Rovai, A. P. (2004). A constructivist approach to online college learning. *Internet and Higher Education*, 7(2), 79–93.
- Russell, M., Kleiman, G., Carey, R., & Douglas, J. (2009). Comparing self-paced and cohort-based online courses for teachers. *Journal of Research on Technology in Education*, 41(4), 443–466.
- Santilli, S., & Beck, V. (2005). Graduate faculty perceptions of online teaching. *The Quarterly Review of Distance Education*. 6(2), Retrieved April 25, 2013 from <http://cohortresearch.wiki.westga.edu/file/view/graduate+faculty+perseptions.pdf>
- Sari, E. R. (2012). Online Learning Community: A Case Study of Teacher Professional Development in Indonesia. *Intercultural Education*, 23(1), 63–72.
- Savery, J. R., & Duffy, T. M. (1995). Problem based learning: An instructional model and its constructivist framework. *Educational Technology*, 35, 31–38.
- Schlager, M. S., & Fusco, J. (2003). Teacher professional development, technology, and communities of practice: Are we putting the cart before the horse? *The Information Society*, 19(3), 203–220.
- Schmidt, W. H., & Kennedy, M. M. (1990). Teachers' and teacher candidates' beliefs about subject matter and about teaching responsibilities.
- Seaman, J. (2009) The paradox of faculty voices: Views and experinces with online learning. Washington, DC: Association of Public and Land-grant Universities. Retrieved April 15, 2013 from <http://www.aplu.org/NetCommunity/Document.Doc?id=1879>
- Shanklin, S. L. (2009). *Professional learning communities: People leading change*. University of Pennsylvania. Retrieved April 15, 2013 from <http://repository.upenn.edu/dissertations/AAI3374194>
- Shieh, D. (2009). Professors regard online instruction as less effective than classroom learning. *Chronicle of Higher Education*. Retrieved April 30, 2013 from <http://chronicle.com/article/Professors-Regard-Online/1519/>
- Siemens, G. (2004). Connectivism: A learning theory for the digital age. Retrieved April 30, 2013 from <http://www.elearnspace.org/Articles/connectivism.htm>
- Skibba, K. A. (2009). What faculties learn teaching adults in multiple course delivery formats, Presented at the 25 the Annual Distance Teaching and Learning Conference, Madison, WI .
- Smith, T. C. (2005). Fifty-one competencies for online instruction. *The Journal of Educators Online*, 2(2), 1–18, retrieved April 20, 2013 from <http://www.thejeo.com/Ted%20Smith%20Final.pdf>
- Sparks, D., & Hirsh, S. (1997). *A new vision for staff development*. Alexandria, VA: Association for Supervision and Curriculum Development.

- Tang, S. Y. F. (2003). Challenge and support: The dynamics of student teachers' professional learning in the field experience. *Teaching and Teacher Education*, 19. (5), 483–498.
- Taylor, J (2011). Characteristics of effective online professional development: a case study analysis of an online professional development course offered via Blackboard, Unpublished doctoral dissertation, retrieved April 30, 2013 <http://d-scholarship.pitt.edu/10812/>
- Taylor, E. W. (2008). Transformative learning theory. *New Directions for Adult and Continuing Education*, 2008(119), 5–15.
- Thomas, W. R. (2004). *Online Professional Development: Why SREB States Should Use It*. Southern Regional Education Board, Retrieved April 30, 2013 from <http://www.eric.ed.gov/ERICWebPortal/detail?accno=ED485276>
- Tillema, H. H. (2000). Belief Change towards Self-Directed Learning in Student Teachers: Immersion in practice or reflection on action. *Teaching and Teacher Education*, 16(5-6), 575–591.
- Watson, J. F., Winograd, K., & Kalmon, S. (2004). *Keeping pace with K–12 online learning: A snapshot of state-level policy and practice*. Naperville, IL: Learning Point Associates.
- Whitelaw, C., Sears, M., & Campbell, K. (2004). Transformative learning in a faculty professional development context. *Journal of Transformative Education*, 2, 9–27.
- Wolf, P. D. (2006). Best practices in the training of faculty to teach online, *Journal Of Computing Higher Education*, 17(2), 47-78.
- Woo, Y., & Reeves, T. C. (2007). Meaningful interaction in web-based Learning: A social constructivist interpretation. *Internet and Higher Education*, 10(1), 15–25.
- Wood, E., & Bennett, N. (2000). Changing Theories, Changing Practice: Exploring Early Childhood Teachers' Professional Learning. *Teaching and Teacher Education*, 16(5), 635–647.
- Yaman, M., & Graf, D. (2010). Evaluation of an international blended learning cooperation project in biology teacher education. *Turkish Online Journal of Educational Technology TOJET*, 9(2), 87-96.
- Yang, Y., & Cornelious, L. F. (2005). Preparing instructors for quality online instruction. *Online Journal of Distance Learning Administration*, 4(1). Retrieved April 21, 2013 from <http://www.westga.edu/~distance/ojdla/spring81/yang81.htm>
- Yeh, Y. (2010). Integrating collaborative PBL with blended learning to explore pre-service teachers' development of online learning communities. *Teaching and Teacher Education*, 26(8), 1630-1640.
- Yin, R. K. (2009). *Case Study Research: Design and Methods* (4th ed.). Sage Publications, Inc.