INSTITUTIONALIZATION OF DIGITAL LITERACIES
IN FOUR-YEAR LIBERAL ARTS INSTITUTIONS

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ABSTRACT

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Few in the field of Rhetoric and Writing debate digital literacy's value in higher level institutions today, yet while faculty in general echo this same value, the actual institutionalization of digital literacy—especially in liberal arts institutions—stands in question. This dissertation project, situated in the field of digital rhetoric and positioned theoretically with postmodern constructs, approaches research in digital literacy issues and "institutionalizing" digital literacy. I examine findings using activity theory and genre theory to construct a model of the Operational Life Cycle of the Institutionalization of Digital Literacy.

This model of the Operational Life Cycle has several purposes: it visually can enable others to navigate the murky journey of institutionalization; it provides a clear framework for understanding the complexities of institutional work; and it demonstrates the possibility that any size school, even with limited funds, can institutionalize digital literacy. This kind of model illuminates two ideas: One, the power of the centrifugal and centripetal outcomes (genres) of the activities in the Life Cycle, which can perpetuate and speed along such institutionalization. Two, such institutionalization requires the participation of the institution at large, English departments more specifically, and faculty members as individuals. Without such participation, holes in the Life Cycle render institutionalization of digital literacy much more difficult a challenge.

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Introduction

In the summer of 2008, my colleagues in the English department where I was an adjunct trudged through their departmental assessment, reading student portfolios, designing rubrics, charting data, revisiting goals. A list of seven objectives for their exiting senior English majors guided this assessment, and of these goals, most or all students got high, satisfactory scores—with one exception: objective number seven. It read, "[English major graduates] will be able to write in a wide variety of modes and media." The department determined that only one of their graduates satisfactorily achieved this goal. This disturbed my colleagues, and they found themselves filled with questions: When did we add this goal? Why did we add it? What had we planned to do to implement this goal? Why have we not done anything toward achieving this goal? What exactly did we mean by "variety of modes and media"? What can we do about this now? Are we graduating digitally "illiterate" students? Are they going to be unprepared for the digital world they will encounter? Many legitimate questions.

At the time, I was working toward my PhD in Rhetoric and Writing with an emphasis in digital rhetorics. Fortunately, because of this I was able to help them answer some of these questions and, in due course, help them determine what they might have meant by "writing in a variety of modes and media" and, subsequently, what steps they might take toward this goal. We discussed ways we could incorporate "a variety of modes and media" into more of our courses. This experience led me to this project: to discover the values, goals, and implementation of those goals in other schools concerning "writing in a variety of modes and media." After all, it was highly unlikely that we were alone.

My research project focuses on three related "digital literacy" goals: First is to examine the importance of digital literacy and discuss some of the key definitions—especially of the term

"digital literacy" in its complexities—in order to situate myself amongst the varying discussions in the field. This discussion then leads to my second goal: to research four-year liberal arts institutions to learn how they approach the digital literacy issue and how they go about "institutionalizing" digital literacy. This research will then serve my third purpose: to present ways of looking at the institutionalization of digital literacies in four-year liberal arts colleges in order to enable others to find their way through the murky journey of taking on such a challenge.

CHAPTER ONE: PROJECT OVERVIEW

The purpose of my first goal is to situate myself in the field. In Chapter One I will discuss the value of digital literacy by delving into a few of what I call "lenses," which are really some of the areas of education that are affected by the influx of digital composing. While the ideas here may seem obvious to some, I discuss them directly because they affect the research itself and some of the choices I made.

The Values of Digital Literacy

Before getting into a discussion of definitions, first it is necessary to take a brief look at *why* digital literacy is important to begin with and take a quick glance at some lenses that determine my approaches to digital literacy. The impetus behind this entire project is axiological: why should we value digital literacy? Answer: writing is changing. Composition classes are changing. Technology has catapulted the ways we communicate into a very different place from where it was merely twenty years ago.

I learned about this giant technological leap the hard way. I graduated from high school in 1981. During my four years there, I took a typing class and was very excited because the school had just gotten new *electric typewriters*! They were much easier to use; I didn't have to pound the keys with as much force, and they could erase errors just by hitting a back/erase key. Twenty years later, I returned to academia and had to type my first paper on a computer using a word processor. Those who have never been without a word processor have little clue about the arduousness of typewriters; I, on the other hand, was well aware and found myself amazed at how much easier it was to write a paper. Why? Because nothing I wrote was permanent. I could cut and paste without a pair of scissors and glue (or tape—no one ever really used paste; it should be called cut and tape).

But this was only the beginning of my deep-end dive into a new way to write and learn. I had a Shakespeare class that required us to all go online and respond to the professor's questions every week in an online forum. Everything in the library was searchable only one way: computer database. Presentations were done using PowerPoint instead of poster board. Everything we did involved technologies I had never used before.

However, I am not doing this entire project simply because we have changed writing tools. While our tools have indeed changed the way we write, I contend that technology has changed what it means to compose and what it means to be literate. Thus this project has much more to do with *how* we read and write—and how often. For instance, today's students—students who would never think of themselves as readers or writers—spend more time reading and writing every day than students have for decades (Yancey). These students don't think of what they are doing as reading and writing because they are playing games, chatting with friends, blogging about their lives, posting to YouTube, catching up with friends and family on Facebook and MySpace—is this kind of fun really reading and writing? It is. Kathleen Blake Yancey says, "Writing IS 'words on paper,' composed on the page with a pen or pencil by students who write words on paper, yes—*but* who *also* compose words and images and create audio files on Web logs (blogs), in word processors, with video editors and Web editors and in e-mail and on presentation software and in instant messaging and on listservs and on bulletin boards—and no doubt in whatever genre will emerge in the next ten minutes" (298, emphasis hers). When I was young, this breadth of reading and writing was quite uncommon. According to Pingdom.com, statistics show how incredible this phenomenon truly is:

From 2009:

90 trillion – The number of emails sent on the Internet in 2009

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247 billion – Average number of email messages per day

1.4 billion – The number of email users worldwide.

234 million – The number of websites in 2009

81.8 million – .COM domain names at the end of 2009

12.3 million – .NET domain names at the end of 2009

7.8 million – .ORG domain names at the end of 2009

1.73 billion – Internet users worldwide (September 2009)

126 million – The number of blogs on the Internet (as tracked by BlogPulse)

27.3 million – Number of tweets on Twitter per day (November 2009)

350 million – People on Facebook

50% – Percentage of Facebook users that log in every day

4 billion – Photos hosted by Flickr (October 2009)

30 billion – At the current rate, the number of photos uploaded to Facebook per year

1 billion – The total number of videos YouTube serves in one day

While these numbers amaze many people, they disturb many others, people like Sven Birkerts who believes that reading is "increasingly shrinking, with the attendant effects of the loss of deep thinking, the erosion of language, and the flattening of historical perspective" (40). As educators we know two things: one, we have no way to know what the future will bring; two, if we want to prevent these losses and erosions Birkerts fears, we need to appropriate these technologies rather than ignore them (Faigley, Yancey). Teaching digital literacies sends the message to our students that we know what the world is like, and we want them to be critical users, consumers, and producers in these new spaces (Selber). Technology has changed what it means to compose:

writing now includes sight, sound, various spaces, and various ways to communicate ideas. Composition now includes multi-media rather than just print media. In addition, writing is now much more collaborative. Blogging and social networking involve the voices of many people rather than a single voice. Composition is now also much more cross-cultural. Online gamers write back and forth to one another from across the globe, becoming friends with people in countries they have never seen.

The field of R&W knows this all too well. As far back as 1996, experts in the field of R&W from all over the nation gathered in Milwaukee, Wisconsin to listen to Lester Faigley, the chair of the Rhetoric and Writing department at University of Texas at Austin. Faigley gave the keynote speech for that year's Conference on College Composition and Communication (CCCC). In his speech, Faigley discusses the "technological revolution" due to the introduction of the personal computer and the internet (32). He says:

> It is very difficult to imagine from the perspective of 1949, the year of the first meeting of CCCC, the development of computer and information technologies and the impacts they would have on the industrialized world. Computers in 1949 were comparable to automobiles in 1899…A throw-away greeting card that sings "Happy Birthday" has more computing processing power than existed in 1951. (35)

Faigley then announces that "the Internet will soon be as ubiquitous as cable television…" (37). At this point he does not even imagine cable and the Internet joining hands to create high-speed access.

Not surprisingly, Kathleen Yancey takes up the subject of technology at CCCC in her keynote speech seven years later. Yancey talks of how once we experienced the "winds of

change"[1] with the process movement but that what we are now experiencing in composition are *tremors*, actual earth-moving, foundation-shaking changes in what we do. The reason? Yancey explains, "Never before have the technologies of writing contributed so quickly to the creation of new genres" (298). The field of R&W faces rapid changes, and the implications surge onward to literacy itself. As Yancey says, "Literacy today is in the midst of a tectonic change" (298).

As far as teaching goes, she insists that we need a new curriculum, we need to pay more attention to writing across the curriculum, and we need to have rhetoric and composition majors. Yancey explains, "Literacy is deictic. The speed of technological change has affected literacy…technological change happens so rapidly that the changes to literacy are limited not by technology but rather by our ability to adapt and acquire the new literacies that emerge" (318). This project aims to discover how well we as educators are adapting and acquiring these new literacies.

Yancey explains further that our students will no longer be considered literate if they are not able to function in these new technological environments; adapting to these newer technologies will bring what she calls a "new composition":

> This new composition includes rhetoric and is about literacy. New composition includes the literacy of print: it adds on to it and brings the notions of practice and activity and circulation and media and screen and networking to our conceptions of process. It will require a new expertise of us as it does of our students. And ultimately, new composition may require a new site for learning for all of us. (320)

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[1] A reference to Maxine Hairston's article "Thomas Kuhn….And the Winds of Change."

These two speeches alone clearly demonstrate the value of digital literacies to the field of

Rhetoric and Writing (R&W from now on) and the need for digital literacy (DL) to be taught in

composition courses. In addition to these two CCCCs addresses, both the CCCC and the

National Council Teachers of English (NCTE) have adopted new literacy statements with the

main purpose of including technology or what Yancey would consider "new composition."

CCCC's adopted a "Position Statement" titled "CCCC Position Statement on Teaching,

Learning, and Assessing Writing in Digital Environments" in February of 2004. This document

attests to the growing importance of digital literacies as it focuses on how "the curriculum of

composition is widening to include not one but two literacies: literacy of print and a literacy of

the screen. In addition, work in one medium is used to enhance learning in the other." This

document lists those practices that a digitally literate student should be exposed to: "the

epistemic (knowledge-constructing) characteristics of information technology," "the

opportunities to apply digital technologies to solve substantial problems common to the

academic, professional, civic, and/or personal realm of their lives," "much hands-on use of

technologies," and "to be reflective practitioners." The document further defines best practices of

writing instruction not specific to digital writing, with an emphasis on the social nature of writing

and faculty/student interaction. Writing programs are also given directives on goals, assessment,

and the possibility of electronic portfolios.

One year later, the NCTE felt it necessary to be more specific, and they wrote

"Multimodal Literacies: A Summary Statement Developed by the Multimodal Literacies Issue

Management Team of the NCTE Executive Committee." This document contains two

declaration groups about multimodal literacies: one group "concerning the broadest definitions

of multimodal literacies" and another group "concerning the unique capacities and challenges of

digital forms." The first group contains eight declarations, with each followed by a "what this means for teaching" list. The second group has four declarations, each with a "what this means for teaching" list as well. Important in the first group is the progression of declarations, from declaring that multi-media is more than decoration to the fact that young people know this, use it with ease, learn best from it, and often work collaboratively in these environments. Thus teachers need to incorporate "multimodal literacies" into every aspect of their pedagogies, despite—or because of—its complexities, in order to not put students at a disadvantage. The second group of declarations points to the complexities of production, the fact that many young people will be more advanced than their teachers and will find education boring and/or irrelevant, and the world of publishing is now open to everyone, a fact that allows a more genuine writing experience for students. The importance of this document is that it ties teaching with definitions of "multimodal literacies" and the challenges we face because of these newer literacies, and, while it doesn't add anything new or profound, its existence testifies to the importance of digital literacy in composition.

Clearly the field of R & W faces dramatic change. Important groups like CCCC and NCTE have publicly *changed* their definitions of literacy to include newer technologies. Kathleen Yancey wants a "new composition" curriculum. The amount of reading and writing occurring outside the classroom surpasses anything we could have imagined years ago, as Yancey points out, "without instruction and, more to the point here, largely without *our* instruction…[students] have a rhetorical situation, a purpose, a potentially worldwide audience, a choice of technology and medium—and they write" (301-302). My purpose here was to demonstrate that studying and researching digital literacy clearly is *incredibly* important. My other purpose is to provide some lenses that demonstrate *why* digital literacy research is

important by briefly discussing the impact of this "tectonic" change. These lenses give a glimpse into the impact of digital literacy on larger academic issues.

Lens One: Digital Literacy and Epistemology

Knowledge now is understood to be made through a dialectic of exchange of information rather than some static notion of one person merely passing on information to another person. Years ago the field of R&W came to understand that writing was not simply regurgitation but that during the process of writing, the writer experienced a building of knowledge (Scott, Knoblauch, Brannon). As Kant determined long ago, "people are not passive receptors of sense data, but rather active participants in the formation of knowledge" (Royer 284). Writing is a significant part of this epistemology.

The question, then, is what effect does a digital environment have on this epistemology? For one, the addition of sight and sound to composition cannot avoid having a profound effect on how we learn. Because many people—some would argue most people—are very visual and/or aural learners, the process of composing and having to think through the addition of sight and sound forces the composer into an even more complex discursive process. This epistemological understanding has been demonstrated throughout the field. The CCCCs statement on literacy states that literacy today includes an understanding of "the epistemic (knowledge-constructing) characteristics of information technology." As Yancey explains, this approach does not just add sight and sound but many more aspects of how we create knowledge now with this "new composition" (320).

While notions of epistemology and writing/rhetoric are hardly new, we now see the knowledge-building that writing was once a part of—or that was a part of writing—as complicated and more robust through the addition of multiple media. Many advocate multi-

media writing especially for those whose home culture is more oral simply because learning to compose, for them, in a digital environment is easier and makes more sense (Hobbs). Overall, any research into digital literacies needs to consider the "eyes and ears" that now are a significant part of the way students learn. Point: studying digital literacy is, in large part, a study of new epistemologies.

Lens Two: Digital Literacy and Axiology

In large part, this entire project is a study in axiology: while most everyone today in academia claims to value digital literacy to some extent, many apparently are all talk and no action, as my research will show. But this issue of axiology delves much deeper within digital literacies itself. As educators, we are concerned with the value systems that technology supports, and we worry that students are not taught to challenge and question these systems (Wysocki). While just half a century ago, when most of our information came from sources that people tended not to question (whether or not they should have is another story), today's digital culture requires much more savvy than ever. Search engines have a very distinct hierarchical practice, which feeds us information in a way formed by what matters to others but not necessarily to us. Because websites can essentially be authored by most anyone, anyone's values can easily be taken for truth.

Sonia Livingstone finds this both a benefit and a bane for technology. In her article "The Changing Nature and Uses of Media Literacy," Livingstone sees the Internet as a space not to find answers but rather "as a new environment for questioning, reflecting on, qualifying that which at first sight seemed straightforward" (12). Livingstone also questions our reasons for valuing literacy and argues that if we value literacy in order to promote "intellectual, spiritual and aesthetic development" and/or to "encourage appreciation of high culture," then these

axiological purposes "can be read as furthering the institutional reproduction of the standards and values of an established cultural and economic elite" (21). In other words, if we value literacy so that "they" can be more like "us," we are advocating some of the very ideologies we fight against. Instead, literacy should be valued "to encourage appreciation of diverse but valid—morally rooted—ways of life within society" (21). This concern with identity joins Brodkey and Selfe who insist that literacy be promoted not to make everyone "like us" but rather to empower those less literate.

Yet digital literacy brings up issues of power, copyright, inequality, access and more, as axiological factors in spaces like blogs, social networks, and webpages in general that tend to support rather than change current power structures and patriarchal repressions. Laura Gurak notes that traditional notions of literacy—reading and writing—contribute to these issues: for those who cannot read and write in more traditional modes, they will be that much further from a cyberliteracy, as reading and writing are components of such cyberliteracy (21).

Stuart Selber also does not see computers to be the answer to all our social and literacy ills. He argues against an instrumental view of computers as neutral tools that do not require critical, contextual, or historical thinking of students as consumers or producers in digital environments. His worries that those in English and writing or composition are not consulted, concerned, or educated in digital literacy matters, which is dangerous: "computer literacy programs can take a rather monolithic and one-dimensional approach, ignoring the fact that computer technologies are embedded in a wide range of constitutive contexts, as well as entangled in value systems" (22). In other words, often DL is approached in a way that pretends only one perspective exists, one truth, one answer, much like older ways of teaching history. But

this is untrue, and if our students are not taught to approach DL with a more critical eye, we run the risk of perpetuating such a single-minded view.

Just as digital literacy clearly impacts how learners gain knowledge, it impacts learners' value systems as well. So much of what we need to impress on our students revolves around awareness of such ideologies embedded in newer technologies. Treating these technologies as mere tools does not suffice. Cynthia Selfe explains this crucial role, that if we do not teach students "how to pay critical attention to the issues generated by technology use," we are perpetuating the ideology we are working against: that they are a tool and nothing more, that they have no embedded ideologies, and that use is nothing more complex than choosing between and pen and a pencil; thus "we participate unwittingly in the inequitable literacy system" (429). Obviously educators do not wish to perpetuate inequalities but rather hope to instill students with the critical abilities to be aware of such ideologies, understand the ramifications of various ways of thinking, and create their own value systems. Point: studying digital literacy is, in large part, a study of new axiologies.

Lens Three: Digital Literacy and Ontology

One other major issue revolves around how digital literacy and heavy computer use can change who we are as human beings. Humanity's latest reliance on technology—what most believe to be considerably more than ever in history—cannot help but affect us and the field of R & W. It affects who we are, who our students believe they are, how we see them as writers, and how they see themselves as writers. Technology has the capacity to change discourse communities as well, since the sense of belonging becomes part of how we identify ourselves. Some teenage student may consider herself a very important and deserving member of a particular genre group like

bloggers or chatters without ever stopping to think what these are, in essence, writing groups of which she is an important part.

Essential to this is the fact that writing cannot be separated from its own materiality (Wysocki, Lemke). Writing without technology is virtually impossible. Yet today opportunities for writing—and having others read our writing as well—have become myriad simply because of technology. These newer technologies have the potential to change who we are: one can easily imagine reliance on technology spawning a breed of cyborgs, unable to live or function without their technology, cell phone growing from their ears, laptops sprung from their thighs. Many see this opportunity as a way to change what it means to be a writer. Many also see this opportunity as a means for the silenced to now have a voice—one they have long been denied (Gurak, Bizzell, Stuckey). Whatever the future may hold, clearly materiality and technology have contributed—and will continue to contribute—substantially to who we are as writers.

Claire Bélisle calls this ontology "intellectual empowerment" and a very key component to digital literacy, which she considers an ongoing process toward fulfillment of human capacity where her "intellectual empowerment" brings "a profound enrichment and eventually entails a transformation of human thinking capacities" (54). Bélisle does not delve deeply into this ontology, yet it reflects those like Gurak whose term "cyborg" indicates a view of technology as a crucial part of our identity, a very extension of whom we become.

This ontology extends as well to our notions of self as part of discourse communities. Douglas Eyman notes something important: academia does not normally recognize digital literacy as something that needs to be taught but often believes instead that most students will just pick it up naturally. Eyman contends, however, that this is not true and that digital literacy requires "the acquisition of a digital Discourse, which can be gained by immersion in

communities of practice" (7). Eyman quotes Lankshear and Snyder, who argue, "To participate effectively and productively in any literate practice, people must be socialised into it" (qtd. in Eyman 17-18). In other words, as educators, we have the responsibility of guiding students into these "communities"; we need to work with them to gain the critical skills they need to effect change as part of these spaces.

The notion of a specific discourse as necessary for a specific literacy echoes those like Carolyn Handa who, in her "Letter from the Guest Editor: Digital Rhetoric, Digital Literacy, Computers, and Composition," wrote her definition of digital literacy, which requires being "at home" in a multi-mediated world. This discourse idea also deals with issues of identity, of belonging to a specific group—a frequently touted elitist group of insiders, which contributes often to the dichotomy of the literate and illiterate that those like Selfe bemoan. Who we become online and who we are offline—whether they are mirror images of one another or not—cannot be separated out from who we are; both are an integral part of our ontology.

Point: studying digital literacy, in large part, is a study of new ontologies. Digital literacy, then, not only changes writing and composition; it changes how we gain knowledge, what we value, and how we become who we are. While this research project is not meant by any means to discover how digital literacy impacts these areas of academia, it is important to understand that I am not just taking a brief glimpse into computer use or tools for writing classes. Just as the beginning part of Chapter One was meant to summarize the field of R&W's significance of digital literacy, these three lenses are meant to show *why*. If indeed digital literacy impacts how we learn, what we value, and who we are, then research into digital literacy is important.

CHAPTER TWO: SOME IMPORTANT DEFINITIONS

Because I am researching the *institutionalization* of digital literacy in *liberal arts institutions,* these terms deserve some discussion. I also have specifically chosen the term "digital literacy" for this project. I have discussed the importance of researching and teaching digital literacy, but what does it mean for digital literacy to be "institutionalized," and why is it important? And what exactly do I mean by a "liberal arts" institution and why does this matter? And what exactly do I mean by "digital literacy"? This section answers these questions.

What Do I Mean by a Liberal Arts Institution?

The first term I will discuss is the "liberal arts institution" (or school, college, university— although these terms are not the same, I am using them interchangeably as the difference is irrelevant to this project). Little agreement exists about the exact details and specific courses that constitute a liberal arts education; if we look at the definitions various schools give of what they mean by calling themselves a "liberal arts" institution, we get varied ideologies and language. Some examples of this variety can be found in nearly any institution's course catalog. Some are incredibly vague: "The Liberal Education Program fosters the development of skills and competencies and the acquisition of knowledge that is essential for all students" (Colby-Sawyer 2). Some are a bit more specific and include an emphasis on interdisciplinary connections: "emphasizing thorough competence in a chosen field of study together with a broad understanding of our historical and cultural heritage, and the relationships among fields of knowledge" (Occidental 5). Some try to be sure to cover a multitude of issues: "to help students develop critical thinking skills, broad vision, effective communications, a sense of the inter-relatedness of all knowledge, sensitivity to the human condition, and a global perspective, all

necessary to enable students to realize their full potential for responsible citizenship" (Gettysburg 5). Yet most would agree on what Gudmund Iverson articulates in "Statistics in Liberal Arts Education":

> A liberal arts education is one that has a liberating effect on the person receiving this education; it appeals to the higher ideals of human life and is not concerned with the necessity of learning specific methods and techniques for a trade or profession. Thus the liberal arts become less a list of subjects and more a general learning process that develops a person and makes that person an active, contributing member of society. (17)

It is this very nature of the liberal arts that is intertwined with my study. Because of the importance of this new digital literacy and its impact on education in general and writing in particular, any school whose main concern is to make students into "active, contributing member[s] of society" would not be able to ignore digital literacies; eventually, if not already, one would be unable to participate fully in our American society if one was not "digitally literate."

One place to look for a definition of "liberal arts" is The Association of American Colleges and Universities (AAC and U), which defines itself as "A Voice and Force for Liberal Education in the 21st Century." This organization is a cornerstone for liberal arts schools. AAC and U defines liberal education thus:

> Liberal Education is an approach to learning that empowers individuals and prepares them to deal with complexity, diversity, and change. It provides students with broad knowledge of the wider world (e.g. science, culture, and society) as well as in-depth study in a specific area of interest. A liberal education helps

students develop a sense of social responsibility, as well as strong and transferable intellectual and practical skills such as communication, analytical and problem-solving skills, and a demonstrated ability to apply knowledge and skills in real-world settings. The broad goals of liberal education have been enduring even as the courses and requirements that comprise a liberal education have changed over the years. Today, a liberal education usually includes a general education curriculum that provides broad learning in multiple disciplines and ways of knowing, along with more in-depth study in a major.

As institutions, then, that are committed to educating students who are prepared "to deal with complexity, diversity, and change," it seems nearly impossible that this would not include preparing students to deal with the "tectonic change" in writing and technology. The very fact that the areas of study in a liberal education "have changed over the years" indicates that part of this way of educating includes staying current with various epistemological, social, and cultural ideologies while maintaining the ideal of a student educated with a "broad knowledge of the wider world." In other words, if a liberal (arts) education aims to prepare students for the complexities of the world in the 21st century, it seems impossible that this would not include digital literacy in some way, shape or form. Because liberal arts schools vary widely in their approach to these ideals, I have not filtered out any school whose curriculum may differ drastically from others or whose view of the liberal arts may be quite different. Instead, my project deals solely with those who *define themselves* as liberal arts institutions, whatever this may mean to them—even though it could mean many different things. I do this under the assumption that no matter what their curriculum, they are still dedicated to the notion of

graduating students who are prepared "to deal with complexity, diversity, and change" with a "broad knowledge of the wider world."

What Do I Mean By "Institutionalization" and Why Is It Important?

Another term that requires clarification is "institutionalization." Since my project's goal is to research the "institutionalization" of digital literacies, I want to establish what I mean by this term and why it matters. I have already established that the field of Rhetoric and Writing considers digital literacy valuable. But it is one thing for a field to find value in what they do, and it is another thing altogether to have their values match with the values of the institutions in which they teach. Personally I have struggled before with attempting to teach a digital rhetoric course in an institution that did not have the necessary infrastructure for the lessons I taught. We struggled daily with a server that was too small to handle several computers being used at once. We struggled with students not having enough school-sponsored space to save their work. We struggled with the computers bogging down and freezing. I had to come to class each day nearly half an hour early to get all the computers started one at a time and then stay after class every day while my students' work took between 20 and 30 minutes to save. The people at IT got very tired of my face that semester, and I swore I would not teach the course again until I had a space to teach in that fit our needs.

I am not the only one who has had to struggle with this kind of issue, and the fact is that it goes much deeper than simply not having a good room. DeVoss et al. actually give us a list of some of the issues involved:

- computer networks

- network configurations

- operating systems, computer programs interfaces and their interrelatedness

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- network, server, and storage access rights and privileges

- courses and curricula

- the existence and availability of computer classrooms

- decision-making processes and procedures for who gets access to computer classrooms

- the design and arrangement of computer classrooms

- time periods of classes

- availability of faculty, students, and spaces outside of set and scheduled class times

- writing classifications and standards (e.g., what is writing; what is good writing)

- metaphors of computer programs; metaphors people use to describe programs; metaphors people use to describe their composing processes

- purposes and uses of new-media work

- Audiences for new-media work, both inside and outside the university (21-22).

As Stuart Selber says, "Literacy activities are necessarily refracted through institutional prisms; there is no outside territory that provides a neutral ground for analysis or actions" ("Institutional" 13). Digital literacy practices are necessarily bound within institutions, and the means of successful digital literacy practices are dependent on the infrastructure and support from the entire institution. DeVoss et al. explain it this way: "the ways in which new-media writing becomes defined, shaped, accepted, rejected or some combination of all of these (and more); who gets to do new media; who gets to learn it, where, and how; and what values get attached to this work (and to its writers and audiences)" are all a significant part of what I struggled with (17). DeVoss et al. discuss "infrastructure" and the embeddedness of power and axiologies inherent within the various materialities of an institution that either allow or prevent the teaching of digital literacies. This discussion leads directly to what I mean by "institutionalization": when

some construct like digital literacy has the full support and necessary infrastructure in an institution, that construct has become "institutionalized."

In the business world, the word "institutionalize" is defined and redefined frequently by nearly everyone who uses the term. A couple of definitions that were broad enough to include academic institutions lend insight into the idea of digital literacy being institutionalized: "Institutionalization is an ongoing process in which a set of activities, structures, and values becomes an integral and sustainable part of an organization" ("Institutionalization" *Quality* 1). This definition uses the terms "ongoing" and "sustainable" which make clear that this is not a one-time stab at making some group happy but rather a significant part of the institution's identity, that they want to be known as having adopted whatever it is they have institutionalized. Another good definition comes from Business Dictionary: they define institutionalization as a "process which translates an organization's code of conduct, mission, policies, vision, and strategic plans into action guidelines applicable to the daily activities of its officers and other employees. It aims at integrating fundamental values and objectives into the organization's culture and structure" ("Institutionalization" *Business* 1). This definition is helpful because it points out that institutionalization requires words and values be turned into actions.

Institutionalization, according to these definitions, requires that an institution do more than pay lip service to an ideology; an institution must also demonstrate what they claim to value through action. A supportive infrastructure would be a key part of this demonstration. Another important aspect of these two different definitions is that the first implies a centripetal force, that institutionalization is an effort to unite an institution's goals and values, while the second definition implies the opposite—a centrifugal force where the goals and values are articulated by

the institution which, in turn, works towards spreading this throughout the institution. (Further discussion of the importance of these forces in Chapter Three).

While it may seem a lofty goal for this project to examine institutionalization of digital literacy—and to hope that this research actually aids in this process as well—the fact is that such change can only come about by those who make these issues transparent. Porter et al. write about institutional critique and how it can produce change: "We hope that institutions can be sensitized to users, to people systemically from within and that this sensitizing can potentially change the way an entire industry perceives its relationship to the public" (611). When I use the term "institutionalization," the hope is that the institutions I research make or have made changes and embedded these values into their entire culture and infrastructure. Essentially this project is "fundamentally a pragmatic effort to use rhetorical means to improve institutional systems" (Porter et al. 625). In short, I use the term "institutionalization" as a way of demonstrating that my goal is to make transparent the value systems concerning digital literacies both claimed by and/or enacted within an institution.

The Name Game: Finding the Right Term

Many terms are used to name this particular literacy I am discussing and researching, so why have I chosen the term "digital literacy" for this project? The literacy process this project focuses on is a very specific one: it includes the literacy involved with technologies and digital and virtual spaces. This literacy has been tagged with several monikers: digital literacy, e-literacy, cyber-literacy, computer-literacy, tech-literacy…and more. The various terminologies come from the complexity of this literacy—or as many would argue, "these literacies"—and create a

plethora of opportunities for those who discuss this issue to apply a label that most nicely suits their idea of what this literacy entails.

Because my project is meant to cover the meaning behind each of these various terms, I have chosen the term "digital literacy" because of its breadth; compared to many of the others, this term is most inclusive of all computer-, technology-, electric-, and cyborg-related ideas. Yet while it is inclusive of what most of those in the field of R&W consider important, it does not include every piece of electronic equipment. Douglas Eyman explains this well:

> I prefer the term "digital literacy" because I believe it captures the notion that the literacy practices referred to are enacted in digital spaces – I would contrast this sense of media, location, and context with terms such as 'computer literacy' which evokes a concept of mere tool use, 'internet literacy' which is too specific both in locale and in historical moment, and 'electronic literacy' which is too broad in scope (as it can be seen as referencing any electronic device). 'Technological literacy' or 'technology literacy' is similarly too broad, as nearly all modes of communication are technologies—so there is no functional distinction between print-based literacy and digital literacy. (8-9)

In addition to this, "digital" in computer-speak refers to the form of letters and numbers, which puts a focus on writing; I also like the way the term "digital" refers to fingers and what is manipulated by our "digits" as well. Given the many options, I have decided to use the term "digital literacy" throughout my project. This does not discount other terms; the wide variety of options merely allows for those writing about or discussing this particular literacy to choose words that best fit their theoretical ideas.

Looking it Up: Some Key Definitions

My second question: What words are used to describe digital literacy—what "literacies" are a part of digital literacy—and what kind of lexicon can we construct from them to gain a better understanding of DL? As I mentioned in the discussion of defining "literacy," it is also important to discuss the language used to describe "digital literacy" in particular. While it is not useful or even productive to come up with some sort of "one size fits all" definition of digital literacy because of its complexity, it is helpful to understand what the current language choices are in the field that make up these definitions. This language does a few things: it provides a lexicon for my research, it gives a sense of what various people in the field value as far as DL, and it determines what "literacies" are a part of "digital literacy." For example, in 1998 Dennis Adams and Mary Hamm list "computer literacies" for teachers, which includes what are now almost irrelevant skills like "knowledgably discuss how computers work and how they are used outside of school" and "operate and use the disk drive of two different microcomputers" (159). Obviously dated definitions like this are not useful today as those who wrote these definitions could not predict the impact such technologies would have or the capabilities they would create. Indeed, at the time, this was likely a sufficient definition.

In 1997 Paul Gilster wrote a book on digital literacy, yet his definition seems incredibly simplistic: "The ability to access networked computer resources and use them" and "the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers" (1). Even though 1997 had not yet imagined advances like Web 2.0 creating such a huge influx of production—that we would all be writing on the internet without being web designers—this definition still includes some key components like access, information, and networking. Yet if we take Adams and Hamm's functional literacy and add

Gilster's access literacy, information literacy, and networking literacy, we still have only four of the literacies that make up digital literacy. There are many more.

Looking at more contemporary definitions can situate what "digital literacy" means in the first decade of the 21st century and give us an idea of what literacies comprise DL. Kathleen Welch's definition of "electric" rhetoric I find particularly useful for understanding these parameters: "an activity of minds/bodies/intersubjectivities that are conditioned within specific cultures/ideologies, all of which have oral/aural features of discourse…which are embedded in writing as a way of knowing" (8). This post-modern construct clearly envisions digital ("electric") rhetoric as being influenced much more than traditionally considered by the physicality of bodies, the cultural and ideological influence of context, and the features of sound—all a part of the epistemology of writing. While this is not a definition of digital literacy— rather of digital rhetoric—to include this language in a definition of DL still makes sense since digital rhetoric—or rhetorical literacy in this case—itself is a significant part of digital literacy. This definition adds "aural" to the lexicon as well, which can guide my research as I look for indications of and consider such influences and features.

Carolyn Handa provides additional language to defining DL. In her "Letter from the Guest Editor: Digital Rhetoric, Digital Literacy, Computers, and Composition," Handa quotes Richard Lanham for a complex and inclusive definition of digital literacy: "To be deeply literate in the digital world means being skilled at deciphering complex images and sounds as well as the syntactical subtleties of words. Above all, it means being at home in a shifting mix of words, images and sounds" (qtd. in Handa 3). Lanham's definition is quite condensed and works well to include the major components of digital literacy: text, images, sound, and the ability to "be at home" in this mix. While the term "be at home" is vague as it implies comfort with use and

consumption but does not imply production or critical or informational literacies, it adds the idea of "comfort" to literacy—the idea that increased literacy means increased comfort with the various elements of the digital world. This definition also adds the visual—a key component of digital literacy—and the idea of "shifting"; it indicates that today's digital literacy is anything but static. The term "deciphering" is another way of saying that *critical* literacy is part of DL, and this definition also adds visual literacy to the mix.

While the previous definitions seem to cover an awful lot of components of what DL means to today's learner—functional literacy, access literacy, information literacy, and networking literacy, aural literacy, critical literacy, and visual literacy—they do not cover everything. For example, Laura Gurak uses the terms "critical literacy" and "cyberliteracy" in her article "Cyberliteracy: Toward a New Internet Consciousness." This "critical literacy" requires users to "become familiar with the social, rhetorical, and political features of digital communication" and become "more sophisticated about critiquing, challenging, and anticipating how these technologies are designed, implemented, and used" (11). Gurak argues for her definition of cyberliteracy (a term she borrows but does not defend) as a merging of print and oral literacy that changes our perspectives on discourse and interpersonal interaction. Cyberliteracy, she then argues, is a reflection of our 21st-century ways of living. What Gurak's definition adds to our lexicon is a more distinct description of critical literacy as critique, challenge, and anticipation as well as adding production literacy: design and implementation.

These definitions include some of the literacies that are important to keep in the forefront of our thinking when considering digital literacy and how we choose to define it—and thus what we value. For example, Welch's definition is the only one I have come across that includes the physicality of the body, even those who discuss cyborg issues. Welch also mentions culture and

ideologies, equally important issues to include. The second definition is valuable for its inclusion of image, sound, and words as well as the notion of "being at home," which I believe is an important part of any literacy. Gurak's definition includes the important issues of context but also brings in the idea of critical literacy ("critiquing, challenging, and anticipating…). Further, she brings up design, implementation, and use, which none of the others mention.

After determining the various literacies included in these definitions, I believe it is necessary to look at the word choices for each author's definition of digital literacy to determine what *kind of activity* digital literacy is. Welch is defining a rhetoric, so this makes a difference as she uses the term "activity." Handa's definition includes "skilled" and "being at home" which could be translated as "comfort." Gurak says digital literacy is "to become familiar with" and "more sophisticated about"—a nice way of keeping literacy open-ended and infinite. Pam Berger uses the term "ability" in her definition, as does Sonya Livingstone. NCTE's variety of words used in their definition of 21st Century Literacies is also very useful: develop, build, design, share, manage, analyze, synthesize, create, critique, analyze, evaluate, and attend to.

If we combined all this language, we come up with a humdinger of a definition: "Digital literacy is the skill, ability, comfort with, familiarity with, and sophistication about deciphering, developing, building, designing, sharing, managing, analyzing, synthesizing, creating, critiquing, challenging, anticipating, analyzing, evaluating, and attending to the minds/bodies/ intersubjectivities of cultural, political, social, and rhetorical ideologies embedded in the complex images, sounds, and words as well as their design, implementation, and use." And this is just a compilation of three definitions. Were I to bring in the language from several others, the definition would become even more impossible. My point here is that coming up with a one-definition-fits-all definition does not do anyone any good. These definitions must be kept within

their context and be honed to serve the purpose for which they are intended. While I had to have

a workable definition for this particular project, I am not advocating my definition as the ultimate

in definitions. However, I do believe that when any institution works toward the

institutionalization of DL, that institution will want to consider what they mean by this term,

what ideologies they embrace, and what components of DL they will concern themselves with in

order to accomplish their goals I a way that makes the most sense for them. They need to

understand both the complexity of the issue and the purview of what digital literacy means in the

first decade of the 21st century.

Extended Definitions: Categorizing Digital Literacies

While I have already talked about various definitions of DL, because of the complexities and

myriad component and literacies that constitute DL I find it very helpful—in my teaching, in any

discussion of DL, and, most important here, in my research—to think about ways to organize all

these parts. As shown, it is neither possible nor desirable to try to include all the language

involved in DL. So coming up with a working taxonomy or clear, more extended definition can

make good sense. And, of course, definitions carry weight, as Sean Williams says, "How we

define literacy reveals the values we attach to it" (26). Thus any time someone creates a

definition—and as a result makes choices of what to include and what to leave out—the author's

value system becomes transparent by his or her language. This is one of the goals of my

research: to look at language closely and determine some of the possible values of DL across

institutions.

This leads to the third question here: How do those who write about and discuss digital

literacies approach the organization of all the complex parts of digital literacy? The first step—

determining a most useful name—and the second step—looking at possible definitions—lay the

groundwork for my discussion of what digital literacy is. The next step is to look at some of the different ways people in the field of R&W organize and compartmentalize the various literacies and complexities of DL into a taxonomy. I will look at a few of the approaches to DL and briefly discuss the benefits and drawbacks of each, ending with what I find most useful and will use for my research.

One example of such a taxonomy is from 2004 when CCCC published what they believe are the essential practices for a digitally literate student in the 21st Century:

1. introduce students to the epistemic (knowledge-constructing) characteristics of information technology, some of which are generic to information technology and some of which are specific to the fields in which the information technology is used;

2. provide students with opportunities to apply digital technologies to solve substantial problems common to the academic, professional, civic, and/or personal realm of their lives;

3. include much hands-on use of technologies;

4. engage students in the critical evaluation of information (see American Library Association, "Information Literacy"); and

5. prepare students to be reflective practitioners.

No explanation or elaboration is offered here. However, the simple existence of this document reflects the thinking of many of those most respected in the field of R & W. These five components—an epistemological understanding of information technology, digital technologies as tools for change, hands-on use, critical evaluation, and reflective practice—echo some of what many others in the field consider essential elements of digital literacy.

The CCCCs approach has several strengths. The first category[2] uses language that includes both the epistemological approach and the word "information," which does not allow a simple use-oriented approach to literacy. As a matter of fact, each of the five categories rejects any simplicity or mere functionality, as the second requires a proactive approach. The third category—hands-on use—is less clear, but definitely requires that students be composers and not just consumers of digital writing. Of course the last two categories require active use rather than passive. These categories definitely demonstrate that the CCCC values much more than mere use-oriented literacy and encourage students to be active composers and critical thinkers about digital literacies. Unfortunately, there is no mention of visual or aural literacies as part of DL here. While it is unlikely, someone following this taxonomy could easily have students doing a lot of reading and writing in digital spaces and completely leave out the many multi-modal possibilities that now most consider a significant part of DL. Also, while it hints at cultural and social issues with its requirement "for change," it is not clear from these categories that the crucial cultural and social issues need to be taught.

Another approach comes from Yoram Eshet-Alkalai who argues for a redefined conceptual framework for digital literacy in his article "Digital Literacy: A Conceptual Framework for Survival Skills in the Digital Era." He argues that all five of the literacies in his framework are necessary for one to consider oneself "digitally literate": photo-visual literacy, reproduction literacy, branching (hyper-media and non-linear thinking) literacy, information literacy, and socio-emotional literacy (the ability to evaluate information and collaboratively

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[2] For purposes of clarity in this project, I will refer to the parts of each taxonomy as a "category."

construct knowledge). Through observation of users, years of working with computers, and empirical research involving thirty computer users of varying ages, Eshet-Alkalai finds that this five-point taxonomy accurately describes those literacies necessary for digital literacy.

Eshet-Alkalai's definition nicely sums up many of the issues others consider valuable for a new definition of digital literacies. He acknowledges multiple literacies and includes visual concerns, the idea that literacy includes production and not just consumption of text, a shift toward non-linear thinking, the proliferation of information due to the internet, and the post-modern ideologies of critical literacy and epistemology. This definition is one of the most comprehensive I have found, yet it lacks any mention of a social or contextual awareness as a part of literacy (as does the CCCC's approach), as argued by several others like Gurak. Alkalai's framework also never uses the term "critical" nor does it discuss issues of cultural and socially embedded practice.

A third more simplified approach comes from Sonia Livingstone. She defines "media literacy" in four categories: the ability to access, analyze, evaluate, and create content in a variety of forms (6). This way of organizing DL ideals is important for its inclusion of access and creating content, two elements that not all definitions mention. Livingstone defines access broadly, including various socio-cultural contexts like availability, choice of computer and software and ISP, and ownership, as well as money, location, time, and space as well as parental attitude—which can inhibit or encourage literacy. This broad definition, then, illuminates how this kind of access is essential to being digitally literate. Content creation is just as crucial, just as one would not be considered literate if he could only read but not write. Not all definitions include content creation, however, which makes Livingstone's definition important. Beyond

content creation, Livingstone promotes a literacy that views the internet as a space not just to find answers but, as noted before, a new space for critical thought (1).

The biggest red flag comes from the last part of her approach: "in a variety of forms." This vague language can have two effects. It allows for creativity and nearly any kind of materiality and/or technology a writer could get his hands on, but it also allows for many of these same materialities/technologies to be overlooked or ignored. Like the CCCs approach, no mention of the visual or aural could result in them being left out completely.

The most notable of those who have created a taxonomy is Stuart Selber who wrote the book *Multiliteracies for a Digital Age* in which he promotes a three-category approach to digital literacy: functional, critical, and rhetorical. Selber redefines functional literacy, rejecting the dichotomous notion of those who can and those who cannot while insisting that functional literacy is skill-oriented. His view of functional literacy compares to Handa's idea of "being at home" in digital spaces. Then in his explanation of critical literacy, Selber avers that this critical literacy is essential in that it insists that students "recognize and question the politics of computers" (75). This goes beyond functional literacy, which usually sees technology as neutral. Critical literacy instead "strives to both expose biases and provide an assemblage of cultural practices that, in a democratic spirit, might lead to the production of positive social change" (81). Selber then explains the third literacy: rhetorical literacy. This focuses on students as critical producers of texts in digital spaces in addition to their consumption (critical literacy).

Selber's definition of digital literacy encompasses nearly all of the concerns and ideologies involved in digital literacies, yet does so in three easy-to-understand categories. All other issues can be considered sub-categories of one of these three: informational, visual, aural, etc. For example, visual literacy is a component of both critical and rhetorical literacy: learners

work toward understanding the impacts and embedded meanings of what they see in combination with learning to create and compose rhetorically in digital spaces. Selber's taxonomy simply divides visual literacy into two components. Thus Selber's organization includes the many literacies discussed earlier while still addressing issues of identity, power, axiology, and more. Because of this, Selber's book has become foundational to digital literacy education.

After discussing the approaches to digital literacy that various scholars consider important, one glaring choice seems apparent: any time some kind of approach is used or defined, the choice must be made whether or not to be more general like Selber or more specific like the others. I imagine that the nature of a person's project would drive this decision. For this particular project, I find a more general taxonomy more helpful and have chosen to use Selber's taxonomy, as I explain in the next section.

My Definition and Taxonomy of Digital Literacy

For purposes of my research, it was necessary that I come up with a working definition for digital literacy. When deciding on my working definition, I considered three things: definitions others have used that were coherent and clear; something broad and inclusive without losing specificity; and something that went along with the term as I have come to understand it through my education in digital rhetorics.

I have chosen to follow Stuart Selber's framework for this project as it divides digital literacy into three categories that I have come to find most useful. I understand "functional literacy" to deal with the user's movement into the discourse community: the ease with which the person can move around—physically, metaphorically, and verbally—within digital spaces, both physical and virtual. This would be a matter of identity, heavily ontological—a sort of

"becoming." The intention is a general literacy construct, a simple matter of being in the digital literacy process. The term "functional" can be misleading if one considers it to be nothing more than being able to turn on a computer and open a browser. However, "functional" as Selber defines it deals with much more than simply being able to "function" in digital realms but calls for a move toward continually greater elegance and sophistication within the digital literacy community.

Selber's second category "critical literacy" deals with the learner as consumer: one who reads, listens to, watches, looks at, critiques, criticizes, analyzes, challenges, and evaluates digital texts. This consumption is epistemological—how one consumes knowledge and learns differently with multiple media rather than text alone. This includes understanding the embedded political, social, and cultural ideologies inherent in any composition and how visual and aural rhetoric plays into understanding this new way of constructing knowledge. This essential category makes is clear that it isn't enough just to be a part of the digital community but that literacy requires the user be a very thoughtful learner in these spaces as well.

My third category is Selber's "rhetorical literacy." This focuses on the person as creator: the composer who develops, builds, designs, shares, and synthesizes his ideas and values in order to affect change. This category focuses as well on the axiological purpose behind all composing. If "it's all rhetoric," then it is certainly also all deeply axiological. Also included are issues of collaboration and sharing, as digital literacy requires a newfound importance on working in tandem with others and not writing in isolation as has often been the writer's way. This category, then, would focus on creation and production—"new composition" if you will—and the imperative of composition as a very social action.

Based on these ideas, then, a more comprehensive one-sentence definition of digital literacy—specifically for this project, of course—would be "The ongoing process of becoming a functional part of the digital community through an understanding of embedded ideologies and through critical and rhetorical learning and composing within verbal, visual, and aural digital spaces." This definition includes the three categories—functional, critical, and rhetorical—while making it clear that this literacy is neither neutral nor a simple matter of tool choices.

CHAPTER THREE: METHODS AND METHODOLOGIES

This chapter focuses on my second goal: to research 4-year liberal arts institutions to learn how they approach the digital literacy issue and how they go about "institutionalizing" digital literacy. From discussions in chapters one and two, we clearly see that this is not a simple question of whether or not institutions have computer classrooms or offer classes in digital rhetoric. Examining levels of institutionalization involves understanding levels of support, determining why current conditions exist, recognizing contextual issues, and more. An explanation of the methodologies behind my research—activity theory and genre theory—provide a lens for my research. The three research methods that follow present a triangulation that helps me to find out as much as possible from both quantitative and qualitative approaches.

Methodologies: The Operational Life Cycle, Activity Theory, and Genre Theory

In order to research the operationalization of DL (O of DL), I simplify the many complexities of what I am studying by looking first at the O of DL as a set of activities that, combined, make up the O of DL. I call this set of activities the Operational Life Cycle (OLC). The idea of an OLC is that in order for any idea to become operationalized, it goes through a "life cycle," not linearly from inception to fruition but in a circular way: from articulation to implementation to assessment and back to re-articulation. This "life cycle"—in this case specifically the life cycle of DL—includes four activities: articulating values, setting goals, implementing goals, and assessing goals. While an OLC does not actually have an end per se but, rather, is an ongoing "process," the definitions of "institutionalization" as discussed in Chapter One show that eventually the process "becomes an integral and sustainable part" ("Institutionalization" *Business* 1) of "the organization's culture and structure" ("Institutionalization" *Quality* 1). It is this process—this Operational Life Cycle—that I examine through my research.

Because operationalization requires the full cooperation of the institution, this means that all people in an institution who deal with literacy issues in any way act as subjects in the four activities of the OLC. This group of people can be thought of broadly as the entire institution at large, a bit more narrowly as broken up into groups by department, or even more narrowly as individual faculty members. While these people are, in essence, all the same people, what matters is that they function in all of these ways: as individual teachers, as members of a department, and as an institutional member. These decision-makers act in different ways according to the role they play during various activities within the functioning of the institution. Because of these activities and the roles people play during these activities, using actual Activity Theory as a foundational way to examine and ground my research seemed natural. These people—whether in the role of individual faculty, department member, or member of an institution—are the subjects of the four activities that make up the institutionalization of digital literacies: articulating values, setting goals, implementing goals, and an assesment of goals.

Applying this to a simplified version of Engstrom's Activity Theory triangle provides a visual aid to make this clearer. The triangle in this Figure is from Yrjö Engström's "Activity Theory and the Individual and Social Transformation." Figure 3.1 shows the first activity of Articulating Values. The subjects in this activity are essentially all the same

Figure 3.1 : The Activity of Articulating Values Using a Simplified Version of Engstrom's Activity Theory Triangle

Mediational Tools: Computer, Paper, Ink, etc.

Outcome

Subjects: Faculty Role, Departmental Role, Institutional Role

Objects: Genres Like Course Catalogs, Websites, Syllabi, Mission Statements

people—educators—but because they play different roles during various activities, they act as *three* subjects rather then just one; it depends on the activity and their role during that activity. The mediational tools for the activity of articulating goals would be a long list of things like a computer, paper, ink—all the hardware it takes to make things such as catalogs and the like. The object of this activity is simply a statement—any genre of some kind that acts as a value statement and is printed in some medium. Two outcomes actually exist in this case, which I will discuss in detail shortly.

An image like this could be created for each of the four activities. However, because they share subjects (faculty, departments, institutions), these four activities could be represented in one figure with the activities all sharing the subject in the center, as shown in Figure 3.2. Here

FIGURE 3.2: The Operational LIfe Cycle of the Operationalization of Digital Literacies: All Four Activities with Shared Subjects
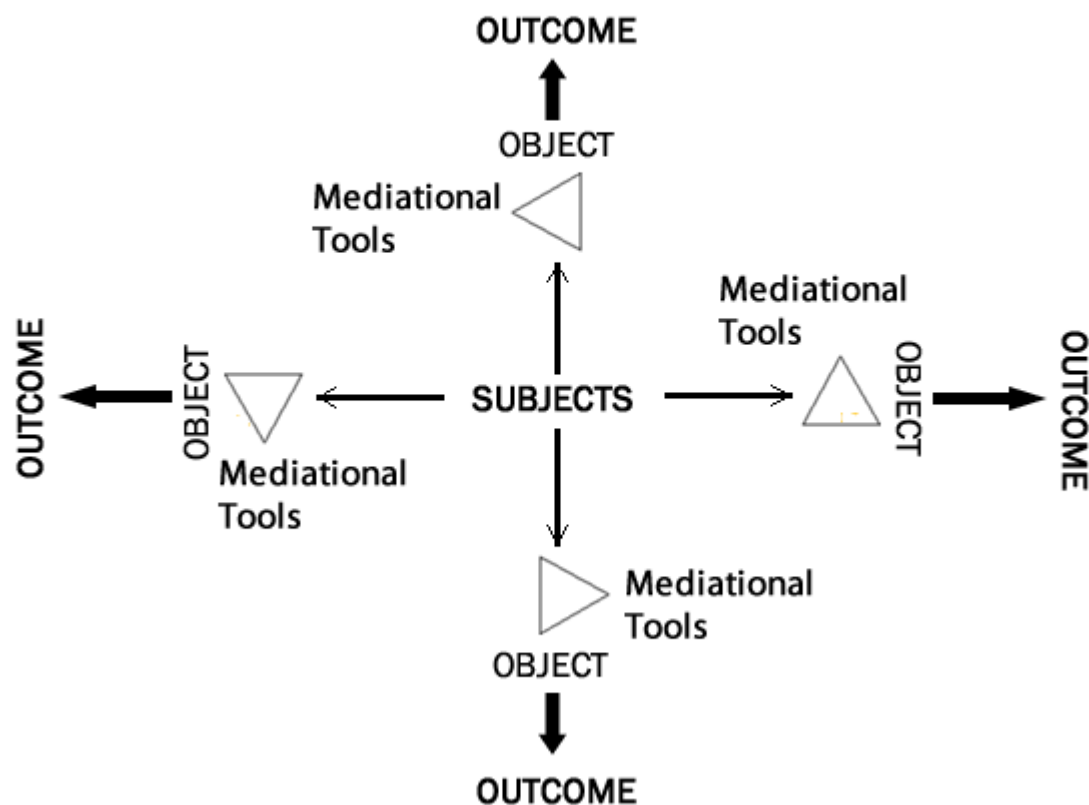
the faculty, departments, and/or institutions are the subjects of each of the four activities. This image represents the core of the Operational Life Cycle of Institutionalizing Digital Literacies. Its circular (as opposed to linear) representation here shows the continuous nature of an OLC, how each activity gives rise to another with no discernable beginning or ending.

My research focuses on two parts of the activities in the OLC: the subjects and the objects. Researching the subject roles—faculty, departmental, and institutional—means looking at all three roles of the players of institutionalization: no idea can "become an integral and sustainable part of an organization" without participation of people in all three roles ("Institutionalization" *Quality* 1). I also focused on the objects: the genres produced as objects by each of the three subject roles. The reason for researching these genres comes from the argument that genres and the activities of which they are an object should be studied together. Here I quote Bazerman and Russell:

> Human-produced artifacts such as utterances or texts…are not to be understood as objects themselves, but within the activities that give rise and use to them. …The objects created and used in action then are studied as mediating artifacts rather than things in themselves, having rules of objects. The principles by which they are formed and maintained and changed are those of activity. (1)

If we apply this theory to any of the four activities, then the "utterances or texts" we understand as "mediating artifacts" would be a significant part—the "object" part—of the activity. Figure 3.1 (above) shows how this plays out. Figure 3.1 shows how the key to a successful activity is the completion of an object that produces the desired outcome. As there are four activities—and thus four outcomes—in an OLC, then Figure 3.2 shows how the key to institutionalization is the outcome of all four activities.

In addition to understanding the OLC of DL through Activity Theory, adding the lens of

Genre Theory makes this research even more meaningful. Rather than simply researching

outcomes, genre theory adds the element of researching the objects that give rise to those

TABLE 3.1: Sources of Genre Evidence of Operational Life Cycle Activities Across Institutional Roles

Table 3.1		Operational Life Cycle Activities			
		Articulating Values	Setting Goals	Implementing Goals	Assessing Goals
Subjects	Faculty	None	None	Descriptions of courses taught, course catalog	None
	Department	Department webpages, course catalog	Webpages, course catalog	Courses offered, curricula, catalog language, webpages	None
	Institution	Mission statements, vision statements, websites, course catalog	Vision statements, goal statements	Mission statements, webpages, course catalog	Webpages

outcomes: genres, in this case. Looking for evidence of what an institution values could be

approached in many ways, but genre theory works best for this research project for several

reasons. One, genres, as texts that serve a rhetorical purpose and are a "stable-for-now"

representation of a response to a specific exigency (Miller, Bazerman) can demonstrate what

institutions value in any given specific time and place (Schryer 107). If an institution does value

digital literacies, evidence of this should show up in some of the specific genres used to express

their values and beliefs to the public, specifically mission statements, which might provide the

kind of evidence that would indicate some sort of dedication to digital literacies as a goal.

On the other hand, what institutions value should align with what they do. Just as my

department had set a specific goal, it also had not followed through with the goal and nothing

had come from it. Evidence of what institutions—English departments in particular—were doing

in regards to digital literacies would also show up in specific genres like course listings and their

descriptions. These genres would serve as evidence that a teacher, department, or institution was actually, to borrow an old cliché, practicing what it preached. Table 3.1 shows the various available places for genre evidence of each activity according to the role of the subjects. In other words, were a subject (as faculty, department, or institution) to desire articulation of digital literacy as a value, the genres (written only) in Table 3.1 show the places where one might look to find evidence of such a value.

Another point of interest to my research was the outcome of these particular genres. When we think of mission statements and the like, we imagine that these genres can have two outcomes: One, they state ideologies and beliefs, attempt to align and unify the various members of a group to show a sign of coherence in their purpose. Two, these same "statements" can serve as a guide, a goal or vision for those who work for an institution. Rebecca Caruthers explains the "ideological work of genres: their power to naturalize and perpetuate the practices of the dominant elite; their affinity for positioning users in prescribed, generic subject positions and within prescribed power relations; and their ability to restrict or prohibit the actions of some individuals" (5). To study an institution's documents, then, serves a dual purpose: we see what they value through their documents and we see evidence of their literacy practices through what they value. Freedman discusses this connection: "Research into genres involves a kind of archeology, in which the genres themselves are construed as traces, as artifacts which can indicate to us the nature of the significant situations in that particular community…" (11). Genre theory, then, allows us to see both what an institution values and how the institution enacts those values.

Institutional response can be further understood by the notion that genres not only respond to but also invoke certain rhetorical situations (Carruthers 21). This dual perspective can

demonstrate how genres as objects in the four activities respond to a situation as well as create

other situations. This idea draws on Bakhtin's notion that communication impulses (genres) can

be categorized in two ways: centripetal and centrifugal (Bakhtin 270-273). Clay Spinuzzi

explains these impulses in his book *Tracing Genres Through Organizations*: institutions in many

ways want to be like other institutions; they have a *centripital* impulse "toward formalization,

normalization, regularity, convention, stability—and stasis. Things are metaphorically drawn to

the center and become official" (20). Institutions want to present a united, coherent snapshot of

themselves to the public, one that firmly represents very specific ideologies and values. Aviva

Freedman, in her keynote address to the European Writing Conference in 1996, mentions this

same kind of force: "Human beings <u>seek</u> and consequently find or create regularities and

patterns. They seek regularities for convenience (as a way of organizing the chaos of

experience), for aesthetic reasons, and for a sense of control" (5, emphasis hers). In other words,

no matter how different or distinct the people—faculty, staff, students—are within an institution,

the instinct of the body as a whole is to unify. As a result of this "centripetal force," institutions

create several genres, "recurring rhetorical responses to recurring exigencies" (Freedman 5).

Studying these genres as a typified response to this centripetal urge can give insight into an

institution's goals and values.

On the other hand, genres do not act simply as a response to or result of activity. They are

not merely centripetal but also centrifugal. Freedman explains that "genres not only respond to

specific contexts but also reshape those contexts in the process of responding to them" (4).

Spinuzzi explains this as the centrifugal force of communication: "that of resistance,

idiosyncrasy, ad hoc innovation—and chaos. Things metaphorically fly away from the center and

become unofficial" (Spinuzzi 20). Despite the disconcerting nature of defining genre, the

inherent flux of genre is essential to its nature: both a reaction to and a cause for action. Genres

result from recurring situations and the recurring situation results because of the genre (Devitt

21). Devitt calls this nature of genre "messily reciprocal," a term that nicely encapsulates the

way genre works (24).

From these ideas, we can see that institutions will have several genres that result from the

centripetal force—the urge to unify and cohere—and the centrifugal force—the urge to

individualize and deconstruct language. These two "forces"—these two outcomes of each

activity—provide the perpetual nature of the Operational Life Cycle. These two outcomes

theoretically keep the OLC in motion, the activities occurring over and over, until (who knows

how many) years pass and DL becomes institutionalized. Once an institution reaches this point

of saturation, the OLC does not stop but continues indefinitely. Theoretically, then, using genre

theory to research the Operational Life Cycle of Digital Literacies makes good sense.

Fitting the Theories Together

Genre theory, then, looks at texts as evidence of human activity, as the result of and reason for

social interaction, the centripetal and centrifugal weight that genres carry in any given

organization. Defining genre theory in this way naturally changes the way one would analyze

genre. Because the questions I want to ask have little to do with the formal structures or the

syntactical or semantically features of different texts from different institutions, it follows, then,

that a more visual theory would fit well with genre theory—a theory like activity theory, which

analyzes activity systems. Considering these genres as social responses, then, lends naturally to

the combination of genre theory and activity theory (Russell, Yates, and Orlikowski). Miller and

Devitt even go so far as to say that if text is not considered in this way, it has no meaning:

"Writing is alive when it is being written, read, remembered, contemplated, followed—when it is

part of human activity. Otherwise it is dead on the page, devoid of meaning, devoid of influence, worthless" (1).

Activity theory, nicely summarized by Spinuzzi, "posits that in every sphere of activity, *collaborators* use *instruments* to transform a particular *object* with a particular outcome in mind (37, emphasis his). Here Russell further explains the connection:

> Activity theory demands that genres not be seen merely as texts that share some
>
> formal features but as shared expectations (perceptions, predictions) among some
>
> group(s) of people of how certain tools … may be used to act together to
>
> accomplish shared purposes to further the object/motive of the activity system. In
>
> this sense, genre … are not best described as textual forms, but as forms of life,
>
> ways of being, frames for social actions. They are environments for learning and
>
> teaching. As forms of life, genres and the activity systems they operationalize are
>
> (temporarily) regularized, stabilized, through routinized, typified, tool-use within
>
> and among (sub)groups/genres. (7)

This idea, then, leads to the argument that genre theory, which studies these "typified responses to recurring rhetorical exigencies or to recurring rhetorical contexts," needs to be applied within the framework of activity theory, which emphasizes the social and contextual nature of genre as well as genre's centripetal and centrifugal nature.

A Visual Look at the Operationalization of Digital Literacy—Theoretically Speaking

Figure 3.3 is my visualization of the Operational Life Cycle of the Operationalization of Digital Literacy in an institution. In the center are the subject roles: teachers, departments, and institutions. Those three all act as subjects in the four activities of the OLC: articulating values, setting goals, implementing goals, and assessment. These four activities are visually represented

by a small triangle, a mini visual of Engstrom's triangle. The objects of each activity are various

genres—which are determined by the subject role and the activity. Each genre produced by each

activity has two outcomes: centripetal, which reflects and unifies, and centrifugal, which starts

the OLC all over again by causing the subjects to begin another activity. These forces nicely

reflect Bahktin's idea about communication impulses.

FIGURE 3.3: The Entire Operational LIfe Cycle of the Operationalization of Digital Literacies
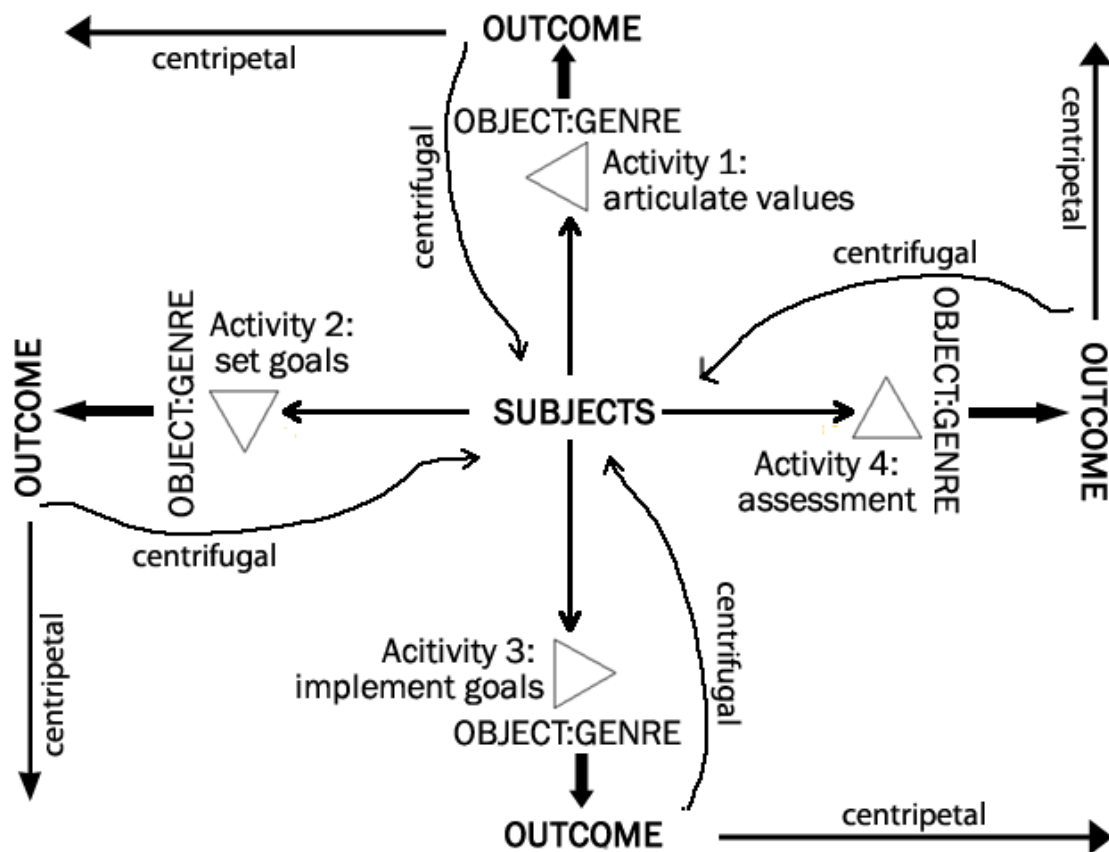
Method One: Surveys

Institutionalization of digital literacy, as previously discussed, is not a simple concept. It requires

several research approaches. One of my original major questions stemmed from the disconnect

between the digital literacy values and goals of the institution in which I worked and the actual

digital literacy practices I saw in place. Most of my questions were related to the break between articulated values and actual practice and why this happens:

- What are [English] teacher attitudes toward digital literacy?

- How much departmental/institutional importance is given to digital literacies?

- What is the availability of technologies and does this affect teachers' desire/ability to teach digital literacies?

- Are "illiterate" students graduating from liberal arts colleges?

- How do these factors add to or detract from the institutionalization of DL?

A survey would allow me to reach many liberal arts (LA) colleges and ask many questions pertaining to the status of DL at LA schools. Ideally, a survey would offer a broad picture of the perspectives from the subjects themselves (faculty as individuals, department members, and members of an institution—all three at once). Because I did not offer an extended discussion of digital literacy, and because some tend to confuse digital literacy with other notions of computer literacies, I used the term "digital writing literacy" to make the distinction more clear. The design of this survey was a series of questions divided into three parts: teaching, curriculum, and institutional infrastructure meant to cover all three subject roles (Questions below. For complete survey, see Appendix A).

The following are the questions I asked the faculty:

Questions on Your Teaching

1. Do any of the courses you teach contain elements of teaching digital writing literacy?

2. What elements of digital writing literacy do you teach?

3. If you do teach the above literacies, in what course(s)?

4. If you do not teach digital writing literacy in some or all of your courses, what are your reasons?

Questions On Curriculum

5. How crucial do you feel it is for an English major with a liberal arts education to be digitally literate?

6. Where do you feel digital writing literacy for students is best taught?

7. What documentation are you aware of in your department where goals for digital writing literacy are explicit?

8. How long have these digital writing literacy goals been a documented component of your program?

9. If digital writing literacy is not a component of your program/department, is it an institutional goal taught elsewhere?

Questions on Institutional Infrastructure and Technology Availability

10. ALL classrooms at my institution have computers for students, computer for instructor, Internet, document camera, projector, overhead projector, television, VCR, DVD player.

11. SOME classrooms at my institution have computers for students, computer for instructor, Internet, document camera, projector, overhead projector, television, VCR, DVD player.

12. Classrooms with computers and Internet for students and teacher are plentiful, readily available for all teachers, can be requested for a semester, can be requested for occasional use, are nearly impossible to get, are very few in number, do not exist, or other.

13. If computer classrooms were always available, how likely would you be to add digital literacy components to your pedagogy?

14. If computer classrooms were always available, how likely would your department/program

be to add a course/courses in digital literacies?

15. Please name your institution.

Determining My Population

A working definition for digital literacy was necessary for the survey to ensure those taking the

survey understood DL in the same way. This definition was given to all those taking the survey:

"The ability to read and interpret media, to be both critical consumer and composer of texts in a

variety of modes and media, and to evaluate and apply new knowledge gained from digital

environments."[3] I limited my research to English departments (or the equivalent) in liberal arts

colleges, as explained in Chapter One. The rationale for English departments stemmed from the

argument that digital literacy is *not* meant to be merely a computer issue, nor is it meant to

reflect media solely as a means of communication. The core of this literacy is critical and

rhetorical, as Selber argues; these aspects are what separate digital literacy as a whole from other

more specific literacies like information literacy, computer literacy, and visual literacy. While

these are all a part of digital literacy as a whole, the main place where such critical and rhetorical

literacy is taught is English departments (Handa, Eyman, Yancey).

My research population was thus confined to English departments in four-year liberal arts

schools. My research accentuated the fact that this categorization was neither clear nor

---

[3] I conducted my survey before working on the definition I ultimately came up with for this

dissertation. At the time, the definition I use here was created to reflect a functional, critical,

and rhetorical view of DL, yet my language had not been honed by the many readings I

encountered during my research for this project.

comprehensive. For example, not all institutions use the term "English" to define a department that deals with literature and writing. Also, while many schools may contain a four-year option, this may be only part of a larger institution that does not consider itself "liberal arts." Thus, for purposes of this project, I limited myself to schools that were considered liberal arts institutions by both themselves and recognized as such by others, (how they *defined* liberal arts was not considered) as explained in Chapter One, and when looking for "English" departments, I only researched those schools who clearly used the term "English" or a term that clearly identified the department as the place where composition and writing courses are taught. Using these parameters, however, complicated my research results to a certain extent. Because I used such a broad definition for "liberal arts," and because I did not limit this population to anything other than "4-year," some of the schools that became a part of this population simply by random selection did not share many characteristics with most of the other schools. The two institutions that stand out as most problematic are Duke University and Cornell University. Both of these schools are much larger than most of the others, with student populations at 6,500 at Duke and nearly 14,000 at Cornell—and these numbers are just undergrads. Which is another significant difference: these schools have graduate schools as well. Size alone makes a big enough difference that it becomes difficult to compare institutions like this with small colleges like Concordia Ann Arbor with 800 undergrads and no grad school.

I did not eliminate them from the population, however, for a couple reasons. One, they did self-identify as espousing the liberal arts. They were also recognized as liberal arts institutions by other entities such as the *US News and World Report's* "Best 100 Liberal Arts Colleges." Because I had not added limitations of size or population or presence of a grad school—or any of the other significant differences that make these schools stand out—I did not

feel it made sense to redefine my population, find different lists that recognized liberal arts

schools in different ways, and basically start my research from scratch because of these two

outlier schools. Why? Because even though these schools do not really serve as fair or adequate

institutions for comparison, they do serve as examples of what larger institutions with similar

values are doing in regards to digital literacy and institutionalization. Thus for purposes of this

project, I have included these schools (and a couple others that differ significantly in size or have

grad programs) and keep in mind during discussion that they do not compare well in some

significant ways but still look for ways we can learn about institutionalization from them.

Designing the Survey

The Internet provided several lists of LA colleges, which I compared and compiled, ending with

a list of 523 LA colleges. One of the websites was the *US News and World Report's* "Best 100

Liberal Arts Colleges," where they have several "best" lists (Best Value, Best Economic

Diversity, Best Ethnic Diversity, and more). From these I copied and compiled every LA school

they had listed. I did the same at Wikipedia[4] until I had my list of 523. I glanced over a few

others to look for any missing names but found none.

Using a random number table, I went through my alphabetical list of LA colleges, going

alphabetically down the list three separate times. All schools with no e-mails available, with no

English faculty listings, and/or with no English (or clearly related) department were eliminated;

---

[4] Because I do not necessarily consider Wikipedia a reliable source, those colleges that I found

only on Wikipedia I asterisked and, if they were chosen when I did my random selection, I

double-checked to make sure they actually were a LA college. I did not encounter any that were

not legitimate.

while this was partly an matter of convenience, the absence of these factors indicated several issues: One, if they do not list e-mails, then it is easy to assume that technology is not on the forefront of their agenda. Two, if they do not have an English department, the questions in the survey become less valid or applicable as many of the questions are designed only for such departments. Three, if they did not list faculty, I assumed the school had adopted a level of privacy and would not want to expose themselves through a survey. These three passes down the list gave me a sample of 120 schools, which gives me a confidence level of 95% with a confidence interval of 8, which allows me to be at least 87% certain that my findings can be generalized to the entire population. This high of a confidence level was satisfactory to me, so I sent an invitation e-mail to these 120 schools, asking if they would be willing to participate. The plan was to contact these schools by directly e-mailing the chair of the English department or the director of the writing program—if one was clearly identified on their webpage. My reasoning was that the chair of the department or director of the writing program would be the most knowledgeable about the department's activities and objectives as these roles usually require that the faculty member has been at the institution for a while and qualifies for such a position; these qualifications were more likely to get me in touch with someone who could help me.

Of the 120 schools contacted, 30 responded positively, 5 said no, and the rest ignored my e-mail. I sent a follow-up reminder e-mail, which then prompted one school to participate as they had said they would. In the end, a total of 17 schools actually participated (about a 3% return of the total population of 523 or a 14% return of the 120 schools contacted). I sent a link to the chair of the English department of these 17 schools which included a link to the faculty survey. In the e-mail, I asked the chair to forward the links to all the faculty—both full time and part time, tenure track and non-tenured. From these 17 schools, 54 faculty completed the surveys.

This sample size will mean that confidence interval limits will be +/- 23%, which is a very large range and thus cannot reliably be representative of the whole population (Lauer and Asher 58). However, many of the questions I asked were not meant to represent the entire population but rather to get a sense of the experiences of others. Therefore, while this small data sample means that I cannot responsibly generalize my findings to the larger population, it still allows for some insight into what faculty think about many issues concerning digital literacies. I do not intend to determine how the overall population approaches and views DL with this size sample, but rather I intend to examine many of the possible views, attitudes, and perspectives on DL issues. These small samples provide a sample of these possibilities.

While the detailed analysis comes later, one major notable insight the surveys provided was that many more English faculty are teaching digital literacy elements than might be expected—only 7 of 54 respondents said they did not teach any elements of DL. The majority of respondents (53 out of 54) said they valued digital literacy and feel it is important to integrate into their courses and curriculum. At the same time, the lack of infrastructure support seemed to be a significant problem. Of the 54 respondents, 28 said they would be likely to teach more DL elements if they had better computer access. None of these results seem surprising; since computers have been ubiquitous for over a decade now, many in academia are taking quite seriously technology's impact on the classroom as well as beginning to realize the many benefits technology can afford—and the many problems that come from making such a shift so quickly. Thus much of what the survey provided was verification of some of the assumptions made just from the literature in the field. For example, this survey confirms Yancey's claim that digital composition is a "tectonic" shift: such a shift would mean everyone would be aware of it but it

would take time and money to recover from the shift—and to find the benefits of what, to some, seems to equivocate a natural disaster!

Method Two: Catalog Review

The survey answered some questions and created others. The survey responses firmly set the scene for further research, as the idea of "institutionalization" of DL was definitely not clear from the survey answers. As these respondents could have, for certain, answered as a member of all three subject roles (faculty, department, institution), the more likely possibility is that these answers were more personal—were more faculty-oriented. The answers were personal—were insider information. They did not, however, provide any insight into a larger picture of institutionalization. Also my survey provided me with no genres to consider for my research, which left a serious hole in my activities: no tangible "objects." It would be possible to consider the answers from the survey as a sort of genre, but these were not a part of the institutions' "activities" working toward institutionalization of DL. Because my entire project's origins stemmed from the goals statement of my English department, which served as a codified testament to the values of our department, this led me to wonder what kinds of texts I could find that would provide evidence of the institutionalization of DL, which led to a new set of questions:

- How do institutions represent what they value to those who attend or may be considering attending their school?

- What written documents might they have that clearly state what they value?

- What kind of language do these institutions use to describe issues of digital literacy?

- Are there any patterns between and within institutions that might lead us to some possible conclusions?

- Do English departments mention elements of digital literacy when they describe courses?

- Do English departments have courses that clearly are dedicated to teaching some specific digital literacy?

- What can be gleaned from looking at the documentation from institutions?

One of the ways to find this evidence was to survey the documentation schools had online. If an institution valued DL, some mention of it—in what would very likely be a wide variety of vocabulary—would show up in their genres: mission statements, courses, course descriptions, department descriptions and the like.

A Brief Look at Mission Statements

My reasoning for researching mission statements (and their like genres[5]) is multifaceted. One reason comes from the very nature of institutions. In "History of Schools and Writing," David Olson calls schools of higher education "literate institutions" by citing why they are so: First, they essentially have complete control over what it means to read and write, but they also function by means of documents: "laws, mandates, curricula, texts, and tests" (283). In other words, schools define, control, shape and function through documentation. To study an institution's documents, then, serves a dual purpose: we see what they value through their documents and we see evidence of their literacy practices through what they value—we can

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[5] As one might imagine, the names of these statements vary significantly. However, I only concerned myself with those statements whose purpose was to speak of the institution's ideologies and beliefs that concerned academics specifically. I did not concern myself with such statements as diversity statements, religious affiliation statements, historical statements, or other statements that did not speak directly to academics.

investigate both the centripetal and the centrifugal impact of its genres. If, then, a genre is a "socially recognized types of communicative action used by organizational members for particular communicative and collaborative purposes" embedded in "situation and motive," and if institutions are both defined by and in control of texts, then studying their documents (genres) makes perfect sense (Olsen 283).

Looking at the definition of mission statements makes my reasoning for researching mission statements clearer. According to Jeffrey Abrahams' *The Mission Statement Book,* a mission statement is:

> an enduring statement of purpose for an organization that identifies the scope of its operations in product and market terms and reflects its values and priorities. A mission statement will help a company to make consistent decisions, to motivate, to build an organizational unity, to integrate short-term objectives with longer-term goals, and to enhance communication. (14)

This definition reflects both the centripital and the centrifugal nature of the genre (as discussed earlier), and it clearly states that a mission statement is meant to reflect the values of an organization.

Designing My Genre Review

Returning to my list of 523 liberal arts colleges in the United States, I used my random number table to select various college websites to find any kind of public documentation that indicated the institution's value of digital literacies. Most websites had a current (or very recent) course catalog available; these provided a list of courses and their rationale listed, and several statements of purpose and/or mission. I visited 100 websites using the random number table, and of these 100, 66 had catalogs available in either .pdf format or accessible to the public online. I

was satisfied with the sample size of 66, since this was a little over 12% of the whole population and gave me a confidence interval of 8 (Lauer and Asher 58). I did not use the other 34 because they did not have a course catalog available; either they did not offer one online or it was not available to the public. Because of the wide diversity of website content, the wide range of available material online, and the overwhelming difference in web structures, I chose to limit my research to course catalogs, which were genre systems structured at least somewhat the same— enough to be considered similar in rhetorical purpose.

My course catalog and website research began by searching for the initial language that indicated DL practices or values (see Table 3.2 for a lexicon of this language). In these 66 course catalogs, I looked for several genres: mission statements, value statements, goal statements—any official statements that represented some kind of overarching institutional goals or ideologies. I also looked at English department statements of purpose or goals printed in the departments, majors, programs, or course offerings section of the catalogs for these same DL units of analysis[6]. Lastly I looked at course offerings: the title of the courses and their descriptions. The assumption is this: The use of this language in a course description indicates that the course includes DL in some way: these words (In Table 3.2) are words I recognize—and I would argue are recognized in the field—as words that deal with digital literacies in some way that is distinct

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[6] The titles for these sections vary so widely that it does not serve any purpose to name them all. The section I am referring to is the portion of the course catalog that breaks down the curriculum of the institution into department or program divisions where they specifically list the requirements for degrees and the courses availble by their program or department. The structure of these sections also varies widely.

from text-based rhetoric. In other words, these words would not be used in the title or description of a course that did not teach some element of DL.

My purpose here was to find genres that provided some evidence of valuing or practicing DL. The (very broad) assumption was that if DL was an important component to a particular course, was a significant part of a department or institution's mission, or was considered a core value for the school overall, some indication of this would show up in the language of these genres. My assumption was that institutions and departments would want to demonstrate their technological values because of its relative importance to young people today when choosing a school. Students want institutions that are not behind technologically but rather are advanced, as many equate advanced technology with advanced education. Obviously an absence of DL language does not mean DL is not valued; however, the OLC of DL relies heavily on these genres doing their work—which they cannot do if the language of DL is not present.

In the 66 course catalogs, 32 courses from 27 schools contained language indicating DL practices or values (Table 3.2). I then divided these courses into two types: Type 1 were those courses that contain elements of DL in their description but not in their title. Type 2 were those courses that appear to be primarily concerned with DL in some way because these words were present in both the course description and the title. Each box in Table 3.2 contains all the phrases I found that began with the same DL term (i.e. computer, computer-based, computer animation, computer games, computerized). I also looked at the courses the survey users said they taught and included these as well. If no language was found beginning with that DL term the category says "none."

TABLE 3.2: LEXICON OF LANGUAGE FOUND IN COURSE DESCRIPTIONS		
DL Words Found in Type I Course Descriptions	**DL Words Found in Type 2 Course Descriptions**	**DL Words Found In Survey Responses**
Blackboard (or other CMSs)	*none*	*none*
none	blogging (2)	*none*
none	computer (2) computer-based computer animation computer games computerized	*none*
none	digital and electronic media digital contexts	*none*
none	cyborgs cybernetics cyberbullying cyberlaw	*none*
none	design (2)	*none*
desktop publishing	desktop publishing	*none*
digital	digital (2) digital property	*none*
document design	*none*	*none*
	downloading	*none*
on-line	eBay	*none*
electronic (2)	electronic (2) electronic art electronic form electronic literature electronic discourse communities	*none*
none	Facebook	*none*
none	HTML	*none*
none	hyper-mediated	*none*
none	hypertext (5)	*none*
none	interactive fiction interactive media	*none*
none	internet (2)	*none*
new media	media (17) (new) media (5)	media writing (2) media law and ethics media theory and criticism media research
multi-media (2)	multimedia multimedia resources multimedia technology	multimedia storytelling
none	navigation	*none*
none	online (2)	*none*

TABLE 3.2 CONT'D		
podcast	*none*	*none*
none	rollovers	*none*
none	social networking	*none*
software (2)	*none*	*none*
technology (4)	technology (4)	*none*
none	visual visual aid visual images visual structures visual space visual technologies	*none*
none	web-based web design web media	web-based design
word-processing	word-processing	*none*
none	World Wide Web	*none*
none	YouTube	*none*

I used this list to determine which courses and descriptions I would analyze. If words from this list were not included in a course title or description, I did not consider them to have any elements of DL as part of their curriculum.

An example of a strictly text-based writing course (one that does NOT indicate DL values or practice) from the Clarke College catalog demonstrates my point:

> ENGL 311 PROFESSIONAL WRITING 3 hours
>
> Intended for students already in control of the essentials of composition who wish to develop their ability to write effectively for professional purposes.
>
> Prerequisites: GNED 110, GNED 111.

This sample does not in any way indicate any DL pedagogy takes place at all because it lacks the language that would deem it as such. Could this course contain elements of DL? Of course. But the catalog description does not indicate this, so one cannot assume that it does include DL in

any way. To demonstrate the contrast, the following course title and description from the

Concordia College New York catalog do contain such language:

> ENG 346 Writing for the World Wide Web
>
> This course explores the rhetorical practices of writing and publishing for the
>
> World Wide Web. Through the study of various electronic discourse
>
> communities, students will create their own Web pages. Emphasis will be on the
>
> conventions of Web design as well as elements of standard English usage and
>
> style.

The title's use of "World Wide Web" clearly indicates that this English course will contain some

digital component, while the catalog language goes further with the word choices of "electronic,"

"Web pages," and "Web design." These words and/or phrases clearly would not be included in a

course that did not contain elements of digital literacy.

I followed the same parameters throughout the catalog, looking for "statements" that

applied to the entire institution or strictly to the English department. Most institution's catalogs

have a section on Institution Technology (IT), for example, but I did not consider this section of

the catalog. Obviously all IT statements will discuss technology. As mentioned earlier, these

"statements" vary widely—everything from very traditional mission statements to much longer

and more diverse statements like notes from the college's president.

This catalog research enriched my research goals dramatically. From the data collected, a

much clearer picture of institutionalization of DL could be formed. Some catalogs were barren of

any kind of DL language in any of the genres I researched, indicating a school that did not

appear to value DL in any way, almost as if the "tremor" of this new composition had never been

felt on their soil. Other catalogs seemed to indicate a serious level of commitment to at least

making valiant efforts to mend from the fissure, to bridge the gap between print-based writing and digital writing through language of commitment and a curriculum that clearly emphasizes the "tectonic" shift. This research was much more insightful, yet one major question loomed: how did the findings from this research compare with what was really going on at that particular institution? Was the OLC indicated by the genres I studied similar to the actual values, goals, and practices of that institution's actual institutionalization of DL? How well were these genres representing their institutions?

Method Three: Interviews

Since a significant part of my research question involved the functioning of genres and how well the genres reflected actual levels of institutionalization, more research was indicated. One finding of the research was a trend—or rather the lack of a trend: originally I had imagined that the beginning of operationalizing a specific goal (in this case, institutionalizing DL) would show up following a particular pattern: begin with articulating a value, move to setting goals, then implement those goals, and then some means of assessment. I imagined a much neater and more predictable pattern. I also imagined a consistent "entry" into the OLC. This neat approach did not prove to be true—at least with the evidence from my sources. Had this projected OLC been the way institutions actually approached the institutionalizing of DL, I expected to find several mission statements, statements of purpose, goals statements that indicated DL as a value. Only after finding these would I find evidence in course descriptions and, lastly, courses dedicated to DL. Instead, several institutions had courses dedicated to DL with no mention of DL as a value or goal anywhere. Many schools have language indicating some efforts toward DL in their course descriptions, yet no mention in value statements. Others have DL language in value

statements and nothing in course descriptions—but these were in the minority. In other words, there really was no pattern at all.

This messy picture of what appears to be occurring as far as the OLC is concerned in various schools—combined with the disconnect I felt between what the catalogs—seemed to indicate and the sense I got from the surveys, I felt that having actual discussions with some of the people from these schools would fill in the gaps. Obviously time limited the number of people I could talk to, but I did believe that I could get a better indication of at least a snapshot of their OLC through interviews. Before designing my interviews, I had these questions:

- What did an OLC actually look like at any given school?

- How do various institutions approach DL?

- How do others define DL?

- Was the institutionalization of DL at any given school centripetal or centrifugal? (Where was the pressure to institutionalize coming from?)

- What were some of the details that no genre would include?

- Did the evidence from the genre study actually coincide with the actual values and practices of the institution?

- Was the level I assigned to the institution based on the genre study accurate?

The best way to find answers to these questions was through interviews. I wanted to talk to peope from schools at different stages of institutionalization of DL based on what I found in the genre surveys to find details about how the Operational Life Cycle of DL functions in their particular institution.

Preparing for Interviews

In order to create a heuristic for these stages—or levels, as I chose to call them—of DL institutionalization, I used my units of analysis (UAs) from Table 3.2 as a guide for a bit of Content Analysis; I coded words to determine where I believed each institution fit into a schematic chart. For each catalog, I gave "points" to determine where the school was in terms of institutionalization—according to catalog genres only, of course. Each catalog was given 1 point for any official "statements" that mentioned any units of analysis as part of a value or goal. I gave one point for *each course* in the English (or equivalent) section that demonstrated it taught DL elements in some way. Last I gave 2 points to each course in the English department that had language clearly indicating that the course was, for the most part, dedicated to DL in some way. My rationale for the extra point for the DL course is twofold: One, a course dedicated to DL indicates a more developed curriculum (in terms of DL) than a course that only mentions DL as *part* of the content. Two, while a mention of DL values in a statement is important, if there are no courses that actually implement them, the statement has less meaning[7]. On the other hand, a course dedicated solely to digital literacies indicates a level of commitment whether there is a mention of digital literacies as an ideology or not. I am relying on the notion that "actions" (having a course dedicated to DL) speak louder than "words" (mentioning DL as a goal or value).

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[7] One exception: any school that had several DL points but no points at the "statement" level did not get moved to level 4. My reason was that these schools are definitely far along in the OLC of DL, but actual institutionalization, according to my schematic, required a statement of value that included DL as well. Four schools were at this level.

I used this coding system on the colleges and universities I had catalogs for from the second part of my research; I only wanted to work with people whose curriculum and school I was familiar with. Of the 66 catalogs from the genre review, 45 were given a score of 0 or 1, which I called a Level 1 school, meaning their level of institutionalization of DL was low—at level 1. Of the 66, 10 scored 2 points, so I put them at Level 2. Likewise, 10 schools got a score of 3, and thus were given a Level 3 score. Only 5 schools scored 4 or higher, and I gave these the highest rating at Level 4. (See Appendix D for a list of the schools and their scores.)

Because I wanted to contact the same number of schools at each level, and because Level 4 only had five schools, I ended up contacting five institutions at each level. I chose the five from levels two and three by putting their school names on a slip of paper and randomly choosing five. For level one, since there were too many to do this, I referred back to my random number table. Once I had determined what schools I would interview, I contacted the faculty member listed on their websites that I thought would be the most well-informed about DL in their institution; if there was any mention in a faculty description of any kind of DL background, that person was my first choice. If I could not contact my first choice, my second choice was the faculty member who was the head of their writing program, if one was listed. If the WPA did not respond to my email, my third choice was the department chair. My reasoning was based on my experience in the institution where I was an adjunct: had anyone called with questions of digital literacy, they would have immediately forwarded the call to me, since I knew more about the story behind the process than anyone, even though I did not hold a professorial position; I did, however, have experience in the field of digital literacy, as indicated on my website. The next person in my institution who would be knowledgeable about DL would by the WPA as this person at least had a composition background rather than strictly literature. In my contact e-mail, I mentioned how I

chose them from their website and asked that they forward my message to the most appropriate person if they did not feel equipped to answer my questions.

After several weeks of attempting to contact schools, I ended up with a total of eleven interviews: three at Level 1, four at Level 2, two at Level 3, and two at Level 4. Of these, five were phone interviews and six were e-mail interviews. Two phone interviews were arranged, but the interviewees did not answer when called at the scheduled time. Two people agreed to do e-mail interviews but did not follow through, even after two reminders. The schools that never responded were contacted at least three separate times by e-mailing three different people, none of whom responded.

The combination of survey, genre review, and interviews provided a relatively clear understanding of the several ways institutionalization of DL works. One thing was incredibly clear: there is no one way to approach institutionalization. Yes, the "tremor" Yancey spoke of seems quite real, and most institutions are feeling the pressure to do something. It seems most institutions—if you ask them—value DL, despite the lack of genre evidence. Most clear: the inestimable power and impact of genre is consistently overlooked, ignored, or unknown. Should institutions put the four activities in motion for all subject roles, the OLC would perpetuate itself into institutionalization much more quickly.

CHAPTER FOUR: OPERATIONAL LIFE CYCLES

This section discusses the findings of my combined research on the institutionalization of DL. Because of the complexity of my research findings, I will separate these findings into two groups for clarity: the first group is Chapter Four, which examines the Operational Life Cycles (OLCs) from the perspective of each of the three subjects (faculty, department, and institution). The second group, in Chapter Five, discusses the thoroughness of DL in these activities through the lens of genre. In Chapter Four I divide OLCs into four activities: articulating values, setting goals, implementing goals, and assessing goals. In Chapter Five I divide Comprehensive DL into three categories according to genre: courses, titles, and their descriptions; official statements; and definitions of DL in interviews. My reason for the combination of these two levels of discussion is to show that both are essential elements in the institutionalization of digital literacy. I intend to show that both are necessary, that one without the other is not literacy. The overall purpose of this research is to provide an extensive view of these activities in liberal arts institutions and the genres these activities produce in order to demonstrate the importance of the inclusion of DL language in order to perpetuate the life cycles and eventually reach the goal of institutionalization of digital literacy. I will discuss each activity one at a time through the filter of each subject, thus looking at each activity three times and sharing the results under that category.

Articulating Values

One activity of an OLC is Articulating Values; this can come about at any point in the origination of the cycle of some specific value. For example, a teacher can have a discussion with a colleague in which she articulates her value of DL well after she has already implemented DL into several of her courses. On the other hand, a teacher could have no DL components in her

pedagogy, could attend a CCCCs conference, for example, and then have a discussion in which she clearly realizes the value of DL. Or maybe a teacher takes over a course someone else has been teaching in which the previous teacher included DL components, and the new teacher uses the previous teacher's syllabus before ever articulating DL as a value. In other words, while it may seem logical that one would articulate values before setting goals for those values or before implementing them, the truth is not as organized. This messiness could be a result of the dual outcomes of genres: the centripetal and the centrifugal. Subjects in these activities feel pressure to implement DL both as a way to conform to the institution and as a means of breaking out of the norm.

The objects in this activity of Articulating Values are genres of several types: mission statements, value statements, department goals, syllabi, and more. And these genres can result in, as previously discussed, either centripetal or centrifugal outcomes. Using a mission statement as an example, a mission statement is usually published online under a "mission statement" link in which the school presents some kind of united belief about particular ideas, social and cultural values, epistemologies, and more. This mission statement can centripetally bring about the desired effect of being read by a prospective student who agrees with these values and, in turn, decides to attend the school. Or the mission statement can centrifugally serve as a guide for departments and faculty as they go about planning curriculum and courses. Below I present the results of my research of the genres in this activity of Articulating Values.

Articulating Values: Faculty

Evidence of teachers articulating what they value does not come easily unless we consider spoken articulations. As a general rule, individual teachers don't create mission statements and the like in their role as an individual faculty member (See Table 3.1). The exception might be

personal websites or syllabi (I know my personal website states my values), but as I did not include personal websites or syllabi as part of my research, the only sources I have are faculty responses from the survey when I asked outright if they valued DL and faculty discussion from interviews. An extended look into personal value statements in individual documents is a project for future research.

In the survey I asked "How crucial do you feel it is for an English major with a liberal arts degree to be digitally literate?" The survey showed that digital literacy is clearly valued by faculty, as I expected. Of course a possible bias exists since faculty who responded to the survey could have been only those who care about the issue; however, of the 42 who did respond, 39 ranked DL "Very Important" and 12 ranked DL "Somewhat Important" on a Likert scale (See "Appendix B" for details). Only one respondent ranked DL "Neither important nor unimportant," and no one ranked it "Slightly" or "Not at all Important." One respondent, when asked if she taught any elements of digital literacy, added "No, but I hope this will change!" In my discussions with faculty, all persons clearly articulated that they highly valued digital literacy. In this case, too, possible bias is likely since I selected the person I interviewed based specifically on their possible knowledge of DL. In other words, I chose the faculty most likely to value DL at each school.

While these finding were not completely unexpected, it does seem that faculty, as individuals, value DL. If we go just by statistics here, we know that "If 99% of your sample said "Yes" and 1% said "No," the chances of error are remote, irrespective of sample size" ("Sample Size" 1). My percentage is 95% not 99%—still very high—so perhaps we could assume that this finding is pretty accurate; it would be safe to say that, for the most part, faculty as individuals value DL or at least recognize the value of DL for students. However, because I hand-selected

DL-knowledgeable people for my interviews, and because those who answered my survey may have only been those who care about DL to begin with, it seems dangerous to make the assumption that all—or even most—faculty value DL. In the interviews, some said that they did not believe everyone in their department though DL was valuable—at least not as a part of *their* curriculum. I know from experience as well that valuing DL is hardly unanimous in English departments. I have encountered a significant number of faculty who feel it hinders what we do, like Sven Birkerts. The key, however, to these findings, I believe, is the *lack* of genre here. Were this research to include individually produced genres like the syllabi and personal websites mentioned earlier, I do not believe I would find that 95% of them clearly state that they value DL. Whatever the case, individual articulations of DL values are not frequently made public, are not available to those outside of institutions on a regular basis, so it is difficult to know how faculty feel as individuals. This vague representation of DL values does not help perpetuate institutionalization of the OLC.

Articulating Value: Departments

While teachers, obviously, make up a department, departments still need to, as a group, articulate their values. What individual teachers value will not have the impact of an entire department declaring their values; a department's articulation of values both centripetally presents a united effort and centrifugally encourages teachers to reject, resist, and/or modify and embrace these values in their pedagogy. Evidence, then, of genres that contain language indicating DL values is incredibly important in the OLC.

One of the clearest ways for a department to articulate that they value DL is by coming right out and saying so. While I did not find this to be very common, there were examples of English departments that were clear about their commitment to DL practices. For example,

SUNY at Old Westbury describes their composition courses on their English webpage, then states, "These composition courses fulfill competencies in college-level composition, revision, oral skills, computer use and research methods required by the General Education program." While this language does not give us any indication of what elements of DL their Gen Ed program requires, nor does it give us any idea of *how* they use computers in their college-level composition, they do make it clear that computer use is part of a value for all students. Brandeis University's department of English has similar vague language in their online description: "We teach and study not only poetry and prose, but also films and newer media and technologies (journalism of all sorts, television and the Internet, for example) and place these texts in historical and geographic context." While both of these DL mentions are (intentionally) vague and brief, neither of these departments would include this language if they were not hoping to relate to their readers that some sort of DL practices were a part—perhaps a significant part—of what they do. The vague nature of this language additionally allows the department to continually change, adapt, and shift practices while maintaining their commitment to such digital literacy practices.

Other English departments have language that could be understood to mean that they value some sort of DL, but the language is not as clearly related to a commitment to DL. For example, the Cornell English Department website says they have "a long history of critical and methodological openness. From the early twentieth century, it has embraced new approaches to literary study, while maintaining traditional strengths." Here the phrase "new approaches" could indicate some sort of newer technology, yet this language is not specific enough to make that claim for certain. In a similarly indistinct way, Duke's English website says, "The Duke English major also pursues understanding of literary experience in terms of genres, forms, and structures

of meaning." The word "genres" here could mean multi-genres, multi-media, and more—but that is also not certain. These statements do not necessarily mean that they value DL, but they could mean that they do. Here it may seem that I am grasping at straws, which perhaps I am, but for one simple reason: out of the 66 course catalogs in my research, this was the most explicit language about DL I found—and only five times. In other words, only five out of 66 departments articulated any hint at institutionalizing DL, a very low percentage. This low percentage, when compared to the number of individual faculty who say they value DL, exacerbates the discrepancy mentioned earlier between what is said and what shows up in print.

My survey complicates the findings from the individual faculty and the genre review. In my survey I asked "What documentation are you aware of in your department where goals for digital writing literacy are explicit?", and 13 faculty said their department mentions DL values in "Goals for the major/minor/concentration" while 3 said their department had a mention of DL in a department mission statement, and another 3 respondents said their department mentioned DL values in their department description. The ratio of 13 out of 52 is nearly a 25% affirmative response, but these are the responses of individuals. Many of these individuals gave affirmative responses and come from the same institutions. When we count instead the number of institutions whose faculty gave affirmative responses, the result is 13 faculty from 7 institutions saying they had this kind of documentation. Thus the percentage actually becomes even larger: 7 out of 17 institutions answered this in the affirmative, which is 41%. This number is significantly different from what I found in the genre review. A simple answer to this discrepancy is that English departments are simply not publishing these goals online or including them in catalog language. A more complicated answer could be that individual faculty *believe* these documents exist—somehow have decided that this kind of DL language is present in their documents—

when actually it is not. It is very possible that those who responded to the survey did so without actually going to the documents themselves and looking for evidence; more likely they assumed the language was there. After talking in person through interviews, this scenario seems more likely. However, the interviews complicate any sweeping generalizations I might be tempted to make from either the survey or the genre review.

In my interviews, some conversations/answers gave indications of DL values in departments. For example, my conversation with Dr. Kathryn Evans from Bridgewater State College began with a discussion about the new hire for their department. I had learned through previous e-mails that Bridgewater's English department was in the process of hiring someone in a digital literacy position (Dr. Evans did not give me a specific title), so I was already aware of at least one thing: they did value digital literacy and were working towards making it a significant part of their department through this hire. We talked further about the position they were hiring for, and Dr. Evans said several factors led up to the decision to not just add more digital literacy elements to what was already being done, but that some significant changes had taken place at their institution that made a new hire necessary. For example, they had revamped their curriculum, and one thing added was a writing concentration. Many electives now required more writing as well. She was fairly clear as well that this momentum came from the department rather than from the institution in general. Instead, it was the English department that pushed for these changes. Thus while Dr. Evans never explicitly said the words "We highly value digital literacy," her level of enthusiasm on the subject and the various ideas they were implementing concerning DL conveyed that they found DL issues significantly valuable.

On the other hand, a very different perspective came from my interview with Dr. Thomas Kealy from Colby-Sawyer College. Dr. Kealy did not feel that the English department was much

concerned with digital literacy, and he felt this was largely due to the emphasis on literature rather than writing in their department. Dr. Kealy did not sense any felt resistance to digital literacy in the English department but also did not feel that they saw it as their responsibility. Dr. Michael Landis from Montreat College feels his department has a similar position. His e-mail response says, "I do not think that the English department considers digital literacy directly relevant. It's viewed as a necessary component to communicating, but not part of the 'English and Foreign Languages' curriculum." Clearly not all English departments share a value for inclusion of DL pedagogy in their curriculum. As individuals, they valued DL. As members of a department, they—speaking for others—did not.

While some English departments highly value DL as a department and others do not, what is important is a consistency between department values and department genre language. A good example of the need for consistency comes from my conversation with Dr. Warren Rosenberg from Wabash College, a school that did not appear to value DL from their web genres. When Dr. Rosenberg and I discussed this, he was clearly appalled that the school did not represent its commitment to DL more clearly. He made it clear that Wabash was much further along in institutionalizing DL than their genres represented. Dr. Rosenberg's concern is valid: if Wabash wants to represent DL as a value, their genres need to reflect that in order for those genres to accomplish their purposes. On the other hand, Dr. Rosenberg mentioned some felt resistance from his department but believes much of this comes from the belief that the students know more about technology than the faculty does. But Dr. Rosenberg also feels that this "phobia" will dissipate with time.

From the medley of responses to this question of whether or not departments value DL, it is tempting to say that most do value DL in some way, but 2 out of 11 interviewees—nearly

73

20%--made it clear that this might be jumping the gun a bit. However, one inference can be made: a large discrepancy exists between the number—even the least generous number—of departments that say they value DL and those genres that should be conveying that value. In other words, 5 out of 66 departments (7.5%) say they value DL in their written sources while 9 out of 11 interviewees (82%) say their departments value DL. Clearly these departments need to work on this activity of articulating values.

Articulating Values: Institutions

While department articulations of DL values were relatively scarce, institutional articulations were even more so[8]. Francis-Marion College's mission statement has a pretty clear DL value articulated in their mission statement:

> We provide traditional and when appropriate, non-traditional instruction, access to an excellent library as well as electronics resources, and staff members committed to the success of the individual student…Francis Marion is a unique University. It focuses on traditional liberal arts education but provides new technology and new academic programs.

While this mission statement does not come right out and say "We value digital literacy," the language of "electronics resources" and "new technology" make it clear that this institution

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[8] While reviewing course catalogs, I did not look into the part of catalogs that is devoted specifically to the institution's technology. Most catalogs have some sort of section that discusses their IT department and resources. I have not included this section in my research because every school has some sort of IT resource, but the presence of IT does not represent digital literacy commitment.

wants to represent themselves to the public as one who is on the forefront of DL. Duke University also pretty clearly articulates a DL value in their mission statement: "…to provide wide ranging educational opportunities, on and beyond our campuses, for traditional students, active professionals and life-long learners using the power of information technologies…" The language "using the power of information technologies" again would be included to demonstrate to the public that this institution is, at least on some level, working on DL. These two schools, however, were the only 2 out of 66 mission statements with any mention of DL concerns.

But if we look beyond mission statements alone and go to other places in the catalog where the school is articulating values in other genres, DL values are mentioned. For example, one of the clearest expressions of DL values I came across was from Iowa Wesleyan who has an "Outcomes" statement which includes DL values: "An Iowa Wesleyan College education empowers its students to…Extend and facilitate effective discourse through modern technology." Iowa Wesleyan also has "Communication Skills Definition and Outcomes" which states, "Communicating is an interchange that involves sending, receiving and processing. Demonstrable competence in communicating includes sending, receiving and processing information in a variety of modes (written, oral, graphic, numeric, symbolic, and technological)." These very formidable statements represent institutions with a obvious value of DL. A very ambiguous message, however, comes from a message from the President of Concordia College NY, who said:

> We live in a society where there is easy access to information. This information, increasingly brought to us through the use of technology, has not by any means transformed us into a society that is more caring, compassionate, or even

knowledgeable. In other words, it is abundantly clear that information alone does

not change lives.

This statement does not come right out and say it values DL; instead, it almost sounds as if it

were taking a stand *against* including DL. However, if read carefully, this statement does not

actually go against DL but instead says information obtained through this technology *is not*

enough. In other words, technology is not the antidote to all our ills. One could speculate that this

means this institution fights, then, to educate its students to be savvy and highly literate people

who will not fall prey to the sham that technology *alone* can change lives and, instead, teaches

them to use technology critically. This, however, is nowhere indicated.

These articulations of digital literacy values demonstrate a certain level of commitment to

DL by these schools, yet out of the 66 catalogs I reviewed, only two had mission statements with

clear articulations of DL values, and overall 10 schools—including the two whose mission

statements mention DL—articulated some sort of DL value in some sort of genre in their catalog.

This percentage is double the small 5 of 66 departments whose genres articulated DL in some

way, but still drags in at a lowly 16%.

Discussion

Before discussing these findings, I want to briefly discuss the outcome of "articulating values" as

an activity which has a significant place in institutionalization. A reminder of Abrahams'

definition of "mission statement" (in part) adds to this discussion. As I quoted in Chapter Three,

a mission statement is "an enduring statement of purpose for an organization that identifies the

scope of its operations … and reflects its values and priorities. A mission statement will help a

company to make consistent decisions, to motivate, to build an organizational unity, to integrate

short-term objectives with longer-term goals, and to enhance communication" (Abrahams 14).

This discussion also harkens back to the centripetal and centrifugal forces I referred to earlier. I am equating "articulating values" with mission statements because whether or not "articulating" is labeled as such, it has the same traits as a mission statement. For example, if a department published that they value DL on their website, their purpose is to "identify the scope of its operations" and "to reflect its value and priorities," (centripetal outcomes) and to "motivate," "build … unity," "integrate short-term objectives," and "enhance communication" (centrifugal outcomes). I mention these possible outcomes here again because the most important finding of the research is the lack of this activity in the genres I studied. If, as Abrahams says, these statements of value have the power to unite and motivate and integrate and enhance, then using these genres as a means of perpetuating the OLC of DL would be a powerful tool. Yet this does not appear to be happening.

If we look back at the evidence from my research, faculty that responded to my survey and spoke to me in interviews were nearly unanimous in declaring that they highly value DL. If these findings were generalizable to reflect the attitudes of a larger population, then it would only make sense that more English departments would have articulated DL values. Yet when this attitude is compared to what the results are at the department and institutional level, some contradiction is apparent. Several indicators show some ambivalence or even resistance from faculty. This could easily be explained by the fact that those who responded to the survey were likely those who do value DL and those who do not value DL perhaps did not respond to my survey. My interviews were very intentionally conducted with the person in the institution's department that I felt was most knowledgeable about DL, which would, in turn, mean I spoke to the person most likely to value DL. This is important to note, because the results of my survey and the attitudes of my interviewees are from the perspective of those who clearly articulated

that they value DL. But the results of the genre review say that these people are not the norm if only 10 of 66 institutions have DL values in their mission statements and only 5 of 66 departments had even vague language indicating DL values.

However, if an articulation of values has such a strong effect—if it works both to "reflect the values and priorities" of a person or group and to "motivate, build, integrate, and enhance" the institution to which they belong—then a clear articulation of values that includes at least a vague hint of DL values would be important for any teacher, department, or institution who wants to advance DL. One of my interviewees, Dr. Rosenberg from Wabash, understood this contradiction. His institution, from my review, did not appear to value DL; I had them listed at Level 1 in the process for only having zero or one instance of DL language in all areas. After speaking with Dr. Rosenberg, it was clear that Wabash is far beyond Level 1 in the process of institutionalizing DL and should have been at least at a Level 3. But according to the indicators online, they did nothing to demonstrate to the public that DL mattered to them. After my discussion with Dr. Rosenberg, I anticipate that their next course catalog will have some significant changes.

Another important issue comes out of the incident with Dr. Rosenberg. If, as I imagine, some change may take place at Wabash College after my interviewing Dr. Rosenberg, then another dimension becomes a part of the OLC: those outside influences like researchers and external assessors that might affect the perpetuation of the institutionalization of DL. If Wabash changes their web presence to one more adequately reflective of their actual level of DL institutionalization, then I—through a very short conversation—have become a part of the OLC. Any person who, from outside an institution, has some kind of effect on institutionalization of DL would also be a part of the OLC. These persons could include visitors to campus, faculty

and/or staff from other schools, and more. This influence ought not to be overlooked by those who want to perpetuate the OLC; an outsider may be able to more objectively give an assessment of how an institution represents itself and where it needs to more accurately represent itself through its genres. After all, if an institution does value DL but does not adequately convey this message, chances decrease that the institution will attract the number and type of students it hopes to attract.

If we look at the big picture of institutionalization, evidence shows that the activity of articulating values can be a beginning—can set the stage for a centrifugal outcome. An institution could articulate DL values, and departments and faculty could "create ad hoc innovations" in response. Or a faculty member like Dr. Laflen from Marist could articulate her DL values, and it could have a similar centrifugal effect. A department could already be implementing DL goals and decide to add what they do to their website in a more centripetal way. Important for institutions and departments to remember is the power of representing their DL values in the genres that will be read by the public and by those in the institution that will, like faculty, work toward change; an well-worded genre that lets others know DL is important in an institution will easily attract anyone who values DL as well. Whatever the situation, in order for an institution to have "institutionalized digital literacy," it would have to make this commitment clear to the public at every level through articulation of DL values.

Setting Goals

A second aspect of an OLC is Setting Goals. Like articulation of values, setting goals does not necessarily come before or after any particular part of an OLC; for example, a school could set DL goals because the institution finally gets computer writing classrooms, but this happens before ever having articulated it as a goal anywhere. Or a teacher could be using elements of DL

in her classroom without ever having consciously made digital literacy a goal. Once the cycle has begun, however, one can imagine that goal setting would follow some articulation of values, which would then be followed by implementation and assessment.

The outcome of setting goals can be, as previously discussed, either centripetal or centrifugal. For example, a department may add a DL goal for their English majors which could result in teachers feeling a need to add DL components to their classroom. On the other hand, this addition of a DL goal for English majors could cause the institution to feel pressure to add a more reliable infrastructure which could lead to more students enrolling. Or a student looking at colleges could find out that a department has set DL goals and could then want to be a part of that school and their new goals. Whatever the outcome, setting goals for the future in academia is an essential part of keeping the process of institutionalization going. Below I present the results of setting goals from my research.

Setting Goals: Faculty

It makes no sense to look in catalogs or websites for evidence of faculty goal setting since individuals do not (usually) have genres in such publications. As with articulating values, the only exception where we might find faculty goals might be faculty websites or syllabi, which I saved for future research. During the interviews, however, many teachers expressed personal goals to implement more elements of digital literacy into their pedagogy while a few others did not seem concerned. Most of their goals concerned adding online elements, like using BlackBoard more (or the equivalent), using blogs and chatting, creating online discussions and the like. In addition to these ideas, Dr. Kathryn Evans from Bridgewater State College talked at great length about the person the department was hiring who would be a specialist in "that kind of thing." Those I interviewed who did not seem concerned about adding DL goals felt, for the

most part, that DL was not relevant or necessary to what they do—mostly because they taught literature rather than writing.

In my survey I asked one question related to faculty goal setting: "If computer classrooms were always available, how likely would you be to add digital literacy components to your pedagogy?" Of those who took the survey, 43 answered, and of these 43, 19 answered "Very likely," 9 answered "Somewhat likely," 12 said "neither likely nor unlikely," and 3 people responded they were "not very likely." These numbers demonstrate that nearly 65% of faculty have set at least one goal: to do more if they had the resources. Besides this, not much can be gleaned from these numbers.

Setting Goals: Departments

As I mentioned in the department section of articulating values, 13 people responded that their department had DL goals for English majors or minors. Besides this, the survey did not reveal anything else about DL goal setting at the department level. The genre review of catalogs did not show much either. In the genre review, I did not expect to find goal setting language in course catalogs at the department level, since departments do not often use this genre to discuss goals; it is a more likely venue to articulate what the department values or what they have already implemented instead.

I did expect to find websites with published goals for English majors, though, and I found a few that mentioned DL goals. For example, Alverno College has online their "Learning Outcomes for the English Major" which include "Reads and interprets diverse cultural expressions in works of literature, film, and other media." Iowa Wesleyan's website also lists their goals for English majors, one of which states, "English majors will…Recognize the progressive development of technologies and the implications of such development." These

clearly articulate DL goals, as does Millikin. Their English Major Core Requirement Learning Goals from their website lists as goal number three: "Students will demonstrate computer-aided design, editing, and publishing skills." These instances are not detailed, are vague, and give little insight as to what exactly they have planned, but they at least acknowledge the need for some aspect of digital literacy.

I found out more details concerning department goal-setting from interviews, though. The most extensive example comes from Dr. Victoria Szabo of Duke University who had much to say on the topic of DL goals, so I will quote a section of what she said:

> Next year we will be involved in a "Representing Haiti" project focused on using virtual world spaces as a front end to various archival materials. The focus is on how digital media transforms teaching, research, and understanding by modeling ways of thinking and providing access. We learn by doing, combining theory and practice. Our key areas of focus have evolved to include:
>
> - internet and web technologies, including web 2.0 and participatory work (historic focus)
>
> - mapping and place-based work
>
> - digital reconstructions and visualizations
>
> - virtual worlds and games
>
> - physical computing and mobile technologies/gadgets

Dr. Szabo also mentioned a project for next year, which I consider a goal since it has not yet happened and is new. Dr. Szabo said, "We are also part of a consortium of programs involved in the Visual Studies Initiative (January 2007), which is a Mellon-funded entity created to promote visual literacy across campus. This has merged to some extent with our mission, as technology

facilitates this type of activity." I feel it is important here to point out that Duke University's size, with 6,700 undergraduates alone, can be largely responsible for the extent of their DL involvement. More students means more money, which means more faculty and more resources. Since many of the impediments to institutionalizing DL come from this simple equation, Duke's size could be a large contributor to their advanced level of DL institutionalization. This does not mean, however, that what they do is outside the scope of this study. Still much can be gleaned from all they do at Duke.

Dr. Hannah Freeman of Pikeville College also belongs to a department that has some exciting DL goals. Dr. Freeman said in her interview:

> In the coming months, the English faculty is working with the library staff to develop a training sequence for English 111 and 112 so that all students completing first year composition have developed the same digital skills. This collaboration will begin in the fall of 2010. We will assess the incoming freshmen with the SAILS assessment test and then retest the same students at the conclusion of their first year to measure their learning. In the coming years, we hope to implement digital literacy training in each discipline as students move into their particular majors.

It would be interesting in the next few years to return to a discussion about this goal with Dr. Freeman and discover how well this has gone. Unfortunately, no written documentation readily available to the public conveys this lofty and very important DL goal—as is the case with most other departments. If they are setting goals toward implementing DL into their curriculum, they are doing a poor job of putting it in print.

Setting Goals: Institutions

At the institutional level, goal setting is an essential activity. In order to continue with change, updating, innovation, and other steps toward continuing improvement to any large entity, goals need to be set. Publication of these goals in genres that centrifugally perpetuate improvement is just as important; because of the importance of these genres, I anticipated finding more goal-setting language at this institutional level than at the faculty or department level. Unfortunately, this was not the case. The catalog review revealed a few mentions of DL goal setting, such as this from Centenary College's Vision Statement: "…Centenary College is committed to enlarging its presence in the immediate and expanded geographic region through its quality undergraduate and graduate programs, and by becoming…'An acknowledged leader with its contemporary Career, business, and Education technology centers…'" Because this is a *vision* statement rather than a *mission* statement, it can be construed as a goal rather than an already-established practice since the two genres are meant to function in different capacities: vision statements that articulate future goals and mission statements which articulate already established practices. Lyndon State College also has a similar goal across several programs:

> In providing students with the essential foundation of a liberal arts education in all its various programs, the Department of English, Philosophy and Film Studies seeks: to provide students with a vital and substantive understanding of the study and analysis of culture through literature, writing, philosophy, and a variety of cultural media. …

This could also be considered a genre from the department, but because it came from multiple departments, I put it in the institution section. Iowa Wesleyan also states in their Vision Statement: "OUTCOMES: An Iowa Wesleyan College education empowers its students

to…Extend and facilitate effective discourse through modern technology." These brief language instances were the only explicit DL goals I found.

The only goals at the institutional level that interviewees mentioned were from Dr. Lowman at University of Maine Presque Isle (UMPI) who said the school had a goal to have 20% of their courses offered online[9]. I also would consider Bridgewater State College's hiring of a specialist in the field (Dr. Evans never gave me an exact title or description of this hire) as a goal (at possibly both the department and the institutional level), although what specifically they plan to use this hire for was unclear. Dr. Freeman from Pikeville College said, "We have a new dean who is eager to enhance faculty and student training in digital literacies. Students and faculty alike understand the need to develop our skills." Pikeville also declares an institutional goal "To provide necessary resources for a quality education through instructional materials, information technology, library and physical facilities" among a list of other goals. The idea of providing quality education through "information technology" could be construed as a DL goal—although it could also mean nothing more than getting all their library resources into a database. This reference is obscure.

Discussion

All efforts toward institutionalization require setting goals. For any large group to undertake anything as significant as making digital literacy "integrated …into the organization's culture and structure," setting specific goals and keeping a vision for the future is essential

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[9] While most would not consider the implementation of online classes the same as the implementation of a digital literacy component, this particular interviewee gave this answer when asked about DL goals, so I have included it here.

("Institutionalization" *Quality* 1). Because institutionalization is an ongoing process that requires the operational life cycle continue to repeat itself, setting goals is one of the most important activities needed to perpetuate this repetition.

The research shows that those from the survey and interviews have set many goals and have some very specific and interesting ideas in the works. Unfortunately, the genres that demonstrate these goals are not generally being made public, although some institution and department effort has been made in this direction. One can imagine, for example, the effect that would result from a school like Pikeville College making a public a goal like the one Dr. Freeman spoke of: "In the coming years, we hope to implement digital literacy training in each discipline as students move into their particular majors." Were this goal put into a vision or mission statement, were it mentioned on the English webpage, were it printed in their course catalog, it could seriously speed up institutionalization of DL at Pikeville College; faculty would be adjusting their pedagogy to prepare for this change, departments would be training everyone to be prepared, and potential students would be intrigued by this notion—and may come to this school just because of this one goal. I might mention again here that my having had this conversation with Dr. Freeman and mentioning putting this on their website could be another example of an outside researcher perpetuating the OLC.

Those public genres, like the articulation of values, can have centripetal or centrifugal effects, but those documents that remain outside the public realm—as is likely the most common case with goal setting—will only have centrifugal effects within the department and for current students. This does not need to be the case, however. A written document declaring goals may be kept private so that a department or institution that fails to meet their goals will not be held accountable to the public or held up for ridicule. However, if institutionalizing DL really is

valued, publicly setting forth these DL goals would push this along more quickly for the very same reason. Because of the significance of public genres that clearly state an institution's goals, the lack of such writing—3 out of 66 (and 2 very vague possibilities)—indicates one of two possibilities: institutions are not setting digital literacy goals, or institutions do not have as an object for this activity those genres that were a part of my research. However, the genres I looked for were the most easily accessible, so the effects, both centrifugal and centripetal, of these genres would do a lot toward institutionalizing DL.

Implementing Goals

The third activity of an OLC is Implementing Goals. As with the other aspects of an OLC, the first time a goal is implemented by a teacher, department, or institution, it may not necessarily follow on the heels of a clearly stated goal or a clearly stated value by any of these subjects. Many practices exist that have never shown up in any kind of public genre at all. For example, a teacher could have her students working on critical analysis of web sources because she knew of another teacher that was doing so, but this same teacher may never have indicated that this was important to her or claimed that she saw any value in it at all. Once a practice has been adopted, though, there likely needs to be genre evidence of its existence in order for the practice to continue. These genres and discussions were also a part of my research.

Like the other objects of activities, genres that are the object of implementing goals have both centripetal and centrifugal outcomes. The most common genre of this activity is the course description, which can result in students registering for the courses or interested students deciding to go to a particular school because of the courses they offer. In the centrifugal

direction, the outcome could be that these course descriptions give rise to other faculty or departments coming up with ideas that could incorporate DL elements (and more).

While all of the activities in an OLC are essential, the actual purpose for the entire life cycle is implementation of goals. Implementing goals means the actual practice of institutionalizing DL through various pedagogies and programs. The genres that indicate such pedagogies are most likely to be course descriptions, the place where this implementation occurs. The institution can demonstrate that they implement these goals by publishing the course catalog itself and by publishing information about their infrastructure support, while departments and faculty can talk more specifically about what they do with DL in courses themselves. The following research shows evidence of these three subjects implementing DL goals.

Implementing Goals: Faculty

Evidence of faculty implementing DL goals was found in all three research sources. For example, several questions of the survey dealt with this specific part of an OLC. First I asked "Do any of the courses you teach contain elements of digital literacy? Please answer by providing a ratio (ex. 3 out of 6). In response, 8 of the 42 people who answered this question said they taught elements of digital literacy in all of their courses. One person reported 7 out of 10 and one person said 5 out of 8, while 6 people said they taught them in half their courses. This means that of the 30 that answered the question (in the requested format), 16 or just over half said they taught some sort of digital literacies in half or more of their courses. Of the others who answered, five said they didn't teach elements of digital literacy in any of their classes. Several answered with a number but didn't provide a ratio. Ten people did not answer this question.

I also asked what particular elements of DL they taught and provided them with a list to check all that applied. I have provided the results in Figure 4.1 for a clearer visual idea of their responses.

Figure 4.1: Survey Results of Digital Literacy Elements Taught by English Faculty

The chart shows the number of teachers who responded to individual elements:
- Critical use of software 18
- Writing in digital environments 24
- Digital rhetoric 12
- Document design 9
- Visual literacies 35
- Technology theories 7
- Digital identities 4
- Fair use and legal issues 12
- Equal access issues 6
- Other 9
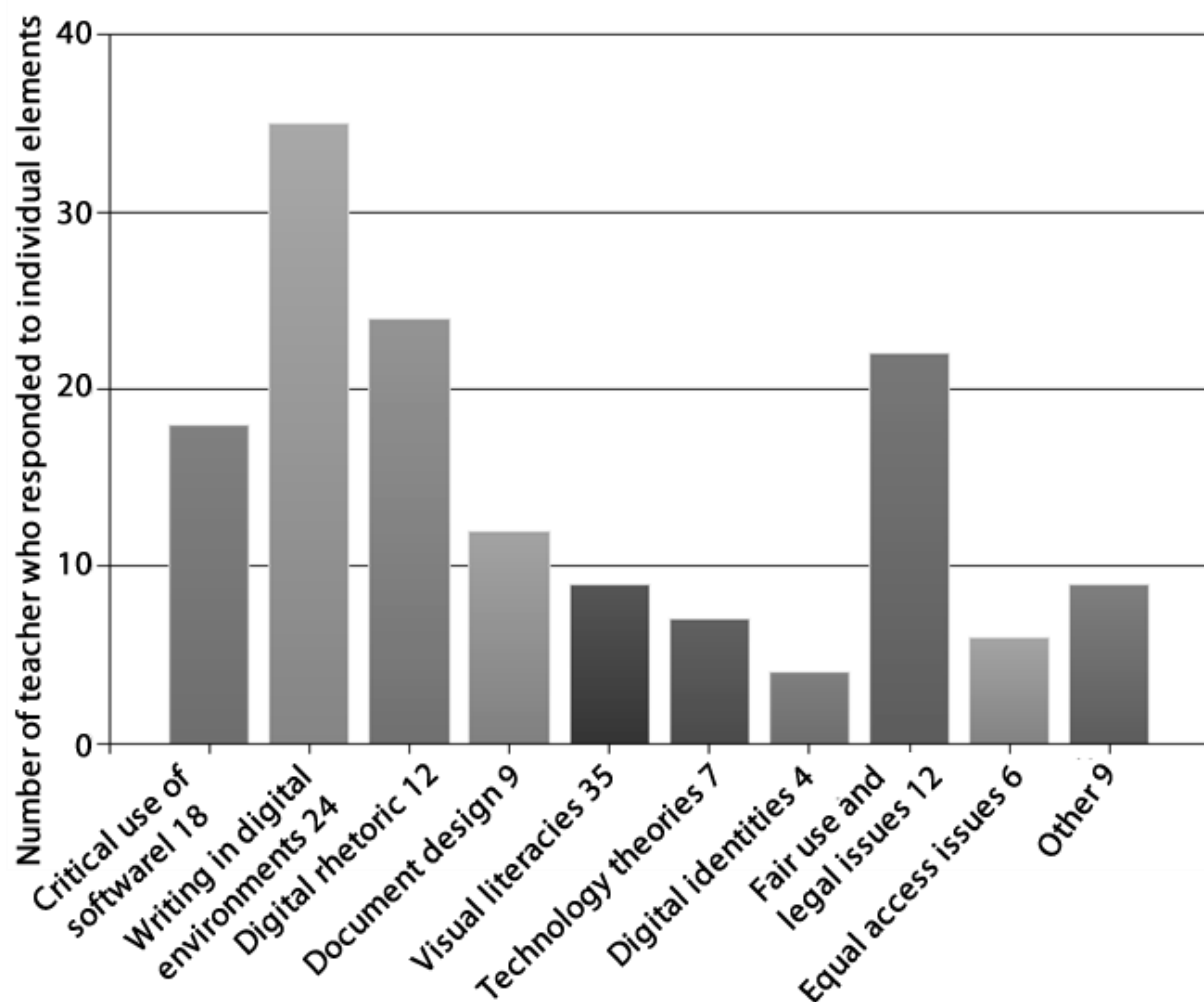
Their answers to "other" are as follows:

● Use of internet for research purposes

- Accessing and understanding library information; effective use of PowerPoint; correct documentation and attribution of sources

- Mass comm and semantics classes—lot of internet examples

- Search and evaluation of digital materials

- Reading, analyzing, and creating advertisements, TV commercials, movies, paintings

- Evaluating media information

- Database digital research, assessing sources

- Electronic resources for research

Of interest in the survey data are the DL elements taught most frequently: teaching visual literacies was the most common, followed by teaching writing in digital environments and teaching fair use and legal issues. Critical use of software came in next. The others were taught only half as frequently. Visual literacy as number one is not very surprising, as this could mean a wide variety of things: anything from teaching critical use of presentation software like PowerPoint to teaching the meaning of color on the web—and a plethora of visual issues in between. It is not difficult to imagine that many faculty have visual elements to their pedagogy; understanding what we see has always been valuable. But it has now become even more so with the addition of multimedia as part of composition.

It was not surprising, either, that "fair use and legal issues" were also relatively common. While it might seem like a topic that may not be closely related to the average English class, we have to consider that any time students begin to research online, they are going to come across these issues. In other words, this category is closely related to research and information literacies, so it is very likely that faculty considered it as such. Those who did not were probably

those who filled in the "other" box, as most of these answers are directly or closely related to the same information literacy issues.

Following this question about the elements faculty teach, I asked in what courses these were taught. For a more detailed look at these courses and their titles, see "Appendix B." The results show that teachers include digital literacy elements in 52 writing-related courses—18 of which are first-year writing courses (or the equivalent) versus only 22 literature-related courses and in 15 other kinds of courses. This means DL elements are taught in writing courses 2 ½ times more frequently than in other English courses.

My review of course catalogs also demonstrated the level of implementation of DL goals; out of the 66 catalogs I read, 23 institutions had a total of 36 courses specifically designed for DL teaching, and 46 courses which mentioned some sort of digital literacy component. This is just over 1/3 of the institutions with any mention of DL implementation at all. It is important to note here that this evidence of implementing goals can be considered the activity of faculty implementation (the current discussion) or department implementation—or could even be considered institutional implementation. Because institutions have very different ways of going about course development, I have no way of knowing who is doing the implementing without further details. I have included these results here in the faculty section because they could apply here—but what subject actually did the implementing is hardly certain.

The interviews, though, help provide some of these details. Those I interviewed offered much insight into faculty implementation of DL goals. One interviewee said she knew she was aware of "use of PowerPoint, researching using electronic sources, and multimedia projects" by her colleagues. Many of the answers referred specifically to implementing "information literacy" (or some equivalent) explained as helping students do critical library research. One particular

interviewee spent significant time on this discussion. Dr. Jacquelyn Lowman from University of Maine at Presque Isle (UMPI) was adamant about implementing DL goals. "I insist," she said, "that my students leave my class fully functional and literate." Her students research online, use and study social media, do "posting and email," and create digital portfolios. Dr. Lowman's goal, she said, is to "make them all communication entrepreneurs." She also said she is going to be teaching a course called "Writing for Evolving Media." One of the reasons for Dr. Lowman's passion for technology is that she is handicapped, and, for the past ten years, technology has made it possible for her to do many things she otherwise would never have been able to do.

Quite a different view came from Dr. Thomas Kealy, Associate Professor of the Humanities at Colby-Sawyer, who believed that writing classes emphasized electronic database research and perhaps used software like PowerPoint occasionally, but there was no multi-media composition as far as Dr. Kealy knew. He felt that most of this kind of work was done in the communications department. Dr. Warren Rosenberg, Professor of English and Department Chair at Wabash College, said he works online with all his courses; for example, in his Medieval Literature course, he posts digital copies of medieval manuscripts online for students to study. Dr. Rosenberg uses technology extensively for his linguistics class as well. Dr. Rosenberg and the other English faculty use Moodle, use online grading, share texts, and use technology in composition "a little" as well. Dr. Rosenberg and several others would also like to see online portfolios happen.

While the genre evidence possibly points to faculty implementing DL goals, when we ask the faculty directly, it becomes evident that much of this implementation occurs at the faculty level. This makes the most sense, of course, since it is the teachers who teach, so implementing their goals will definitely be the most prevalent, although many of the "little" things teachers do

like adding a visual literacy lesson or emphasizing critical research techniques online may never show up in any genre at all unless the teacher is aware of the importance of adding this language to a syllabus or written course goals.

These findings mesh well with some previous findings as well. For example, the emphasis on library research and information literacies correlates with the findings from my survey when asked what kinds of literacy elements faculty teach. Many faculty answered that they taught forms of library research and critical use of databases and websites. When all of these answers are considered together, and at the same time we take into consideration the fact that little research today happens without databases, computers, and/or the internet, it makes good sense that nearly every English faculty member would be compelled to teach critical thinking in this area in order for students to produce credible research projects.

Implementing Goals: Departments

As I mentioned before, those survey questions that demonstrated evidence of faculty implementation of goals as discussed in the previous section could also serve as evidence of department (and possibly even institution) implementation of goals. From my experience, this depends largely on the institution. I know that many courses are the brain-child of a single faculty member who presents an idea for a course to the department or the provost (or some other person in charge depending on the school's structure), and then eventually the course gets approved and gets printed up in the catalog. But in other cases, the department together comes up with a course that goes through this process. It can also be a combination of both—different schools have varying practices when it comes to new courses. So what I found from my survey and from my course catalog research would fit in this section as well.

From the interviews, however, I was able to discover more specific details about who was responsible for what. For example, Dr. Evans from Bridgewater College said her department had revamped their curriculum, and one thing added was a writing concentration. Many electives now required more writing as well. But she was fairly clear that this momentum came from the department rather than from the institution; the English department pushed for these changes. While Dr. Evans was very positive about support from the institution—for example, all freshmen are required to have laptops, and the institution at large seems to be relatively pro-technology— she was also clear that the English faculty initiated whatever digital literacy movements had been made in her department.

Departmental activity concerning implementation of goals was evident from other interviews as well, like Dr. Dehne from Manhattanville. She was not specific about what pedagogies or courses this included but said, "It was before my time at Mville, but the curriculum is entirely faculty driven." While Dr. Dehne's answer was very general, Duke University's Dr. Szabo was very specific. Duke's department has implemented many goals, some of which Dr. Szabo bulleted: "Our key areas of focus have evolved to include:

  • internet and web technologies, including web 2.0 and participatory work (historic focus)

  • mapping and place-based work

  • digital reconstructions and visualizations

  • virtual worlds and games

  • physical computing and mobile technologies/gadgets."

Again, Duke's size allows for this kind of detailed, specific, and innovative digital literacy work, while other smaller schools are implementing much broader goals such as the anonymous interviewee who said, "All of the freshman composition faculty at our school teach students how

to conduct research with computers"; not too surprisingly, this was one area of DL that seemed

nearly 100% in place to everyone I spoke with, whatever the institution's size. Because students

do most of their research online now, it seems faculty have been forced to teach this kind of

information literacy or run the risk of students using non-credible sources like personal blogs or

Wikipedia for research.

Implementing Goals: Institutions

Evidence of institutional goal implementation looks a bit different from this same activity at the

faculty or department level. Although one could argue that new courses or programs are goals

implemented by the institution, I have not included these things in the institutional category

because, for the most part, these do not *originate* at the institutional level but rather at the faculty

and/or department level. Of course, new programs and course offerings require the approval of

the institution, so the institution certainly has to do its part; this activity—approval of new

courses and programs—certainly is an implementation-of-goals activity at the institutional level.

Also as part of the activity of implementing goals at the institutional level, one could

consider new faculty lines and hires as a significant contribution to institutionalization. While I

did not include this in my research, future research might find this an important component of

the institutionalization of DL. For example, at the institution I worked, the one where all this

curiosity about institutionalizing DL began, one of the most significant moves they made toward

perpetuating the OLC was to hire someone who specializes in the field of digital rhetoric. Most

of the changes made after this stemmed from having this resource. Other schools like

Bridgewater and Marist, in our interviews, mentioned having hired or the intention to hire

specialists as one of the steps they planned to make in order to perpetuate the institutionalization

of DL. While I did not make researching recent hires as part of this particular project, it would be

interesting to follow the path of new hires and the progress of institutionalization to see how these hires have an effect.

I did look at infrastructure, however, and the role of infrastructure support by institutions. My survey provides some evidence of the level of institutional goal implementation. I asked several questions about the availability of technology. Results show that 23 out of 52 institutions have computers for instructors and 28 have Internet access. Of the 52, 20 have built-in screens and projectors while only 5 have a document camera / visualizer. Comments from respondents also shed some light on the institutional level of implementing goals. For example, one respondent commented "We are a laptop campus, so all teachers and students have computers at their disposal." Another respondent said, "Almost all classrooms have computer projectors," and another said, "all students get laptops when they arrive, so all classrooms can be used (the quad and public places are wireless, too) but student computers are not in the classrooms." One respondent answered in a way that represents many schools—at least the ones I have seen: "Most classrooms have a console for teachers, but no computers for students." Some institutions, therefore, are working toward access at some level—some more so than others.

Evidence of implementing goals at the institutional level in catalogs and websites really can only be found if, as I mentioned before, credit is given to institutions for new courses and programs. Interviews, though, provided more insight. Marist College claims on their website that Marist "is a highly selective comprehensive liberal arts institution noted for its leadership in the use of technology in and out of the classroom." Dr. Laflen agreed that Marist as an institution was very supportive—even more so than the English department—and her hire had been the institution's idea to "bridge the gap" between what the department was doing and what the institution hoped they could do. Dr. Laflen did not give specific goals that the institution had for

her, but she did say she began bridging the gap within her first year. Likewise, Dr. Lowman of UMPI said that their Vice President of Academic Affairs (the equivalent of a provost, she said) is incredibly supportive of advancing technology, but money is a major issue and they struggle with broadband issues because of their remote location.

Wabash College as an institution definitely has implemented many DL goals, as Dr. Rosenberg explained in his interview, when he explained that Wabash is very much at the forefront of digital literacy practices. For example, he spoke of a Great Lakes Colleges Association (GLCA) consortium of which Wabash is a part, which received a Lily grant to come to Wabash to set up their now very successful Center for the Liberal Arts at Wabash. This project, explained Dr. Rosenberg, was key in the institutionalization of digital literacy at Wabash, where he feels both he and the school are very advanced. And, while Dr. Rosenberg was clearly unhappy with the lack of digital literacy goals and values expressed both online and in institutional documentation, he insisted that the expectations on campus to push for digitally literate students were very clear. This particular school stands as evidence that the genres I am researching are not necessary for institutionalization of DL; clearly Wabash does a poor job in using DL language in their written documents, yet they seem to have advanced far in their work toward institutionalization of DL. The problem, however, is that no one would know this without talking directly to someone from Wabash.

Dr. Freeman of Pikeville gave some adamant indication that her institution was actively implementing goals as well: "We have a new dean who is eager to enhance faculty and student training in digital literacies. The dean, librarian, and two English faculty members participated in the conference on information literacy in the March 2010… In the coming months, the English faculty is working with the library staff to develop a training sequence for English 111 and 112

so that all students completing first year composition have developed the same digital skills."

Thus Pikeville, though small (700 undergrads), implements DL goals as well.

Of course, a small institution like Pikeville will barely compare if held up beside Duke with their 6,000 students. Dr. Szabo offered a lot of information about Duke's institutional goal implementation, most of which is associated with their relatively new program called ISIS, the Information Science and Information Studies Program. This program's mission is to "study and create new information technologies and to analyze their impact on art, culture, science, commerce, society, and the environment" (ISIS at Duke website). Dr. Szabo explained this program in detail:

> My program [ISIS] was created in part to address the question of digital literacy
> as both a theoretical/cultural concern and as a practical matter. It was created in
> 2004 as an initiative of our Vice Provost for Interdisciplinary Studies in
> collaboration with various faculty who were concerned about technology in
> society, hands-on digital production expertise, and the overall impact on IT on
> higher ed…Key to our program is that it isn't specifically a humanities enterprise:
> our core collaborators are in literature, computer science, and visualization
> technologies, with additional faculty from various interested sectors on campus,
> including Art, Art History and Visual Studies, languages, history, and Classics.
> Our students come from all over campus, both in the engineering and arts and
> sciences schools.
>
> We are also part of a consortium of programs involved in the Visual
> Studies Initiative (January 2007), which is a Mellon-funded entity created to
> promote visual literacy across campus. This has merged to some extent with our

mission, as technology facilitates this type of activity. We have reshaped the VSI to include a broader "media" focus. We have labs there – a game lab, a physical computing lab, and specialized equipment – that get used by faculty, staff, and students for projects. We are also core collaborators in the new major in Visual and Media Studies, the upcoming MFA in Experimental and Documentary Arts, and in the planned interdisciplinary PhD in Visual and Media Studies, as well as international collaborations with other universities. We are also working closely with art historians and classists to develop methodologies for digital historical reconstruction.

These interviews demonstrate that some institutions are implementing DL goals—and some to a very great extent. Some of the implementations of DL already in place at institutions like Duke are ideas that some smaller schools would never dream of having access to. A program like ISIS, for example, would be difficult to implement at a school with only 1,000 students or so. However, the ideas that come from a program like this—the values taught, the information gleaned, the lessons learned—can be translated into smaller school settings with the right kind of goals set and implemented.

Discussion

When considering institutionalization, implementation of goals is inarguably the most important activity of the OLC. From the research I conducted, we can see that a lot of DL goals are being implemented in a wide variety of ways. Any school interested in how to go about implementing their DL goals could get some wonderful ideas from all of the courses and descriptions available and from the enacted goals of some of those schools that are further along in the journey of institutionalizing DL. No one approach to institutionalization stands out as the key to success

here. Each school will want to assess their own needs, their own resources, and their own values and approach institutionalization in a way that makes sense for them.

Unfortunately, it also seems clear from the research that much more DL work is actually practiced than the evidence would show; again, the discrepancy between what the genre review reveals and what is being practiced is significant. This means, again, that there is a lack of the "object" part of this activity. Perhaps this is the result of pedagogy as the main focus of implementing goals rather than working on course descriptions. Providing a course description for a new course or program or innovation for the catalog is often one of the last concerns on a teacher's list. At the same time, teachers know that a good course description will mean good enrollment numbers in the course, which often means the life or death of a new course. However, because of the importance of this particular genre—for both centripetal and centrifugal reasons— perhaps these genres could use more attention. While this research provided good insight into the pedagogies of several schools, it also demonstrates the severe lack of DL implementation overall.

Assessing Goals

I did not ask any questions in my survey about assessment, and the genre review of catalogs and websites really offered no insight into any kind of assessment. Out of my eleven interviews, only two were aware of any assessment of DL. Because of this limited information, I am not dividing this activity into sections. Dr. Freeman of Pikeville said, "We will assess the incoming freshmen with the SAILS assessment test and then retest the same students at the conclusion of their first year to measure their learning. In the coming years, we hope to implement digital literacy training in each discipline as students move into their particular majors." Dr. Szabo also spoke of some of the assessment happening at Duke: "We work closely with the Center for Instructional

Technology – there are a number of reports on ISIS specific projects there as well. They focus on general tools and pedagogy so there is some overlap with our mission, and with the university's efforts at promoting digital literacy at large." While these two mentions of assessment were all I found, this particular activity within the OLC was not the focus of my research; I anticipated that the relative new-ness of DL concerns would make any kind of structured assessment at this point pretty rare. Because of this, I did not focus on assessment, which I am leaving for future research.

Some Roadblocks and Impediments

What I have shown so far has been the evidence of the activities of various OLCs at the faculty, department, and institutional levels. However, not all of my research showed the positives of these activities; some of my research revealed some of the reasons these activities are not happening. I do not have extensive evidence about why institutionalization is not happening, but the information that can be gleaned from these problems is relevant to institutionalization of DL. Again, because I don't have a lot of information, I will not separate this information into the three subjects. Determining who to "blame" for the roadblocks is difficult unless an interviewee was specific.

In my survey, I asked outright why a faculty member might not include DL elements in their pedagogy. Respondents were asked to choose from a list then add any comment they may have beyond the list, as shown in Figure 4.2. The additional comments follow. (Some editing for brevity and relevance).

Figure 4.2: Reasons Respondents to Survey Gave for Not Teaching DL in their Classrooms

- Sometimes, I simply choose not to. E.g., this semester I'm teaching American Lit I. Students are required to keep a commonplace. At times I have required these to be done as a blog. This time I asked that they keep their commonplace in a composition book.

- Other areas of the overall curriculum do teach this content. And since I don't feel particularly comfortable teaching it, I feel like I can fill in the gaps by helping to teach students to write in linear logical means. I also teach creative writing. It is in this latter area that I will probably first make a breakthrough.

- Less relevant to some courses, e.g. creative writing and literature surveys. At least I can't see how it fits with my course content right now. Open to learning.

- We don't have very many classrooms equipped for teaching this way. We have a few 'smart' rooms that include access to the net/ overhead, and we have one computer classroom that two departments share. I also sense that this is not a part of what the department cares about, which frustrates me.

- I can teach my courses using other methods and materials.

- I also teach strict literature courses.

- I acknowledge that it is not irrelevant to my course content, and in fact I do try to help students locate reliable secondary sources by accessing the very best on-line bibliographies via the College's internet system

Also as part of my survey I asked if they would be more likely to teach DL if computer classrooms were always available. Of the 43 who responded (9 skipped the question), 19 said they would be "very likely," 9 said "likely," 12 said "neither likely nor unlikely," and 3 said "not very likely." In other words, 28 faculty feel the lack of computer classrooms impeded them from teaching DL. Of course, not all faculty need to teach DL elements in every class for DL to be institutionalized; however, if institutionalization means a value becoming "an integral and sustainable part of an organization," then it would require at least access to resources for those who want to do the work. Again, it comes back to the department and the institution knowing their limits, understanding their needs, and being aware of their strengths. They would want to take advantage of those who did teach DL in their courses to ensure that each student was exposed to a breadth of DL pedagogies.

Obviously no course catalog or website is going to share the reasons why an institution does *not* do something like teaching DL, so I have no evidence from these genres. But interviews did provide some insight. For example, Dr. Evans of Bridgewater State felt she was relatively comfortable with teaching DL elements in her classroom, but there were many in her department who were not, although we did not get into reasons why. Dr. Laflen from Marist shared that the faculty at Marist feels that the students know a lot about technology already, which is a problem because many of the faculty do not know much about technology.

The opposite situation exists at UMPI. Dr. Lowman from UMPI discussed the kind of student common to her institution: she said 2/3 of their students live off campus, and, because of their location in the far northern part of Maine, many have no internet or just have dial-up. Dr. Lowman remembers a student considering attaching a document to an email "very high tech." So she says one of their goals is trying to "immerse students" in technology while they are on campus. "It's basically like throwing them in the deep end," Dr. Lowman said. The rest of the school, from her point of view, is very rural and thus very behind. "We have to be creative in order to not make [the divide] worse," said Dr. Lowman, "between the have and have nots."

While some faculty see students as too advanced to need direction and teaching in DL and other faculty have students whose DL is far behind, yet another group of faculty do not believe digital literacy is a composition/writing issue at all. Dr. Kealy from Colby-Sawyer felt that most of "this kind of work" was done in the communications department[10]. Dr. Kealy did not sense any felt resistance to digital literacy in the English department but also did not feel that

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[10] This is very common. I found during my catalog review that many DL-related courses were in a Communications department rather than in English.

they saw it as their responsibility. Dr. Landis from Montreat had the same response: many think DL belongs to the communications department, but Dr. Landis thought this was odd. My anonymous interviewee said, "One challenge has been coordinating efforts between departments." Dr. Freeman from Pikeville commented, "The only reservation expressed is that English composition already has to accomplish so much. We want to avoid making composition the course responsible for everything we expect college students to learn in their first year." Dr. Freeman also shared, "We anticipate some older (and some newer as well) faculty who have difficulty themselves being asked to incorporate digital literacy into their courses. We also want to allow individual freedom in course design but also want all first year students to exit English composition with the same set of skills." No one is going to argue that DL is *not* a communications issue, yet as we saw from those in the field of R & W, it is certainly a composition/writing issue as well.

Reminiscent of Sven Birkerts and his reservations about the digital movement, some faculty do not want to deal with DL at all. Dr. Hankla of Hollins' main concern about institutionalizing DL was that "some older faculty … are intent on riding out their careers with as little knowledge of digital means as possible. We have one faculty member who only learned to type for himself in the past 4 years (as a result of more university email and digital information)."

On the other hand, often a lack of DL practice is a simple matter of numbers. Even Duke, the largest institution in this research group, had trouble getting enough people and money. Dr. Szabo from Duke recognizes several roadblocks in her institution:

> Our primary roadblock is that we do not have large core faculty. Two of us are
>
> devoted more or less full time, but everyone else needs to negotiate teaching with

their departments. Many courses are cross-listed, but those that are too far afield

from "core" responsibilities get lost. … With budget cuts due to the recent

economic crisis, we have found it difficult to continue our commitment to this

program. Also, as a small program we are vulnerable to admin cuts as well; we

lost 50% of our primary staff support position, which makes it harder to do more

than keep things going. The newsletters, publicity, extras that make a program

highly visible are harder to come by. This is vital for a program that thrives on

serendipitous discovery since we don't fit into predetermined categories of

understanding.

From this information we can determine that one of the biggest impediments for faculty is their

impression of DL itself: some feel they are not qualified or that the students know more than

they do, and some just do not feel it is worth the effort. At the department level, this issue seems

to be a question of where DL belongs: English or communications. At the institutional level, the

biggest problem is infrastructure, which most blame on lack of money.

If we recall the discussion from the previous sections about a discrepancy between what

subjects value and what their genres represent, the addition of the idea that there exist portions of

departments who resist DL—some quite vehemently—makes the discrepancy between what

faculty, departments, and institutions value and what their genres say they value may not be as

significant. Possibly the lack of genre representation of DL values and implementation stems

from the desire to represent and entire body of faculty whose beliefs differ in drastic ways. For

an institution to boldly and publicly declare that DL issues are of great value to them could

misrepresent a significant portion of an institution's faculty. Those who do value DL, however,

know that it does not help an institution, at the beginning of the 21st Century, to ignore DL

issues, nor does it help the institution to leave DL issues out of their publications.

Discussion

This chapter represents the several parts of the Operational Life Cycle of digital literacy in

institutions. I looked at four activities in this OLC: articulating goals, setting goals, implementing

goals, and (briefly) assessment. In addition, I examined each of these activities from the

perspectives of three subjects: faculty, departments, and institutions. As I explained earlier,

institutionalization of DL can only occur when all four activities are enacted by all three subjects.

Without all three subjects participating in all four activities, no goal like DL can "become an

integral and sustainable part of an organization" (Quality Assurance). Yet this is only half of the

equation. The other half of the equation involves my earlier definition of DL and the framework

of Selber's I discussed, as the next chapter examines.

While this research demonstrates several institutions in the process of institutionalization

of DL in English departments, the place of genre in this process deserves discussion. The many

genres I have presented here through my research have had an obvious centripetal outcome: like

any person interested in an institution's DL practices could do, I have read these genres. I can

glean from them what any reader could. However, I took this a step further and analyzed these

genres to determine the level of DL institutionalization at these particular schools. From this

research, I have made conclusions about what these institutions value, what goals they have set,

and how they have implemented these goals. I have presented a snapshot of various operational

life cycles and how the activities embedded in these life cycles contribute to the institution's

overall progress toward institutionalizing digital literacies. And this effect, this outcome, is

important. It is highly plausible that any prospective student or parent of a prospective student who reads these genres will come to the same conclusions.

However, as I said before, if these genres did not exist, it would still be possible for an institution to practice DL pedagogies and promote them in the classroom, something the public may never see. Yet the centripetal effect—this centripetal outcome—of the genres I researched is not the only outcome of these genres; how the public views them is not all that matters. As genre theory expresses, these genres also have a *centrifugal* effect. It is this centrifugal effect that perpetuates the operational life cycle; it is this very effect that makes institutionalization happen. While the centripetal effect demonstrates to the public what is already occurring, it is the centrifugal effect of these genres that make them occur to begin with. As Freedman said, "Genres not only respond to specific contexts but also reshape those contexts in the process of responding to them" (4). Genre is both a reaction to and a call for action. It is the call for action that perpetuates the operational life cycle and results in the overall process of institutionalization.

I re-emphasize this idea here because evidence shows that very few schools demonstrate a fluidity of the operational life cycle. Many seem to be just beginning the process of institutionalization, and if an institution's desire is to keep the momentum of this process moving, then it would do well to create the various genres that would be a call to action in the institution. In addition, because I am considering academic institutions which define, control, shape and function through documentation, then the pressure to produce such genres that would encourage DL institutionalization would further define the institution and its control, shape, and function. My research indicates that too many faculty, departments, and institutions underestimate the power of these genres.

CHAPTER FIVE: COMPREHENSIVE DIGITAL LITERACY

The second—and equally important—part of the institutionalization of digital literacy (DL) involves the definition and elements of DL as discussed in Chapter Two, what I am calling "Comprehensive Digital Literacy."[11] While evidence of an Operational Life Cycle (OLC) demonstrates that institutionalization is in progress, the second part of this equation is equally important. Essentially "Comprehensive DL" is the institutionalization of all three of the components of DL: the categories of functional, critical, and rhetorical. This chapter asks if an institution's "coverage" of DL is comprehensive, or are they missing significant aspects of DL that would mean that a school has a significant "hole" in their process of institutionalization. My claim is that all of the subjects (faculty, departments, and institutions) and objects (genres) of all the four activities discussed previously (articulating values, setting goals, implementing goals, and assessing goals) can be fully functioning within an institution, but digital literacy itself is not institutionalized if these activities do not include all three of the categories of digital literacy. To think about this in practical terms, it would not make sense for an institution to teach only one or two of these three categories and call this digital literacy any more than they would teach just reading without writing or reading and writing without critical thinking and consider it literacy.

Determining Levels of Comprehensiveness

In order to determine the comprehensiveness of DL, I looked at the language reported in the survey, the language found in the genre review, and the language written or spoken in parts

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[11] As I mentioned in Chapter Two, I do not mean to imply that these categories are separate and distinct but instead am using them as a means for research and discussion. Clearly the three categories I named overlap and depend on one another.

of the interviews from Chapter Three. However, I am not grouping my findings according to research method here but according to genre instead. The first genre is Course Descriptions: I analyze language from course titles and descriptions and self-reported elements from the survey. The second genre is official "statements": mission statements, value statements, department statements and the like. Last I look at language in definitions of DL from the interviews. I am dividing my findings this way in order to separate and discuss the effectiveness and impact of these genres.

The language I analyze for this research comes from my previous framework and working definition from Chapter Two, which I will briefly revisit. My framework consists of three categories. Category One is "Functional": a person's movement into the digital discourse community that includes digital spaces (physically, metaphorically, and verbally), thus a matter of identity, being able to "function" in digital realms toward continually greater elegance and sophistication within the digital literacy community. The language analyzed that I determine to be part of this category reflects such functional and skill-oriented pedagogies.

Category Two is "Critical": reading, listening, watching, critiquing, analyzing, challenging, and evaluating digital texts; understanding the embedded political, social, and cultural ideologies inherent in any composition; and how visual and aural rhetoric plays into understanding this new way of constructing knowledge. This category contains words associated with epistemology as a discursive process that requires the person to work within this process toward creating knowledge. This category also includes language which indicates that part of this discursive process—part of this learning—connects to the embedded ideologies inherent in digital spaces; it especially includes the kind of language that indicates collaboration. The language analyzed in this category reflect these kinds of epistemological occurrences.

Category Three is "Rhetorical": developing, building, designing, sharing, and synthesizing ideas and values to effect change, a focus on creation and production as a very social action. This category requires some kind of tangible product, some kind of writing or composing—it requires creation. As I mentioned before, some words do not fit neatly into one category, so I have discuss them as part of more than one category. For example, words like "collaboration" fit both categories two and three people learn as they work together—but very seldom do this without producing something. My one-sentence definition of digital literacy, again, is "The ongoing process of becoming functionally part of the digital community through an understanding of embedded ideologies and through critical and rhetorical learning and composing within verbal, visual, and aural digital spaces."

Categorizing genres for this particular part of the research differed from the previous chapter significantly. For each genre, I looked for specific language that reflected the kinds of literacies that fit either category one "functional," category two "critical," or category three "rhetorical." Some language clearly indicates one category over another. The word "use," for example, falls into category one "functional" as this word does not indicate any kind of learning takes place nor does it indicate and kind of product. For example, I "use" my computer to listen to music—but I am not learning anything nor composing anything directly related to the computer I am "using." Of course, we can learn from the music we listen to, but the word use does not *require* any critical or rhetorical participation. Other terms like "skill" or "familiarity" or "ability" also are solidly category one language, so when I came across genres that mentioned DL in conjunction with this kind of language, I could usually put that particular piece of writing into category one. Similar language exists for categories two and three. However, a large number of words, if considered outside of the context of the whole genre, could easily fall into one, two,

or even all three categories, yet when considered in context were much more difficult to categorize. Because of this, I have no distinct group of words that I put into specific categories. Instead, I consider each DL word in its context and determine what each level of DL each genre is likely to mean, one instance at a time.

For example, the term "access" may seem to indicate only a level one literacy practice. However, if we consider "access" to encompass all of the aspects of literacy that Livingstone does—socio-cultural contexts like availability, choice of computer and software and ISP, and ownership, as well as money, location, time and space, parental attitude—then we can hardly contain this all in category one. In other words, it is unlikely that anyone dealing with issues of access is also not engaged in some critical learning –indeed, learning the hard way—about socio-economic issues embedded in something as simple as software availability.

Other words also complicate a simple categorization of these genres. Unlike the presence of a technologically-related term that made a genre either DL-oriented or did not as in Chapter Four, the terms I looked for here were much more ambiguous. Thus I had to consider the entire text I read rather than just the presence of specific words. As a result, my analysis for this part of my research were whole paragraphs or whole genres: an entire course description, an entire official statement, or an entire answer to a survey or interview question. Appendix D contains the course descriptions.

After going through all the catalog language and considering each language instance in its particular context, I labeled courses as part of category 1, 2, or 3 based on the language of the course title and description. A couple examples here will make clearer how I went about making these categorizations. Here is a course description from Wabash College:

WABASH: ENG 150 – Intro to Mass Comm

Intro to the print and electronic media (Comm theory, advertising, news gathering, media effects, and investigative journalism) in which students analyze the special languages of the media, examine the economics of the comm industry, and evaluate the media as a reflection of the ideas and preoccupations of society. The goal of the course is to develop students into informed and discriminating listeners, readers, and viewers.

I considered this course a category two course: It uses language that would imply coverage of both "functional" and "critical" categories of DL. The first word "intro" gives us a category one word, as does the word "develop" later on. These are basic terms that do not imply any sort of critical learning or composing. However, language like "analyze," "examine," and "discriminating" are all "critical" words: they indicate a more critical level of engagement. Whatever the language, though, the last sentence of the description clearly indicates the level of DL taught in this course: "The goal of the course is to develop students into informed and discriminating listeners, readers, and viewers." The goal—the purpose and focus of the course— is level two work. "Informed" is level one, the kind of course that gets the student familiar with DL, while "discriminating" clearly moves into the second category of "critical." Additionally, the phrase "listeners, readers, and viewers" almost seems to deliberately leave out any kind of category three (rhetorical) language. Taking all these pieces of language use into consideration, this course received a category two of DL comprehensiveness.

Another sample perhaps will be helpful in demonstrating my categorization process:

FRANCIS MARION

ENG 318 Technical Communications

Introduction to the conventions of writing in technology and the sciences.

Students learn technical writing style and the use of visual aids. On-line searches and computerized report production are included.

The verbs used here—"learn" and "use"—cover "functional" and "critical" categories. The description, however, begins with the word "introduction," which we can imagine would be closer to a level one kind of course, even though it is a 300-level course. The kinds of technical activities that appear to be a part of this course seem relatively "functional" as well: words like "conventions" and "on-line searches" do not imply critical learning or any critical kind of activity in this course. The simple presence of the word "writing," though, makes this course eke its way into category three, as it requires production.

The assumption is that more instances of a combination of each of the three categories within the various genres an institution has published bring an institution closer to institutionalization of digital literacy; whether or not this is true cannot be known without actually sitting in on the class, but the language at least *implies* a more comprehensive approach. However, I cannot assign a magic number that a school needs to pass for their DL to be "comprehensive"; this would depend on too many factors: size of school and number of students, intensity of DL work in the course, how often a course is offered, whether or not the course is required—innumerable factors make it nearly impossible, and certainly impractical, to try to do so. Instead, comparing what schools are doing illuminates the most comprehensive versus the least comprehensive DL practices. The idea is not that this particular means of labeling and coding courses is "the way" to do this, but that any faculty or department or institution that wants to work toward digital literacy needs to have a clear vision of all that DL entails, what is important to them, and then be certain that it is covered in their curriculum. Then they will want

to ensure that the genres they produce—mission statements, course descriptions, course titles—reflect a comprehensive approach to digital literacy.

Results: Course Names and Descriptions

Because the courses I got from the survey had only titles, I really had no way to determine any kind of level of comprehensiveness for these courses. The course descriptions from the genre review, however, provided much more information. From the 66 catalogs and websites in my genre review, I found 27 schools whose catalogs contained language that indicated some category of DL pedagogy in a total of 32 courses. Of these, 17 courses had language which indicated that the course was specifically designed to teach DL issues. These courses are marked with an asterisk. The other 15 courses contained language that indicated that some sort of DL component was part of the course, but according to the title, the course was not specifically designed to teach DL issues. After eliminating all non-DL courses, I looked at the language used to describe these courses; using the method of categorization described above, I labeled courses as indicating category one, two, and/or three literacy. The chart below shows the results of the DL courses and the categories of literacy they indicated.

TABLE 5.1: Institutions, Their DL Courses, and Their Level of DL According to Course Description Language (*DL Courses)				
SCHOOL	COURSE NAME	ONE	TWO	THREE
Adrian College	Expository Writing	X	X	X
	Freshman Writing	X		X
Allen College	*Computer-Aided Writing	X		
Alma College	*Digital Rhetoric	X	X	X
Bridgewater College	Second-Year Writing Seminar	X	X	X
Concordia NY	*Writing for the World Wide Web	X	X	X
Cornell	*Introduction to Visual Studies	X	X	X
	*Justice.com: Cybertechnology and the Law	X	X	X
Duke University	Telling Stories in the Modern World	X		X
	The Culture of the Virgin Mary	X	X	X

TABLE 5.1 CONT'D				
	Radio: Theatre of the Mind	X	X	X
	*Art and Lit in the Digital Domain	X	X	X
	*Making Media	X	X	X
Eureka College	*Writing for the Mass Media	X	X	X
Francis Marion	Technical Communication	X	X	X
Hollins University	*The Early Modern Cyborg	X		
	*New Media and Literature	X		
	*Creative Code: The Art and Science of Interactive Media	X		
	*Special Topic: Rhetoric, Media, and Documentary Culture	X		
Howard University	Sophomore Seminar	X		X
Iowa Wesleyan	*Media Ecology and the Humanities	X	X	X
Manhattanville	*Writing for the Media	X	X	X
Marist	*Writing for the Media	X		X
	Writing as a Discipline	X		X
	Business Writing	X		X
	Technical Writing	X		X
Illinois Wesleyan	*Electronic Fiction		X	X
Umaine @PI	Advanced Professional Writing			X
U of Cumberlands	*Writing With New Media	X	X	X
Wells	Writing for the Mass Media			X
Wabash	Intro to Mass Communications	X	X	

Discussion

Providing DL comprehensive courses, as discussed earlier, is an essential part of

institutionalization. To omit any part of DL can leave a student with a significant hole in his

literacy. Although I have divided these multiple elements into three categories for simplification,

the components of these three categories proliferate across definitions. For example, Leu, Kinzer,

Coiro, and Cammack define "new literacies" this way:

> The new literacies of the Internet and other ICTs [Information and
>
> Communication Technologies] include the skills, strategies, and dispositions
>
> necessary to successfully use and adopt to the rapidly changing information and
>
> communication technologies and contexts that continuously emerge in our world

and influence all areas of our personal and professional lives. These new literacies

allow us to use the Internet and other ICTs to identify important questions, locate

information critically evaluate the usefulness of that information, synthesize

information to answer those questions, and then communicate the answers to

others. (qtd. in Tan and Guo 1572)

This definition, and others like it, demonstrates the complexity of DL and the importance of

"coverage"—or comprehensiveness—in education. These course listings and the language used

within their titles and descriptions demonstrate what the public might perceive as the

comprehensive level of DL in these institutions.

When course description language is separated and counted as in Table 5.1, two trends

become noticeable. One trend is in the "functional" category: in this category, 15 of the 17 DL

courses have "functional" language, while 13 of 15 of the non-DL courses have "functional"

language; in other words, both the DL courses and non-DL courses seem to use Category One

language about as frequently. This means that those courses *not* dedicated to DL, while not

specifically designed to teach digital literacies, are an essential part of the "functional" category

of literacy; these "functional" courses are the most likely to help students become more

comfortable in digital environments because they do not have to spend the time required to cover

the other two components of DL. This should not be overlooked, as these courses provide an

important foundation for the institutionalization of DL.

The other trend that is noticeable is that DL courses use "critical" language almost twice

as often as non-DL courses as seen in Table 5.1. These two patterns tell us that non-DL courses

are much more likely to emphasize the "functional" part of literacy and much less likely to

emphasize the "critical" part of literacy. Frankly, I would have expected the "rhetorical" section

to have been lighter in the non-DL courses, but this was not the case. The reason for this, however, could be that 8 of the 15 non-DL courses are writing courses according to their titles, and when coding, the word "writing" was an indicator of category three literacy. If all the instances of the word "writing" are removed (which would be silly to do for a writing course), the word count in the "Rhetorical" category drops from 45 to 28. So while the course description does mention DL components, the fact that it is a writing course and mentions writing makes the results in this category larger.

One other noticeable anomaly stood out: one particular school, Hollins University, has four courses that seem very DL specific by their titles, but their course descriptions only hint at DL pedagogy: each course has one unit of analysis from the "functional" category alone and no other mention of DL. So while the course listings may make Hollins appear to be further along on the DL journey toward institutionalization, their (apparent) lack of comprehensiveness in DL makes them appear to be less advanced. Duke University, on the other hand, appears to be very advanced in every category in both DL and non-DL courses; their courses all use all three categories. However, one thing is not apparent from this table: the course descriptions from Duke are *very* long. While other course descriptions range between 30 and 120 words long, Duke's average course description is around 300 words *per description*. So while their descriptions may seem to be much more oriented toward DL, the length of the description affects the outcome. This is the case because the length of the description allows the description to go into much more detail, detail shorter descriptions cannot afford to offer. Long descriptions, though, are not necessarily the answer to articulating comprehensiveness; instead, shorter descriptions can simply use a more comprehensive lexicon.

To revisit the discussion of the purpose of these genres, both the centripetal and centrifugal effects of these course descriptions can have a profound effect on the institutionalization of DL. If these courses do not make it apparent that they not only teach components of DL but cover all three categories of DL, even those who have no awareness of my framework will still be able to tell that some courses require much more critical work, some require production while others do not, and some limit their literacy by helping students become knowledgeable about DL components without the added time consumption of teaching the second two categories. If institutions, departments, and faculty want to maximize the effects of these genres, they will want to express all of the categories of DL, spread out throughout their courses and course titles, to clearly demonstrate their comprehensiveness of DL. The tables above provide a relatively comprehensive lexicon for institutions, departments, and faculty to choose from when designing their curriculum, naming courses and composing their descriptions.

Analysis of these course names and descriptions requires one other consideration: context. As I discussed in Chapter Two, the complexity of literacy, the wide variety of needs and contexts, and the purposes for DL should never be ignored. None of these course descriptions look exactly alike—and none of them should. These genres can only achieve the desired outcome if context is always considered. Hawisher and Selfe emphasize this very point in their article on "Becoming Literate in the Information Age." In this article, they closely examine the literacy lives of two women to demonstrate this, as they explain:

> In foregrounding the significance of multiple contexts for electronic literacy
> efforts, we hint at the many related factors that shape, and are shaped by, people's
> adoption of computers as literacy tools and environments: social contexts;
> educational practices, values, and expectations; cultural and ideological

formations like race, class, and gender; political and economic trends and events; family practices and experiences; and historical and material conditions—among many, many other factors. (644)

As can be seen, being "comprehensive" is neither simple nor a one-size-fits-all kind of accomplishment. The words used to describe the kinds of DL activities in these courses can be carefully chosen—and then carefully considered—to reflect those aspects of DL that a department or institution deems relevant and important. However, course names and descriptions are not the only genres that can provide evidence of comprehensiveness. Next I look into the official statements I found in the catalogs and on websites for evidence of DL comprehensiveness.

Results: Official Statements

	Table 5.2: Occurrence of DL Comprehensive Language in Official Statements			
	Statement Type	**Functional**	**Critical**	**Rhetorical**
Duke	Mission	X	X	
Francis-Marion	Mission	X		
Concordia NY	President	X	X	X
Iowa Wesleyan	Outcomes	X		
	Comm Skills Outcomes	X	X	X
Brandeis	English website	X	X	
Marist	Vision	X	X	X
	Homepage	X		
Lyndon	Division Goal	X	X	

As mentioned before, mission statements with DL language were scarce. However, looking at the language these statements use can give an indication of the level of institutionalization just as the course titles and descriptions do. These statements also are more likely to be evidence of a much larger group: the department or the institution at large. My initial research to determine what statements to include in my results was based on the same DL lexicon as used in Table 3.2.

Table 5.3 below shows the schools that contained DL language in their official statements and the kind of language it included according to Selber's categories.

Category One Statements

Category One Statements include language that only indicates a category one level of literacy. While this is definitely a step in the right direction, no institution that wants to represent themselves as seriously concerned with DL issues would want to limit their language in this way. Those statements with language in only category one include an "Outcomes" statement from Iowa Wesleyan and the homepage from Marist College (see Table 5.3). Francis Marion's Mission Statement, in part, says, "We provide traditional and when appropriate, non-traditional instruction, access to an excellent library as well as *electronics resources*, and staff members committed to the success of the individual student…Francis Marion is a unique university. It focuses on traditional liberal arts education but provides *new technology* and new academic programs" (Francis Marion catalog 7, emphasis mine). The first phrase, "electronics resources," clearly falls into category one, "functional," since the language before it states that the school's mission is to "provide … access" to these "electronics resources," which I categorized in the first group. The second phrase, "new technology," falls into the same category as the claim is that the school "provides" this "new technology." Again, this is part of category one.

Marist College's homepage also makes the following category one claim, that Marist "is a highly selective comprehensive liberal arts institution noted for its leadership in the use of technology in and out of the classroom." Clearly Marist wants to communicate to the public that not only do they value the use of technology but also that it is a major force in their institution. This language, however, only indicates category one literacy with the word "use." The word

"leadership" could imply further literacy, but no specific mention of either critical or rhetorical language is evident.

While any mention of DL practices indicate a step toward comprehensive digital literacy in an institution, these category one words can be interpreted in very basic ways. Words like "use" can mean something as meaningless as "we use Word to type papers," while a phrase like "provide access" can mean little more than having a computer in the library. Likely it means much more, but this language does not convey a comprehensive approach to DL, which, as discussed, is ideal.

Category One and Two Statements

Institutions that have statements including language from both categories one and two demonstrate a more comprehensive approach to DL than those that only use category one language. The last category—rhetorical—clearly requires a greater dedication to DL as well as faculty who know how to teach such skills. So it isn't unusual for institutions to leave out such language. However, as mentioned before, composing is a crucial part of DL. Those statements that have language that falls into both categories one and two come from Duke's Mission Statement, Brandeis's English Department, and Lyndon's Division Goal. Duke's statement, in part, said, "…to provide wide ranging educational opportunities, on and beyond our campuses, for traditional students, active professionals and life-long learners *using the power of information technologies…*" (emphasis mine). These few words, "the power of information technologies," is the only DL language in this statement. However, I looked at the words leading up to these words as well, to determine what they claim to do with "information technologies." The statement says they intend use technology to "provide wide ranging educational opportunities," language that indicates an intention to use technology to expand learning. This language is broad

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and rather generic yet contains the word "provide" which is category one language and "critical" which would technically categorize it in the "critical" category.

Another example of an institution with a brief mention of DL goals in category two comes from Brandeis University. The English department has the following in their online description: "We teach and study not only poetry and prose, but also films and newer media and technologies (journalism of all sorts, television and the Internet, for example) and place these texts in historical and geographic context." The language here, "teach and study," would refer to categories one and two.

Institutions that include language that covers at least these first two categories demonstrate a much more comprehensive approach toward DL. The language demonstrates this, whether or not it is true. If we revisit the idea of the OLC and how DL is perpetuated toward institutionalization, the *coverage* is also part of both the centrifugal and the centripetal outcomes. An institution does not want to "institutionalize" a partial literacy; they want to include all three categories—and the language in these genres is part of what will make this work. As subjects articulate values, for example, any language that indicates limited literacy—only functional, for example—will have less of an impact, both centripetally and centrifugally, than language that indicates more comprehensive literacy. Any prospective student interested in an institution that values digital literacy and who reads in a catalog that an institution finds "using computers" important will not be nearly as impressed as she would with an institution that values "technology for critical and rhetorical purposes" (hypothetically speaking). Frankly, most students will look for an institution that at least appears to be more technologically advanced and/or appears to value technology as these institutions are more likely to prepare them for a

future that will, most likely, include technology. Thus institutions considering writing—or rewriting—such statements can see how they can most clearly represent what they do.

Comprehensive Statements

The most comprehensive approach to DL, of course, is language that covers all three categories. This comprehensive language will much more efficiently perpetuate the Operational Life Cycle that will eventually lead to institutionalization of DL within an institution. The schools that accomplish this kind of comprehensive language, then, can serve as models for these kinds of statements. Those schools that included DL language which clearly mentions of all three categories were Concordia College's President's Statement, Iowa Wesleyan's "Communication Skills Definition and Outcomes," and Marist College's Homepage and Vision Statement. Concordia College NY's President Viji George has an online statement, which I repeat here again from Section One with a few additional sentences:

> Making a qualitative difference should be the ultimate goal of education. Our students should not only know more as a result of the Concordia Experience, this knowledge should leave them transformed. We live in a society where there is easy access to information. This information, increasingly brought to us through the use of technology, has not by any means transformed us into a society that is more caring, compassionate, or even knowledgeable. In other words, it is abundantly clear that information alone does not change lives.

I quote this at length because the context here is important. The first two sentences indicate that the school hopes to "transform" the lives of students through the "knowledge" they gain from their "Concordia Experience." This attitude relates directly to their position on technology: that easy access to information through technology has not made our society "more caring,

compassionate, or even knowledgeable." So in a strange twist, this statement actually declares that technology alone does *not* do what much of what my research has claimed it can do: affect change, as is the purpose of category three. This sounds like a very strong anti-technology statement. However, this could also be interpreted to mean that the school is dedicated to making the exact opposite of this claim happen: that technology needs to be more than a means to get information: digital literacy—comprehensive digital literacy—is crucial in order to have the effect George hopes for. The language of "knowledge" would indicate category one literacy while the words "compassionate, caring" and "change lives" would cross into both categories two and three. Personally, I find this statement unclear in its intentions and therefore not an ideal way to communicate goals to the public.

Iowa Wesleyan has a "Communication Skills Definition and Outcomes" statement which says, "Communicating is an interchange that involves sending, receiving and processing. Demonstrable competence in communicating includes sending, receiving and processing information in a variety of modes (written, oral, graphic, numeric, symbolic, and technological)." This statement crosses all three categories: category one would be "receiving"; category two would be "processing"; and category three would be "sending." This statement, while general, demonstrates a value that includes a comprehensive approach to DL. Iowa Wesleyan also has a general "Outcomes" statement which says, "An Iowa Wesleyan College education empowers its students to … Extend and facilitate effective discourse through modern technology." Some of the language here indicates category one, as it deals specifically with "functional." Yet this statement could also be seen as part of categories two and three: the word "facilitate" could indicate a learning/collaborative kind of knowledge building, while the word "extend" could very likely indicate written contributions to DL.

While Marist College's homepage limited their scope to category one, their Vision Statement expands this language to all three categories: "Marist seeks to distinguish itself by the manner in which it uses information technology to support teaching, learning, and scholarship at both the undergraduate and graduate categories. The College believes that by familiarizing our students with these advanced technologies, it better prepares them to be productive members of society and lifelong learners." This language demonstrates a comprehensive DL approach: "familiarize" connects to category one, while "learning and scholarship" are language from categories two and three.

One last institution, Lyndon State College, also has a similar goal across several programs in their "Division Statement" which reads, in part: "In providing students with the essential foundation of a liberal arts education in all its various programs, the Department of English, Philosophy and Film Studies seeks: to provide students with a vital and substantive understanding of the study and analysis of culture through literature, writing, philosophy, and a variety of cultural media. …" Their goal, then, is to "provide … understanding," which would fall into category one, but this is followed by "the study and analysis of culture through … a variety of cultural media." This would fall into category two, "critical." The words that take this description clearly into category three here are the words "cultural" in "cultural media" and "writing"; while digital media are implied, this course could limit media to non-digital media. This, however, is unlikely. In any case, their mention of writing implies a rhetorical emphasis.

Discussion

Research on the effects of mission statements is scarce, but research that has been done indicates that mission statements do impact the institution/organization in a variety of ways (Weiss and Pederit). The simple fact that all institutions have mission statements indicates that they have

value. Looking across these statements, though, results in very few mentions of DL commitment or statement of value, purpose, or practice across institutions. Only 7 schools out of 66 had DL language for analysis. If, as I have mentioned already, mission statements are a significant part of institutionalization, not many schools have reached an advanced level of institutionalization. In addition to the scarcity of DL language is the lack of comprehensiveness indicated by these statements. Of course this does not mean that the schools who do not use "critical" or "rhetorical" language in their "statements" do not teach "critical" and "rhetorical" DL any more than it means that schools without this language do not teach digital literacies at all—but these statements do not make it plain that these components of literacy matter. Vision or Outcome statements (in comparison to mission statements) according to this extremely limited evidence, seem to be more likely to cover all three categories of literacy. While it is true that being specific in "statements" like these is not productive because they are meant to be broad statements that cover all educational concerns—especially at the institutional level—language that at least hints at all three literacy categories provides the impression of a comprehensive approach. These few examples provide writers of "statements" at least a few ways to approach DL inclusion in such statements. This inclusion can, as is the goal of such genres, perpetuate the OLC of digital literacy within any institution.

Results: Interview Definitions

While the course descriptions and mission statements provide insight into the comprehensiveness of DL in some of these institutions, one last approach to find some more insight is through the statements of some of my interviewees. One of the questions I asked (most of) the interviewees was "When you hear the term 'digital literacy,' what list of elements come to mind? In other words, if you were going to determine if someone was digitally literate, what skills, knowledge,

or understanding would that include?" This last section looks at the language choices in the interviewees' answers to this question for evidence of comprehensive DL. I discuss them here according to their order of comprehensiveness according to the three categories used before: functional, critical, and rhetorical.

I conducted a phone interview with Dr. Thomas Kealy, Associate Professor of the Humanities, at Colby-Sawyer College in New Hampshire. Kealy's definition of digital literacy was "The student's ability to use digital technology." This category one response—the words "use" and "ability" indicate it as such—provides a very simple yet very common response. Yet a phone interview—which this was—creates a situation that does not really allow the interviewee time to formulate a well-thought-out answer. I do not mean to say that he gave a "bad" answer, but in comparison to the written answers, this is not only skimpy but is not comprehensive. In the three other phone interviews I conducted, we never covered this question.

Of the One e-mail interview comes from Dr. Hannah Freeman, Assistant Professor of English at Pikeville College in Pikeville, KY. Dr. Freeman's response to my interview question follows in italics:

> *Basic knowledge of the library and its resources: databases, different forms of media, online resources, ability to evaluate sources, interlibrary loan, traditional and online book use.*

The language for analysis here includes "basic, knowledge," and "ability" in category one and "evaluate" in category two. No language reflects a category three level of literacy. This answer also limits DL to the library, which I found interesting as it reflects the trend I mentioned earlier, that nearly all faculty mention critical use of library sources as one of their DL practices. Dr.

Freeman's answer further emphasizes this one particular literacy practice as one of the most widely practiced DL issue.

Another email interview revealed limited language as well. This interview was with Dr. Michael Landis, Webmaster for Instructional Technology and adjunct teacher at Montreat. Montreat College. I contacted the chair of the English department, who forwarded my request to Dr. Landis, whose response has been edited for conciseness and relevance.

a. *Ability to use any productivity application at a basic level even if new to the user*

b. *Ability to find information via a variety of web search tools, and ability to assess relevance, significance, and reliability of search results.*

c. *Ability to use technology productivity tools to organize and synthesize information.*

d. *Awareness of basic meaning of some computer literacy terms: file, folder/directory, trashcan / recycle bin, etc.*

Dr. Landis' response heavily reflects a category one approach with his language from all four bullet points, beginning with the word "ability," a word closely associated to function, as are the words "basic, terms," and "find." However, these are combined with category two language: "assess, organize," and "synthesize," which are category two words. Like the answer from Pikeville, Dr. Landis' answer does not reflect any category three approach to DL.

Dr. Angela Laflen, Assistant Professor of English at Marist College, located in Poughkeepsie, NY answered my DL question at a category two level as well, but her answer does not reflect my findings from the Marist catalog. I began the phone interview by asking Dr. Laflen how she would define digital literacy—what she thinks of when I say the term. Her reply was that it partly means knowing technology as a basic category. She also felt that digital literacy meant "equipping students [that are] not in a technological field and also teaching them how it

[technology] affects society and culture." The first part of Dr. Laflen's answer, because of the word "equipping," indicates category one, but the second part of her answer, "how it affects society and culture," would be category two language. This school, as we saw in the previous section, does not only provide DL courses that cover only the first two categories, as they have several courses designed to teach category three DL. We cannot know why Dr. Laflen's description leaves out any kind of production or composition language when clearly their catalog language indicates otherwise. We could speculate that the phone interview as a means of communication did not allow her time to carefully craft her answer. We also could speculate the opposite: the catalog language indicates category three literacy but, in practice, it is *not* taught— although this scenario does not seem very likely.

The discrepancy between Dr. Laflen's answer and the language of her department's courses bring up an additional issue of interest. Part of institutionalizing comprehensive DL also means making sure that the members of the faculty are aware of what DL is—how DL is defined; what issues are a part of DL; how DL needs to be functional, critical, and rhetorical— because without this knowledge, institutionalization, for all practical purposes, cannot happen. For an ideology to become an integral part of an institution's culture and structure, this means that all faculty—whether they teach DL elements or not—need to at least know what the ideology is. As we clearly could see from the discussion in Chapter 2, what "digital literacy" actually is remains variegated and contextual at best, and obscure and vague at worst. In other words, a part of the institutionalization of DL must include, at a minimum, informing all faculty of what the institution has determined to be their meaning of DL and what it means to them as both individual teachers and as part of their departments and the institution at large.

One email interviewee asked to remain anonymous, so I will refer to him as Dr. English. Dr. English's approach is limited to two categories like those above. The institution in which Dr. English teaches sits in a small New England town where approximately 1,500 undergraduate students receive a liberal arts education. The school has several digital literacy-oriented courses and many courses that mention digital literacy practices. The interviewee's answer follows in italics.

> *At a basic level, digital literacy for my freshman students means the ability to use an Internet-connected computer for research and to share work (via blogs, for example). At higher levels, it adds multimedia skills such as digital audio, video and photography, and website administration (for the college newspaper).*

I find it interesting that Dr. English begins his answer with "At a basic level" because the rest of the language reflects a category one approach (use, research) but actually hints at category three with "share" and "blog." Dr. English's idea of "higher levels" indicates more complicated technology but not necessarily more comprehensive literacy.

Dr. Cathryn Hankla, the Director of the MFA Program in Creative Writing at Hollins University in Roanoke, VA, like Dr. Freeman from Pikeville, limited her answer to the library as well. Dr. Hankla wanted to make clear that she answers these questions only to the best of her "limited knowledge" and has a sense that any resistance in the English department may be a result of their serious commitment to class discussion. Her response to my question follows, in italics.

> *Research ability in the library—to be able to locate and use digital resources & to engage in various computer skills to learn, communicate, or share information.*

This brief answer contains several key words "research, able, use, engage, learn, communicate," and "share." This language covers category one and two, and the words "share" and "communicate" could refer to category three. While this answer may indicate a comprehensive approach to digital literacy, the limitations of the library and the sparse language indicate a much less comprehensive DL. We cannot overlook Dr. Hankla's admitted limited knowledge, however, as she teaches creative writing—a very different kind of writing (although multi-media writing and creative writing are becoming more and more integrated—but that is another research project). It remains very likely that Dr. Hankla imagines DL to mean this to most of the faculty but not really knowing for sure.

One email interview that indicated a more comprehensive approach to DLof these interviews was with Dr. Christine Dehne, Assistant Professor of Art and Communication Studies, from Manhattanville College in New York. I was unable to contact anyone from the English department, but one of them forwarded my request to Dr. Dehne, who agreed to answer my questions to the best of her ability, since she teaches occasional courses in English. Here are her answers in italics, which have been edited for conciseness and relevance.

> *"Digital literacy" could imply an understanding of how to use technology oneself, but it could also expand to being able to use/interpret mass media. In our Comm Studies program we hope that one branches into the other. For example, being "literate" of the technology in those classes means that students learn basic knowledge about how to operate cameras, microphones, lights, editing software, etc. So they are then capable of using these tools in a rudimentary way to create their own video projects. However, we then expect them to dissect images/media created by mass media and apply their understanding of these tools to discuss how these mass media images were created, why*

they were created the way they were (what the intended message was) and to judge

whether or not that message is effective.

So, this list would include:

- *Basic working understanding of the technology used in the field*

- *Ability to apply that working knowledge to create a product (in this case a video, but this could be expanded cross-disciplinarily to include blogs, websites, digital photos, etc.)*

- *An ability to critically discuss works made using similar technology*

Dr. Dehne's first instinct is "use," but she quickly adds "use/interpret" to this idea, which covers categories one and two. The language that follows clarifies that indeed Dr. Dehne does mean to cover both categories one and two but also means to cover category three. Dehne uses the words *basic, operate, capable,* and *rudimentary* and then switches to *create, apply, discuss, how, why, judge,* and *effective.* The word "create" falls into category three, while the rest belong in category two. This becomes most clear when Dr. Dehne finally provides a list, which follows my framework exactly. Her first bullet: basic, understanding—category one. Her second bullet: apply, create—category three. Her third bullet: critically discuss—category two. Obviously Dr. Dehne puts these in a different order, but otherwise her answer reflects a very comprehensive DL approach.

As I expected, I got a very thorough response from Dr. Victoria Szabo from Duke University. Duke's English department is affiliated with sixteen other university programs, one of which is ISIS, the Information Science and Information Studies Program. This program's mission is to "study and create new information technologies and to analyze their impact on art, culture, science, commerce, society, and the environment" (ISIS at Duke website).

I attempted to contact two professors in Duke's English department, and the second contact forwarded my request to Dr. Victoria Szabo, a woman who wears many hats at Duke: She is the Program Director of ISIS, Assistant Research Professor in the Department of Art, Art History, and Visual Studies, and also an Adjunct Assistant Professor of English. Because of Dr. Szabo's affiliation with this highly specialized program and the insight she provides, her answers are quite lengthy, so I have condensed her answer to this definition question to the language only relevant to this particular issue. Her response is in italics.

Digital Literacy has three components: information literacy, media literacy, and technology literacy. Information literacy is what we would expect: finding, accessing, and sharing information; evaluating sources; understanding provenance of data and information discovered online; recognizing the production and reception histories that might affect how content is received and understood. Media literacy relates to understanding the multimodal, multimedia nature of digital media forms, and the affordances of each, both in terms of inherent digitality, and in terms of specific sensory attributes and associations of various media types. Technology literacy relates to understanding the machines and tools used to create digital content, and the substrate of information systems, servers, and networks associated with its production, dissemination, and impact. I actually prefer the term "digital fluency" because "digital literacy" implies a textual tradition that I think the digital turn is altering and because it highlights the needing to know and converse within the various digital media modes. It is not enough to be able to theorize or criticize digital media; you need to have real understanding of the process of creation to understand the medium from the inside out.

While Dr. Szabo's framework for DL is different from mine, her answer covers the same material as found in my three categories: finding, accessing, understanding (category one) recognizing, evaluating, theorizing (category two), and creating, sharing, processing (category three). Dr. Szabo's divisions each contain my three categories while they cover three of the literacies others in the field mention: information, media, and technology. This framework is like mine turned 90 degrees.

A notable point about Dr. Szabo's answer, however, is that the labels or names she uses for the three categories do not mirror "functional, critical, and rhetorical" but are instead more reminiscent of categories like Gurak's: categories that point to what might be considered more like skills. "Information literacy" is usually associated with all three categories: functioning within the web and digital databases to access information, critically analyzing information, and synthesizing and using that information. The same kind of pattern exists for what most would consider to be "media literacy." Szabo's use of "technology literacy" as one of the categories, however, is very obscure. It does not reflect the same comprehensive pattern one could follow with "information" and "media" literacies. It does make more sense when one considers her description: "It is not enough to be able to theorize or criticize digital media; you need to have real understanding of the process of creation to understand the medium from the inside out." Clearly she means to use the term "digital literacy" to mean a sort of production, creation, composition kind of literacy. The term "digital," however, does not indicate this without the explanation.

Discussion

Analysis of these interviews makes one fact stand out: a much higher percentage of comprehensive language occurs across all schools, no matter the size. And, if we eliminate the

two oral interviews from the interviewees that had to speak without time to think or edit their

answers, comprehensiveness is nearly 100%. This could be the result of my interviewees being

experts in the field. It also means, though, that those who are the experts do understand what it

takes for DL to be comprehensive. This means that at least one person in these institutions knows

what needs to be done. Hopefully with at least one person behind the scenes who is advanced in

 the process of digital literacy, institutionalization of DL can at least gain a strong foothold.

Table 5.4: Occurrence of DL Comprehensive Language in Interview Answers to Question One				
	Undergrads/ Location	Functional	Critical	Rhetorical
Colby-Sawyer	1,115/ New Hampshire	X		
Pikeville	700 / Kentucky	X	X	
Montreat	1,100 / North Carolina	X	X	
Marist	5,000/Poughkeepsee NY	X	X	
Anonymous	1,500 / New English	X		X
Hollins	775 / Virginia	X	X	X
Manhattanville	1,700 / New York	X	X	X
Duke	6,700 / North Carolina	X	X	X

Weiss and Piderit's research demonstrates that, at minimum, "the choices that managers make in

the content and rhetorical style of their mission statements can have consequences that facilitate

or impair subsequent performance" (193). Consequences, as we have seen throughout this

research, extend well beyond mission statements to other genres that are objects in the OLC

activities. In sum, the language writers choose when composing these genres is incredibly

important. These language choices become even more important when the institution wants to

perpetuate the OLC of DL; using language that indicates comprehensive DL will have the

greatest positive effect on this outcome.

Russell defines the activity system as "any ongoing, object-directed, historically-conditioned, dialectically-structured, tool-mediated human interaction…" (4,5). We have seen how this definition plays out in the various activities within the OLC of the institutionalization of DL and how various genres, as the objects of these activities, have the potential to perpetuate institutionalization.

CHAPTER SIX: CONCLUSION AND FUTURE IMPLICATIONS

Two years have passed since the English department where I taught did their assessment. Since then they have implemented a writing minor, have created a writing course called "Digital Rhetoric" designed especially to teach DL, and have hired a specialist in the field. They now even have online portfolios for all freshman writing courses. Even the most reluctant English professors are having students deal more with digital literacy issues—whether they want to or not. They have a course description in their catalog that covers all three DL categories. The institution has completed a laptop room with all the necessary software. They look forward to more innovations and changes in this area. Most of the questions they asked that day they discovered their fateful discrepancy have been answered; as they work toward institutionalization of digital literacy they are also discovering what they mean by students "writing in a wide variety of mode and media." They know how to address this goal, how to go about implementing this goal, and ultimately how to work toward institutionalization of DL.

Their progress is a good beginning. This project has demonstrated, though, that making something like digital literacy institutionalized requires much more. To integrate "fundamental values and objectives into the organization's culture and structure," this project demonstrates that faculty, departments, and institutions all need to consistently enact all three categories of digital literacy language in the genres they produce from the activities involved in the operational life cycle of digital literacy. I am not suggesting that every faculty member from every department and the entire institution must devote itself toward creating these genres. What I am suggesting is the need for consistency between what we value, what we say we value, and what we practice—in this case, digital literacy.

If we consider Wysocki's idea that "Writing, like all literate practices, only exists because it functions, circulates, shifts, and has varying value and weight within complexly articulate social, cultural, political, educational, religious, economic, familial, ecological, political, artistic, affective, and technological webs," and then substitute "digital literacy" for writing, we can get a (rather complex) picture of this idea of institutionalization and what it takes to provide students with the kind of education that will enable them to not only be "digitally literate" themselves but also, in turn, be far enough along in the process of this literacy to act as guides for the rest of the world (2). The "function, circulate, and shift" part of this equation comes in the form of these activities I have shown as part of the OLC; the strands of the "web" Wysocki lists could be thought of as the other literacies that liberal arts institutions aim to teach. Digital literacy, like writing, is intertwined in all of this.

What faculty, departments, and institutions can do, then, includes a few particular things this research illuminates. First, all three of these subjects need to have a clear picture of their "web," of their place in this complex and intricate weaving of ideologies and pedagogies of which their institution is a part. Not all institutions have the same needs, the same goals. Digital literacy will not mean the same thing to everyone, even necessarily to those within close physical proximity or those similar in student population or affiliations. Recognizing the digital literacy needs of each campus is a beginning step. If the institution does not appear to be moving in the direction of making this kind of step, the move is up to the teachers. My research shows that much of the movement toward digital literacy in institutions has been a centrifugal, grass-roots effort with teachers enacting DL practices and pushing for change. In other circumstances, teachers have had to work toward implementing DL practices when they did not necessarily want to, even to the point of having to learn to type!

As the three subjects—teachers, departments, and institutions—continue to work toward furthering DL, one of the most important objects they can produce are those genres that can perpetuate the life cycle, keep DL "circulating and shifting" in the ways that are necessary for a smoothly functioning OLC. In addition, they can use my framework and the lists of words from this research to ensure that their genres demonstrate all three aspects of digital literacy—and to make sure that they are teaching all three aspects as well. Departments can use the extensive list of course names and course descriptions given in this project to be sure the name of the course and its contents reflect its DL content; if a course does more than have students "use" technology, then the language used in the course description and title will want to reflect what actually is being taught.

This "new composition" as Yancey calls it is changing the way we learn. It is changing what we value. And it is changing who we are. Many even argue that one no longer can separate literacy and digital literacy; their paths are one in the same. My research demonstrates that, for the most part, liberal arts institutions are just beginning the journey of institutionalizing DL. If some object as simple—and yet as powerful—as a mission statement or a course description can change this outcome, then all the subjects in these activities need to be sure these genres change.

At one point one might question if these little genres really do have such an impact or can perpetuate such change. Notice that my entire research project was actually the result of the centrifugal outcome of one little genre: the English Major Goals at one small little liberal arts institution that was involved in the activity of assessment. And only one line from those goals: students will write in a wide variety of modes and media. And only three words from that line: write, variety, and media. Values, goals, and practices were not in synch. In the end, this one genre did its job: it "circulated and shifted" the notion of digital literacy until progress was made.

This becomes excellent ripe territory for further research. Obviously the fourth activity of the OLC was neglected in this project—and with good reason: very few, if any, of the subjects in the OLC have anything to assess. Most of their innovations are still considered to be in their infancy. Further research needs to be done to get more information on how this OLC completes its circular and never-ending process through assessment, re-evaluation, and new setting of goals. The loop right now is barely complete. While two people in my research only barely mentioned assessment, the fact is, it was just such assessment that began this project itself. These genres have the power to accomplish amazing feats. As Moore, O'Neill, and Huot explain in their article on "Creating a Culture of Assessment in Writing Programs and Beyond," those who "embrace assessment" and work toward a community of assessment not only "help set the agenda for campus-wide assessment but also…affect, even 'transform,' teaching and learning across the university community" (108). Very small genre. Very big effect.

A closer look at syllabi would also be very revealing as well. More could be determined about the grass-roots efforts to perpetuate this OLC versus the top-down approach of the institution at large providing such pressure through mission statements and the like. This research could also provide a much more accurate depiction of actual DL practices and what faculty are doing specifically in their classrooms. This information then could be shared as I have shared similar information here. Or one could research syllabi for a closer look at the language of these genres and how they affect anyone who reads the syllabus: administrators, colleagues, students—self. This kind of practical and helpful research can even speed up the "wheel" of this cycle, getting practical ideas from those whose feet are in the trenches.

I have many more ideas like doing a follow-up case study on students after they graduate to find out if an education from an institution that made DL a significant part of their curriculum

really does make a difference as they find jobs and live life. Epistemological research could be done on the effects of digital literacy and how digital spaces are changing the ways we learn, as well as axiological research on changing values and ontological research on changing the very ways we see ourselves. A follow-up study in five years could illuminate the progress of DL in institutions. One could research the effect of technology on the shifting divisions between literature, composition, and communication departments. The possibilities seem just as endless as literacy itself.

In Chapter Two I discussed the importance of digital literacy and the place of the field of R & W in furthering this process. My research reveals that indeed most do value DL and would like to do what they can to further it. As the absolute hub of literate practices, higher educational institutions have the responsibility of doing what they can to prevent the problem of "other," of eliminating divides, of initiating the kinds of critical practices that our students can take out into the world and can use to eliminate unfair practices that result in such divides. Ultimately *this* is the goal.

APPENDICES

APPENDIX A: FACULTY SURVEY OF DIGITAL LITERACIES IN LIBERAL ARTS COLLEGES IN THE UNITED STATES

Mary Wendt application ID# i030054 revision ID# r022429

(SURVEY INSTRUMENT, to be collected anonymously and voluntarily online via the website www.surveymonkey.com)

Faculty Survey of Digital Literacies

Background and Instructions:
Thank you for your willingness to participate!
You are being asked to participate in a research study on digital writing literacies in liberal arts colleges. In this study you will complete a questionnaire concerning your experiences with digital literacies at your liberal arts institution. More information on this project can be found at http://othello.alma.edu/~wendt/dissertation.html. The information you provide will lead to an understanding of student and faculty ideologies about digital literacies in the liberal arts. There are 15 questions, and I estimate it will take about 10 minutes to complete.

Your completion of this survey is completely voluntarily. You may choose not to participate at all, and are free to not answer any question or to stop participating at any time without consequence. Questionnaires are anonymous, and the forms will be kept confidential by the researchers to the maximum extent allowable by law. There are no risks or individual benefits associated with taking this survey. If you have any questions about this study you may call or e-mail the investigator, Mary Wendt, by mail at 614 W. Superior St., Alma MI, 48801, by phone at 989-463-7270 or by email at ProfMaryWendt@gmail.com. If you have any questions or concerns regarding your rights as a study participant, you may contact Peter Vasilenko, PhD, Director of Human Subject Protection Programs at Michigan State University (517-355-2180, Fax 517-432-4503, irb@msu.edu, 202 Olds Hall, East Lansing 48824).

NOTE: By entering this survey and completing any portion of the survey, you indicate your voluntary consent to participate in this study and have your answers included in the project data set.

Please answer each question carefully and honestly. By giving your consent you authorize the surveyors to use the data collected. Your identity will not be given at any point in this survey and will not be tracked by the surveyors via any other means.

Faculty Survey on Digital Writing Literacies

IMPORTANT NOTE: DEFINITION OF TERM
If *Literacy* means "our ability to understand what we see, to interpret what we experience, to analyze what we are exposed to, and to evaluate what we conclude against criteria that support critical thinking," then *Digital Writing Literacy* means

The ability to read and interpret media, to be both critical consumer and composer of texts in a variety of modes and media, and to evaluate and apply new knowledge gained from digital environments.
For all following questions, I use the term "digital writing literacy" according to this definition.

Questions on Your Teaching
1. Do any of the courses you teach contain elements of teaching digital writing literacy? Please answer this by providing a ratio (i.e. 3 out of 6).

2. What elements of digital writing literacy do you teach? Check all that apply.
__ Critical use of software
__ Visual literacies
__ Writing in digital environments
__ Digital rhetoric
__ Document design
__ Technology theories
__ Digital Identities
__ Fair Use and Legal Issues
__ Equal Access issues
__ Other (please specify)

3. If you do teach the above literacies, in what course(s)? Please give a course title (i.e. Freshman Composition, Shakespeare Studies, etc).

4. If you do not teach digital writing literacy in some or all of your courses, what are your reasons? Check all that apply.
__ It doesn't fit with my course content
__ It is irrelevant to my course content
__ I don't believe it will help my students learn course content
__ I don't have the time to teach it
__ I don't feel qualified to teach it
__ I don't have the resources to teach it
__ Other (please provide brief explanation)

Questions On Curriculum

5. How crucial do you feel it is for an English major with a liberal arts education to be digitally literate? (Check One)
__ Not at all important
__ Slightly important
__ Neither important nor unimportant
__ Very important
__ Of highest importance
6. Where do you feel digital writing literacy for students is best taught?
__ English/writing courses
__ Computer-related courses

__ It should be a part of all courses
__ Other (please specify)

7. What documentation are you aware of in your department where goals for digital writing literacy are explicit?
__ Goals for the major/minor/concentration
__ Department mission/vision
__ Department description
__ Individual syllabi
__ Other (Please specify)
__ None that I know of

8. How long have these digital writing literacy goals been a documented component of your program?
__ Less than 1 year
__ 1-3 years
__ 3-5 years
__ 5 or more years
__ Not sure
__ N/A

9. If digital writing literacy is not a component of your program/department, is it an institutional goal taught elsewhere?
__ Yes (name department)
__ No

Questions on Institutional Infrastructure and Technology Availability

10. True or False: <u>ALL</u> classrooms at my institution have…
T or F   Computers for students
T or F   Computer for instructor
T or F   Internet
T or F   Document camera (Visualizer)
T or F   Built in Projector
T or F   Overhead projector (for transparencies)
T or F   Television
T or F   VCR
T or F   DVD player

11. True of False: <u>SOME </u>classrooms at my institution have…
T or F   Computers for students
T or F   Computer for instructor
T or F   Internet
T or F   Document camera
T or F   Projector
T or F   Overhead projector

T or F   Television
T or F   VCR
T or F   DVD player

12. True or False: Classrooms with computers and Internet for students and teacher are…
T or F   Plentiful
T or F   Readily available for all teachers
T or F   Can be requested for a semester
T or F   Can be requested for occasional use
T or F   Are nearly impossible to get
T or F   Are very few in number
T or F   Do not exist
__ other (please specify)

13. If computer classrooms were always available, how likely would you be to add digital literacy components to your pedagogy?
__ Very likely
__ Somewhat likely
__ Neither likely nor unlikely
__ Not very likely
__ I would not teach it

14. If computer classrooms were always available, how likely would your department/program be to add a course/courses in digital literacies?
__ Very likely
__ Somewhat likely
__ Neither likely nor unlikely
__ Not very likely
__ Not at all likely

15. Please name your institution (Naming your institution allows the results from your school to be returned to you).

APPENDIX B: RESULTS OF FACULTY SURVEY OF DIGITAL LITERACIES IN LIBERAL ARTS COLLEGES IN THE UNITED STATES

Below are the results of my online survey. I have included some charts when a visual aid makes a clear picture of the results. At the end of this section are some cross-tabbed results.

1. **Do any of the courses you teach contain elements of digital literacy? Please answer by providing a ratio (ex. 3 out of 6).**
2.

> To this question, 8 people said they taught elements of digital literacy in all of their courses. One reported 7 out of 10 and one 5 out of 8, while 6 people said they taught them in half their courses. This means that of the 30 that answered the question (in the requested format), 16 or just over half said they taught some sort of digital literacies in half or more of their courses. Of the others that answered, five of them said they didn't teach elements of digital literacy in any of their classes. Several answered with a number but didn't provide a ratio. Ten people did not answer this question. One comment was added: "No, but I hope this will change!"

2. **What elements of digital literacy do you teach? Check all that apply.**

Critical use of software   18
Visual iteracy   35
Writing in digital environments   24
Digital rhetoric   12
Document design   9
Technology theories   7
Digital identities   4
Fair use and legal issues   22
Equal access issues   6
Other   9

- Use of internet for research purposes
- Accessing and understanding library information; effective use of PowerPoint; correct documentation and attribution of sources
- Mass comm and semantics classes—lot of internet examples
- search and evaluation of digital materials
  reading, analyzing, and creating advertisements, TV commercials, movies, paintings
- Evaluating media information
  corpus linguistics
- database digital research, assessing sources
- electronic resources for research

3. What courses to you teach these in?

I have added the answers into the following table based on whether they are primarily writing courses or literature courses (based on the course title) or some other course that does not appear

to favor either reading or writing. The results show that teachers include digital literacy elements in 54 writing-related courses versus only 22 literature-related courses and in 15 other kinds of courses or 2 ½ times more frequently.

Table B1: Courses With DL Components as Reported by Survey Respondents					
WRITING COURSES				LITERATURE COURSES	OTHER
FIRST YEAR WRITING (or equivalent)	DIGITAL LITERACY COURSES	CREATIVE WRITING	OTHER		
18	Media Writing (2)	Short Fiction (3)	English Teaching Methods (3)	Literature Survey	Film Studies (2)
	Online Comm	Intro to Drama	Advanced Rhetoric/Comp (8)	Chaucer	Gender and the Art of Film
	Multimedia Storytelling	Creative Writing (2)	Journalism (2)	Medieval Literature (2)	International Cinema
	Web-Based Design (2)		Editing	British Literature (3)	Women's Studies
	Media Law and Ethics		Advanced Grammar	English Studies (3)	Democracy and Global Diversity
	Media Theory and Criticism (2)		Integrated Comm Seminar (3)	Shakespeare	Issues in Modern America (2)
	Media Research		Essay Writing	Pop Culture Literature	Research Seminar (3)
	Media		Writer's Roundtable	US Novel	Humanities 1 (2) and 2
	Cinema and New Media		Professional and Tech Writing (2)	Oprah's books	Future in Film and Fiction
			Expository Writing	Young Adult Lit	Gender Labor
			Writing about Justice	Intro to Literature	The Graphic Novel
			History of the English Language	Upper Level Lit Courses	Women, Health, and Power
			Linguistics	Senior Seminar (2)	
			Sophomore WID Course	Milton	

TABLE B1 CONT'D					
			Reading texts/Writing texts	Gender and Girls fiction	
			Writing Historically		
			Childbirth and Women's Writing		
18	12	6	30	21	15
66				37	

4. If not, why?

The answers below indicate that there are two most common reasons: it doesn't fit with their course content or they don't feel qualified to teach DL. The "other" answers demonstrate that the infrastructure is complex and there are several reasons why someone might not add DL elements to their courses.

It doesn't fit with my course content	14
It is irrelevant to my course content	4
I don't believe it would help my students learn course content	5
I don't have the time to teach it	5
I don't feel qualified to teach it	11
I don't have the resources to teach it	4

Other (Some editing for brevity and relevance—in all open-ended responses)

- Sometimes, I simply choose not to. E.g., this semester I'm teaching American Lit I. Students are required to keep a commonplace. At times I have required these to be done as a blog. This time I asked that they keep their commonplace in a composition book.
- Other areas of the overall curriculum do teach this content. And since I don't feel particularly comfortable teaching it, I feel like I can fill in the gaps by helping to teach students to write in linear logical means. I also teach creative writing. It is in this latter area that I will probably first make a breakthrough.
- Less relevant to some courses, e.g. creative writing and literature surveys. At least I can't see how it fits with my course content right now. Open to learning.
- We don't have very many classrooms equipped for teaching this way. We have a few 'smart' rooms that include access to the net/ overhead, and we have one computer classroom that two departments share. I also sense that this is not a part of what the department cares about, which frustrates me.
- I can teach my courses using other methods and materials.
- I also teach strict literature courses.
- I acknowledge that it is not irrelevant to my course content, and in fact I do try to help students locate reliable secondary sources by accessing the very best on-line bibliographies via the College's internet system

5. How crucial do you feel it is for an English major with a liberal arts degree to be digitally lilterate?

Clearly faculty think digital literacy is important, as nearly 2/3 of those who responded considered it "Very Important" and all the rest but one "Somewhat Important." Considering the possible bias of those who took the survey, this answer is not really surprising.

Not at all important	0
Slightly important	0
Neither important nor unimportant	1
Somewhat important	12
Very important	39

6. Where do you feel digital writing literacy for students is best taught?

English/writing courses	18
Computer-related courses	9
Is should be a part of all courses	24
Other (Answers follow)	10

- It should be a part of most courses
- Our students receive this as part of their general ed
- Advanced grammar (we explore technology and composition theory)
- At the writing center, in the library
- It shouldbe a part of all courses where it is pertinent
- Courses within one's major
- Depends on the curriculum
- My English language courses rely heavily on digital literacy
- Comm and web-design courses
- It should be a part of many different sorts of courses

7. What documentation are you aware of in your department where goals for digital writing literacy are explicit?

Goals for the major/minor/concentration	13
Department mission/vision	3
Department description	3
Individual syllabi	29
None that I know of	17
Other	9

- Integrated comm seminars required of all students
- It is implicit in many of our courses and rubrics
- Assessment criteria
- Course descriptions
- We teach film/production courses
- Multimodal writing is also a learning outcome in our comp 2 classes in the writing program
  Curriculum for Eng 110 writing and research

–   Film courses

8. How long have these digital writing literacy goals been a documented component of your program?

Less than 1 year	1
1 – 3 years	9
3 – 5 years	6
5 or more years	6
not sure	8
n/a	13

9. If digital writing literacy is not a component of your department, is it an institutional goal taught elsewhere?

Yes 20
No 14

10. True or false: ALL classrooms at my institution have: (out of 52 respondents)

	True	False
Computers for students	1	46
Computer for instructor	23	27
Internet	28	21
Doumnt camera /visualizer	5	41
built-in projector and screen	20	28
overhead projector	20	28
tv	21	27
VCR	24	24
dvd	26	22

11. True or false: SOME classrooms at my institution have: (out of 52 respondents)

	True	False
Computers for students	40	3
Computer for instructor	43	0
Internet	44	0
Doumnt camera /visualizer	34	9
built-in projector and screen	45	0
overhead projector	43	1
tv	42	3
VCR	44	1
dvd	42	0

12. T or F: At my institution, clasrooms with computers and internet for students and teacher are:

True   False

Plentiful	17	27
Readily available for all techers	22	18
can be requested for a semester	35	5
can be requested for occasional use	38	2
are neary impossible to get	3	30
are very few in number	17	16
do no exist	2	33
other	4	

        We are a laptop campus, so all teachers and students have computers at their disposal.
        Almost all classrooms have computer projectors
        all students get laptops when they arrive, so all classrooms can be used (the quad and public places are wireless, too) but student computers are not in the classrooms
        Most classrooms have a console for teachers, but no computers for students.
        (I'm not sure about some of these, so I left them blank)

13. If computer classrooms were always available, how likely would you be to add digital literacy components to your pedagogy?

Very likely	19
Somewhat likely	9
neither likely nor unlikely	12
not very likely	3
I would not teach it	0

14. If computer classrooms were always available, how likely would your department/prograam be to add a course/courses in digital literacies?

Very likely	7
Somewhat likely	9
Neither likely nor unlikely	12
not very likely	12
Not t all likely	1
We lready have such a course	2

15. Please name your institution.
(Since I promised anonymity, I am not including these here.)

APPENDIX C: COURSES WITH LANGUAGE THAT INDICATES DIGITAL LITERACY
GOALS AND THEIR COURSE DESCRIPTIONS

ALLEN

ENG 326 COMPUTER-AIDED WRITING   Credit 3 hrs.
This course provides an introduction to writing techniques using computers and the Internet. It covers topics such as word-processing, desktop publishing, electronic mail, HTML encoding, and WWW publishing.

ALMA

ENG *202.   Digital Rhetoric
Exploration of the rhetorical conventions and contexts of writing in digital contexts, as well as the intersections between textual and visual choices. Students explore writing in a variety of digital contexts and will read and discuss scholarly methods for thinking critically about the place of writing in new media.

CONCORDIA NY

ENG 346 Writing for the World Wide Web
This course explores the rhetorical practices of writing and publishing for the World Wide Web. Through the study of various electronice discourse communities, student will create their own Web pages. Emphasis will be on the conventions of Web design as well as elements of standard English usage and style.

CORNELL

Seminar 103 Justice.com: Cybertechnology and the Law
Menendez, J.
Facebook, YouTube, eBay, cyberbullying, electronic threats to privacy, new forms of digital property and communication, and new venues for free speech - developments like these have challenged the law faster than courts can interpret it or legislatures modify it. The fast-paced evolution of electronic technology has caused the rapid expansion of "cyberlaw," whose principles and limits are worth exploring. This course will place such issues as illegal music downloading and the rights and wrongs of social networking in the wider context of intellectual property and communication law, looking at ways in which law and technology intersect and affect each other. Students will read court cases, journal articles, and popular media articles on these topics, writing short essays and a final research project

2920 Introduction to Visual Studies
Provides a broad introduction of modes of vision and the historical impact of visual images, visual structures, and visual space on culture, communication, and politics. The question of "how we see" is discussed in terms of (1) procedures of sight (from optical machines to the psychology of vision and the philosophy of aesthetics); (2) spaces of vision (from landscapes to maps to cities); (3) objects of vision (from sacred sites to illuminated books to digital art); and (4) performances of vision (race, sexualities, ethnicities, cultures). Of importance to the course is the practical and conceptual relation of 20th-century visual technologies (photography, cinema, video, and computing) to their historical corollaries in the arts. The course draws on the visual traditions of both Western and non-Western societies and study texts that have defined the

premises and analytic vocabularies of the visual. Through viewings, screenings, collaborative writing, and art projects, students develop the critical skills necessary to appreciate how the approaches that define visual studies complicate traditional models of defining and analyzing art objects. Guest lecturers occasionally address the class. Requirements: two objective midterm exams; occasional listserve postings; two five-page papers

DUKE
271ES.01. Art and Literature in the Digital Domain.
This course will explore new frontiers in electronic art and literature, along with the theoretical and practical challenges they raise. More and more canonical literary texts are available in electronic form; what is the difference between reading these texts on screen and reading them in print? In addition, many canonical texts have been digitized and enhanced by sound, video, and images; how does our reading and understanding of these texts change when they are hyper-mediated? In contemporary literature, a new genre of interactive fiction is appearing that depends for its effects on electronic media; how does the construction of narrative change when the text presents the reader with multiple reading paths? Similar questions arise in electronic art. How does traditional semiotics need to be revised to account for digital art works? What do computer games and high art forms such as serious literature and electronic art have in common, and what are the important differences? How do image and other digital components such as sound, animation, rollovers and navigation interact in a digital environment communication? How much is creativity constrained and enabled by available interfaces? What are the advantages and disadvantages of collaborative work? How does the interaction between pattern and randomness, chance and design, inform contemporary electronic art works? What is the relation between New Media works and older artistic forms such as cinema and the print novel? How much of the theory and terminology developed for older media forms can be carried over to New media, and how much needs to be changed or re-thought? These questions will also permeate the organization of the seminar itself. The seminar will use a collaborative style of learning that emphasizes working in teams and sharing information both within our group and within a larger electronic community. Participants will be asked to do a final project in electronic form.

181AS. Making Media (DS4).
Duke in New York Arts and Media Program
The arts and media never just happen. They require contributions from many people from writers to actors, stage managers to arts management staff, musicians to fund-raisers – you name it. And, increasingly, all these professionals use and depend on technology of increasing complexity. Making Media gives you a chance to meet and talk with important people who make the arts and media happen. Guests will discuss what they do, how they do it, the role technology plays, and how they interact with society. Readings and participation in intense question and answer period required. Two short papers plus a final project required. Open only to students in the Fall DiNY Arts and Media Program. This course may be used as a 100-level elective towards an English major. Credit towards other majors and certificates possible with approval of the appropriate DUS.

EUREKA
ENG 265W Writing for the Mass Media   3 hours

Techniques of information gathering and writing techniques for the media will be studied in a workshop style through frequent practical lab exercises. Introduction to standard journalism style, basic editing, public relations writing and elements of design.

FRANCIS MARION
ENG 318 Technical Communications
Introduction to the conventions of writing in technology and the sciences. Students learn technical writing style and the use of visual aids. On-line serches and computerized report production are included…

HOLLINS

Eng 197F: FYS – Creative code: the art and science of interactive media; "The field of interactive media, examples of which include computer-based art and hypertext poetry, is redefining both art and science. In this seminar, we will work at the intersection of several emerging fields: computer animation, interactivity, and hypertext literature."

ENG 227: THE EARLY MODERN CYBORG (4)

After establishing a contemporary vocabulary for "cyborgs" and "cybernetics," we will trace the early ancestors of the contemporary "cyborg," an integrated human-machine system, in examples of poetry and science of the 17th- and early 18th-century.

ENG 250: SPECIAL TOPIC - RHETORIC, MEDIA, AND DOCUMENTARY CULTURE (4)
Documentary culture engages information media to record history in ways that liberate as well as delimit the individuals defined by the processes of documentation. This course surveys the history of western documentary culture from medieval manuscripts through contemporary trends of documentary media, including film, video, blogging, and beyond.

ENG 264: NEW MEDIA AND LITERATURE (4)
New Media Studies is an emerging interdisciplinary field that brings together literature, cultural studies, and multimedia technology. The course begins with a discussion of the idea of the "literary" in relationship to the technologies and arts that make textuality and aesthetic experience possible. Though the emphasis of the course is on contemporary literature and innovations in digital and electronic media, we begin with a survey of early experimental and innovative texts such as illuminated manuscripts, interactive poetry and prose, and graphic novels. A primary aim of the course is to offer the creative and critical tools required to participate in a culture where the printed word is no longer an unrivaled textual form. Students will be asked to engage with a variety of theoretical perspectives on literary criticism, media, and performance. No prior experience with digital technologies is required, though an interest in working with mixed media is strongly encouraged.

IOWA WESLEYAN
ENG 344 – Media Ecology and the Humanities
The course introduces students to the critical study of media as environment, with a speial emphasis on how culture, religion, the arts, and education systems are affected by media and

media chnge. Course work includes readings from an interdisciplinary text, the critical use and creation of web-based multimediia resources, reletion upon the communication process and engagement in the skillful and informed interpertation of literary, expository, and filmic texts. Students will work both individually and in groups do consider how changes in technologycan redefine these aspects of culture and to apply their insights to the contemporary realities of their personal, professional and civic lives

MANHATTANVILLE
"Writing for the Media"
"Oriented toward social-science and business media, this creative nonfiction course examines issues of style, history, ethics and practice in writing for media research and criticism, public relations, advertising and the internet. Types of writing to be coered include copy editing, position papers, proposals, releases, "backgrounders" and new media copy.

MARIST
ENG 327 Writing for the Media
An intro to the basic principles and techniques of writing professional copy for the eye and ear. Formats include informational, persuasive, and entertainment content for broadcst and web media.

ILLINOIS WESLEYAN
362 Electronic Fiction (LT)
Focus on the literary hypertext—a text to be read on the computer, with branches, loops and other non-linear or multilinear structures. Topics include precursors, formal elements and structures, relationships between hypertext and literary theories, and implications for the future of reading and writing

UNIVERSITY OF THE CUMBERLANDS
Eng. 231 writing with the New Media
"This course offers and introduction to the principles and practice of effective professional writing with the new media. Students study the differences between writing in a traditional print medium and writing with the new media. Particular attention is given to the stylistic and organiational conventions of effective hypertext composition as well as to the rhetorical opportunities of hypertext. With this conceptual background, students develop their communication skills through a variety of individual and small-group projects that anticipate writing tasks they may face in furture careers. This course is open to English majors and minors pursuing the writing track or to other students by consent of the department chair.

WELLS
ENGL 270. Writing for the Mass Media
Workshop in writing for print and online newspapers and magazines. Topics include news writing, editorial and feature writing, and news and editorial blogging. Students will be encouraged to submit their work to on-campus and online media.

WABASH
ENG 150 – intro to mass comm

Intro to the print and electronic media (Comm theory, advertising, news gathering, media effects, and investigative journalism) in which students analyze the special languages of the media, examine the economics of the comm industry, and evaluate the media as a reflection of the ideas and preoccupations of society. The goal of the course is to develop students into informed and discriminating listeners, readers, and viewers.

APPENDIX D: RANDOMLY SELECTED LIBERAL ARTS COLLEGES/UNIVERSITIES
AND THEIR LEVELS OF INSTITUTIONALIZATION OF DL

Key to Levels of Institionalization based on catalog findings only:
No Asterisk -   Level One
*One Asterisk -   Level Two
**Two Asterisks -   Level Three
***Three Asterisks -   Level Four

1. Adrian College
2. Allen College *
3. Alma College *
4. Alverno College **
5. Amherst College ***
6. Aquinas College
7. Belmont Abbey College
8. Bluffton College
9. Brandeis University *
10. Bridgewater College
11. Centenary College *
12. Clarke College
13. Colby-Sawyer College
14. Columbia College
15. Concordia College NY **
16. Converse College
17. Cornell College **
18. Drew University
19. Duke University ***
20. Elizabethtown College
21. Eureka College **
22. Fort Lewis College **
23. Francis Marion College **
24. Gettysburg College
25. Hollins University **
26. Howard University
27. Illinois Wesleyan University *
28. Iowa Wesleyan ***
29. Lake Forest College
30. Lynchburg College
31. Lyndon State College ***
32. Manhattanville College *
33. Marist College **
34. Marloboro College
35. Mercyhurst College
36. Merrimack College
37. Messiah College

38. Messiah College
39. Millikin University ***
40. Monmouth University
41. Montreat College
42. Montreat College
43. Mount Saint Joseph College
44. Mount Vernon Nazarene College
45. New England College
46. New English College
47. Occidental Colege
48. Occidental College
49. Ohio Wesleyan
50. Peace College
51. Pikeville College *
52. Presbyterian College
53. Regis College
54. Rockford College
55. Saint Ambrose University
56. South Catholic College
57. SUNY at Ol Westbury
58. Thomas-More College
59. Toccoa Falls College
60. University of Laverne
61. University of Maine at Presque Isle *
62. University of the Cumberlands *
63. Union College **
64. Wells College **
65. William and Mary
66. Wabash College

WORKS CITED

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Abrahams, Jeffrey. *The Mission Statement Book: 301 Corporate Mission Statements from America's Top Companies*. Berkeley: Ten Speed Press, 1999. Web.

Adams, Dennis and Mary Hamm. *Media and Literacy: Learning in an Electronic Age: Issues, Ideas and Teaching Strategies*. Springfield: Charles Thomas, 1998. Print.

Bakhtin, M. M. *The Dialogic Imagination: Four Essays*. Austin: University of Texas Press, 1981. Print.

Bartholomae, David. "Inventing the University." *Literacy: A Critical Sourcebook*. Ed. Cushman et al. 511-524. Print.

Bazerman, Charles and David Russell. Introduction. *Writing Selves/Writing Societies: Research from Activity Perspectives.* Fort Collins: WAC Clearinghouse and Mind, Culture, and Activity, 2002. Web.

Bélisle, Claire. "Literacy and the Digital Knowledge Revolution." *Digital Literacies for Learning*. Ed. Allan Martin and Dan Madigan. London: Facet Pub, 2006. 51-67. Web.

Berlin, James. "Poststructuralism, Cultural Studies, and the Composition Classroom: Postmodern Theory in Practice." *Rhetoric Review* 11.1 (1992): 16-33. Web.

Berger, Pam. "Literacy in the Digital Age: What Does it Mean?" *Information Searcher* 16.4 (2006): 3-4. Web.

Birkerts, Sven. *The Gutenberg Elegies: the Fate of Reading in an Electronic Age*. Boston: Faber and Faber, 1994. Print.

Bizzell, Patricia. "Professing Literacy: A Review Essay. " *JAC* 11(2). 11 Mar. 2008. Web.

Carruthers, Rebecca. "The Bohr-Einstein Dialogue: A Rhetorical and Genre Analysis." Thesis. Simon Fraser University, 2004. Web.

Collins, James and Richard Blot. *Literacy and Literacies: Texts, Power, and Identity*. Cambridge: Cambridge U. Press, 2003. Print.

Devitt, Amy. *Writing Genres.* Carbondale: Southern Ill. Univ. Press, 2004. Print.

DeVoss, Danielle Nicole, Cushman, Ellen, and Grabill, Jeffrey T. "Infrastructure and Composing: The *When* of New-Media Writing." *College Composition and Communication* 57.1 (2005). 14-44.

Engström, Yrjö. "Activity Theory and the Individual and Social Transformation." *Perspectives on Activity Theory.* Eds. Yrjö Engeström, Jeijo Miettinen, and Raija-Leena Punamäki. Cambridge: Cambridge U. Press, 1999. 19-39. Web.

Eshet-Alkalai, Yoram. "Digital Literacy: A Conceptual Framework for Survival Skills in the Digital Era." *Journal of Educational Multimedia and Hypermedia* 13.1 (2004): 93-106. Web.

Eyman, Douglas. "Digital Literac(ies), Digital Discourses, and Communities of Practice: Literacy Practices in Virtual Environments." Michigan State University 2005, 16 Aug. 2008. Web.

Freedman, Aviva. "ReACTivating Genre: ReGENERating Discourse Theory, Research, and Pedagogy." *Keynote Address presented at the European Writing Conferences.* Barcelona, 1996. Address. Web.

Gee, James Paul. "The New Literacy Studies: From "Socially Situated" to the Work of the Social." *Situated Literacies: Reading and Writing in Context.* Ed. David Barton, Mary Hamilton, and Roz Ivanič. Routledge: London, 2000. 180-196. Web.

Gilster, Paul. *Digital Literacy.* New York: Wiley & Sons, 1997. Print.

Gurak, Laura. "Cyberliteracy: Toward a New Internet Consciousness." *Cyberliteracy: Navigating the Internet with Awareness*. New Haven: Yale U, 2001. 9-28.

Handa, Carolyn. "Letter from the Guest Editor: Digital Rhetoric, Digital Literacy, Computers, and Composition." *Computers and Composition* 18 (2001): 1-10. Web.

Hobbs, Catherine. "Learning from the Past: Verbal and Visual Literacy in Early Modern Rhetoric and Writing Pedagogy." *Visual Rhetoric in a Digital World*. Ed. Carolyn Handa. Boston: Bedford/St. Martin's, 2004. 55-70. Print.

Howard Rebecca Moore. "Collaborative Pedagogy." *A Guide to Composition Pedagogies.* Ed. Gary Tate, Amy Rupiper, and Kurt Schick. New York: Oxford U. Press, 2001. 54-70.

"Institutionalization." *Business Dictionary.* BusinessDictionary.com. n.d. Web. 20 Jul. 2010.

"Institutionalization." *Quality Assurance Project.* qaproject.org. n.d. Web. 20 Jul. 2010.

Iverson, Gudmund. "Statistics in Liberal Arts Education." *The American Statistician*. 39.1 (1985). 17-19.

Lauer, Janice and J. William Asher. *Composition Research: Empirical Designs."* New York: Oxford U. Press, 1988. Print.

Livingstone, Sonia. "The Changing Nature and Uses of Media Literacy." Mediaculture Online. Electronic Working Papers. Ed. Rosalind Gill, Andy Pratt, Terhi Rantanen, and Nick Couldry. 8 June 2008. Web.

Maybin, Janet. "The New Literacy Studies: Context, Intertextuality and Discourse." *Situated Literacies: Reading and Writing in Context.* Ed. David Barton, Mary Hamilton, and Roz Ivanič. London: Routledge, 2000. 197-227. Print.

Miller, Carolyn. "Genre as Social Action." *Quarterly Journal of Speech* 70 (1984): 151-167. Web.

Moore, Cindy, Peggy O'Neill, and Brian Huot. "Creating a Culture of Assessment in Writing Programs and Beyond." *College Composition and Communication* 61.1(2009): 107-132. Web.

Olson, David. R. "Hisory of Schools and Writing." *Handook of Research on Writing: History, Society, School, Indiviual, Text.* Ed. Charles Bazerman. New York: Lawrence Erlbaum, 2008. 283-292. Print.

"Internet 2009 in Numbers." *Royal Pingdom.* Pingdom.com. n.d. Web. 24 Jun. 2010.

Pullman, George. "Stepping Yet Again into the Same Current." *Post-Process Theory: Beyond the Writing-Process Paradigm.* Carbondale: Southern Ill. UP, 1999. 16-29. Print.

Royer, Daniel J. "New Challenges to Epistemic Rhetoric." *Rhetoric Review* 9.2 (1991). 282-297. Web.

Russell, David. "Rethinking Genre in School and Society: An Activity Theory Analysis." *Written Communication* 14(4). 504-554. Web.

Schryer, Cathy. "The Lab vs. the Clinic: Sites of Competing Genres." *Genre and the New Rhetoric.* Ed. Aviva Freedman and Peter Medway. London: Taylor & Francis, 1994. 105-124. Web.

Selber, Stuart. "Institutional Dimensions of Academic Computing." *College Composition and Communication* 61.1 (2009). 10-34. Web.

---. "Reimagining the Functional Side of Computer Literacy." *College Composition and Communication.* 55.3. (2004). 470-503. Print.

---. *Multiliteracies for a Digital Age.* Carbondale, Southern Ill. Press, 2004. Print.

Selfe, Cynthia. *Technology and Literacy in the Twenty-First Century: The Importance of Paying Attention.* Carbondale: Southern Illinois Univ. Press, 1999. Print.

Spinuzzi, Clay. *Tracing Genres Through Organizations.* Cambridge: MIT Press, 2003. Print.

Street, Brian. "What's "New" in New Literacy Studies?: Critical Approaches to Literacy in Theory and Practice." *Current Issues in Comparative Education* 5.2. (2003). 77-91. Web.

Weiss, Janet, and Sandy Kristin Piderit. "The Value of Mission Statements in Public Agencies." *Journal of Public Administration Research and Theory* 9.2 (1999): 193. *Expanded Academic ASAP*. Gale. Web. 22 May 2009.

Welch, Kathleen. *Electric Rhetoric*. Cambridge: MIT, 1999. Print.

"What is Liberal Education?" *American Association of Colleges and Universities.* AAC&U.com. n.d. Web. 10 May 2009.

Williams, Sean. "Part 1: Thinking Out of the Pro-verbal Box." *Computers and Composition* 18 (2001): 21-32. Web. 10 May 2009.

Wysocki, Anne Frances, Johndan Johnson-Eilola, Cynthia Selfe, and Geoffrey Sirc. *Writing New Media: Theory and applications for expanding the teaching of composition*. Logan: Utah State University Press, 2004. Print.

Yancey, Kathleen Blake. "Made Not Only in Words: Composition in a New Key." *College Composition and Communication* 56.2 (2004): 297-328. Print.