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First-Year Composition Teachers' Uses of New Media Technologies in the Composition Class

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FIRST-YEAR COMPOSITION TEACHERS' USES OF NEW MEDIA TECHNOLOGIES IN

THE COMPOSITION CLASS

A Dissertation

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Philosophy

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Title: First-Year Composition Teachers' Uses of New Media Technologies in the Composition Class

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As new media technologies emerge and evolve rapidly, the need to make informed decisions about using these technologies in teaching writing increases. This dissertation research study aimed at achieving multiple purposes. The first purpose was to catalog the new media technologies writing teachers use in teaching first-year composition classes. The second purpose was to explore the pedagogical uses of these technologies. The study also aimed at examining teachers' approaches to using new media technologies.

This mixed-method study utilized an online survey to collect numerical and verbal data from a total of 164 participants in order to address the three research questions posited. In addition to answering the research questions, findings of the study revealed a number of important phenomena. Three categories of new media technologies were reported by participating teachers: text-rich, media-rich, and management technologies. The use of new media technologies in multimodal composing is spreading steadily among writing teachers despite the supremacy of print literacy in Composition. Furthermore, findings showed that teachers used new media technologies for text production, skill building, and community building. Participating teachers' approaches to using new media technologies were classified into instrumental, substantive, critical, and a hybrid of two or more approaches.

Implications for using new media technologies and multimodal composing in teaching writing are discussed in the light of findings of the study and position statements about digital

literacy issued by flagship organizations in the field of Composition. Recommendations are also made regarding teachers' professional development on the use of new media technologies. Using the experiences accumulated during this study, I presented several methodological considerations and directions for future research.

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CHAPTER ONE

INTRODUCTION

My passion for technology started many years ago when I developed an interest in different forms of technology in my English teaching practice. In the classroom, I used concordances for corpus analysis, gave electronic feedback on writing, and used blogs to teach writing. With further exposure in my personal life to technologies such as Facebook and blogging, and to Moodle and discussion boards in my professional practice, my interest in integrating technologies into the classroom grew. Through these various inroads, I became aware of the availability of a large spectrum of applications and Web-based technologies, known as Web 2.0, that were formerly unknown to me.

From a combination of personal experience, communication with other writing teachers, and exposure to the rapidly-growing literature on technology in teaching writing, a number of phenomena attracted my attention. I was aware that many writing teachers still refrained from using technology beyond simple word processing; some used it because it is available; others because their institutions require it; while still others used technology because they believe that its embedded and potential features add value to student learning. Furthermore, I always believed that the decision to use technology, the selection of certain technologies, and the particular ways of incorporating these technologies into the classroom, are all factors in the success or failure of teachers in the classroom. The observations and notes that I had made over time became the stimulus for this dissertation, in which I focused on teachers' choices of technology, and the ways they make use of various technologies in composition classes.

Initially, I was unsure about the focus of my work: I was uncertain as to which group of teachers to use as participants, which technologies to investigate, and what types of classes to

include in the study (e.g. creative writing, research writing, technical writing, first-year composition). Consequently, my first step was to explore the state of the field by conducting a pilot study. In the summer of 2011, I disseminated an online survey questionnaire among writing professionals in US institutions of higher education through a number of list-serves for writing teachers, such as WPA-L and SLWIS-L. The purpose of the pilot study was to explore the technologies used by writing teachers, the purposes of using these technologies, and the types of classes in which they were being used.

The study revealed that the field of Composition was moving rapidly and steadily toward using new media technologies which incorporate video, still pictures, sound, and alphabetical text (Vie, 2008). Two hundred and eighty teachers from around the country reported using Web 2.0 (e.g. blogs, wikis, and Google Docs), social networking sites (e.g. Facebook and Twitter), multimedia production sites and applications (e.g. YouTube and MovieMaker), and mobile technologies. Participants reported using these technologies for a variety of purposes, such as free writing, peer review, and group discussion of readings. They were used in various classes, including research writing, technical writing, creative writing, and first-year composition.

Participants' comments and their responses to open-ended questions revealed the state of their knowledge. Some teachers, for example, reported that they used only word processing in their classes. Others stated that they used no web-based technologies or sites in teaching because they believed these were a distraction for the students. A third group said they were unfamiliar with many of the technologies listed in the survey (mostly new media).

The findings of my pilot study helped me focus my dissertation research on particular technologies, participants, contexts, and, more importantly, purposes. In about 75% of the cases, teachers in the pilot study reported using technologies that can be categorized under the

overarching umbrella of new media technologies. These are used to produce texts "primarily in digital environments, composed in multiple media and designed for presentation and exchange in digital venues" (Selfe, 2004, p. 43). Furthermore, new media is currently a hot issue in composition theory and pedagogy and, as indicated by recent job postings, it also claims the high ground and status in institutions of higher education. Therefore, I found it logical to narrow my investigation to this category.

In addition to enlightening my choice of technologies, findings of the pilot study made me choose first-year composition teachers as the prospective participants in this study. About 65% of the participants in the study taught first-year composition (FYC) classes, which meant that FYC are the most common sites of using new media among the other classes reported in the pilot study. To summarize, as a result of these preliminary findings, I chose to investigate uses of new media technologies among composition teachers in first-year composition classes for my dissertation research.

Statement of Problem

Composition teachers who are novices in the use of technology need guidance in choosing and using suitable technologies for their classes. Unfortunately, as Takayoshi and Huot (2003) argued, teachers' needs are not the subject of much of the published research on computers and composition. As technology continues to advance and new media emerges more frequently and rapidly, there is an urgent need for composition teachers to continue exploring the implications of new understandings of literacy (Selfe, 1989). The continuing evolution and rapid development of technologies mandates continual revision of methods for integrating these technologies into the classroom (Bloch, 2008). For this reason, the argument that teachers should be aware of the available technologies (Ertmer & Ottenbreit-Leftwich, 2010) is still valid.

However, this argument is inadequate to the extent that awareness must be supported by pedagogical knowledge of how to integrate these technologies into different teaching contexts.

Teachers' use of technology should ideally be preceded by a number of decisions about what technology to use, how to use it, and with which group of students (Bruce, 1999). Although many scholars called for teachers to select technologies that best match and achieve their instructional goals and boost student learning (Ertmer & Ottenbreit-Leftwich, 2010; Selfe, 2003), many teachers' integration of technology into their teaching has been "minimal or superficial" (Hutchison & Reinking, 2011). Even in the best case scenario, integration has lagged far behind technological developments. Selfe (1999) called for more research on the use technologies to achieve various instructional goals. Selfe's call is more relevant now than ever with the advent of new media technologies and their numerous uses in the composition class. However, to date, there has been no large scale research investigating teachers' choices or pedagogical integration of new media technologies in the composition class.

The initial step for teachers to better use technology is to consider the options available to them and to critically balance these options with their goals (Eldred & Toner, 2003). According to Takayoshi and Huot (2003), critical users are those who align their use of technology with pre-determined course objectives. Such critical awareness is a crucial factor in the teachers' approach technology. The earliest call for critical use of technology among composition teachers came from Selfe's (1989) early work in which she argued that teachers should choose strategies that allow their students to efficiently cope with the designated technology. Before bringing it into the classroom, the teacher should be aware of the specifics of the technology which, a decade later, Bruce (1999) conceptualized as the social and cultural aspects of each technology. In their introduction to the same volume, Hawisher and Selfe (1999) strongly supported these

calls as they contended that the use of new technologies may become so complex that it necessitates dynamic understanding not only of the technologies, but also of their relation to their social contexts and to human users.

Critical Approach to Technology

A few years after Selfe's (1989) call for teachers to be critical users of technology, Takayoshi (1995) asserted that one of the major steps a composition teacher must take is to critically test and analyze technologies before adopting them in the classroom. This critical analysis should not be limited to technical aspects; rather, it should extend to the social and cultural features of the target technologies.

Selfe (1999) simplified this critical approach to technology and called it "paying attention" (p. 429) and arguing that paying attention is far more important than simply using technology in our teaching or in our life generally, as Feenberg (2003) added. According to Feenberg, the philosophy of technology "teaches us to reflect on what we take for granted" (p. 1) because we rarely reflect on what technology can or cannot do; we just use it. Selfe furthered the argument, stating that teachers' concern should not be confined to offering technology-rich classes or assignments to their students; instead, they should be able to coach students on evaluating the social and pedagogical implications of the technologies they use in order to develop what she called "critical technological literacy" (p. 432). In other words, teachers should not fall for what Hawisher and Selfe (1989) called the "uncritical enthusiasm" (p. 56) that may mark many of the approaches and practices associated with the use of computers in the composition classroom. This enthusiasm may cause teachers to rush into using new technologies without much consideration of their potential benefits or problems. This enthusiasm underpins teachers' beliefs that technologies are the magic wand that will help them achieve their

objectives, handle their instructional problems, and elevate student learning. Using Feenberg's (1991) terminology, this belief reflects a substantive approach to technology.

Recently, there have been many renewed calls for teachers' critical use and analysis of technology, with more focus on new media technologies as they become more widely used and advocated for in composition classes. One recent argument was presented by Peary (2012) in a panel on multimodality and multiliteracies (Wyeth, Goodwin, Peary, & Sheridan, 2012) in the *Conference on College Composition and Communication* (CCCC). Peary's main argument was that there is a wide digital divide between teachers and students, and in order for teachers to narrow this divide, they need to contest their beliefs and feelings about technology. Peary suggested that the rate of change in technology multiplies teachers' anxiety about technology. Her proposition to alleviate this anxiety was to offer development sessions to teachers. These sessions would focus first on the teacher, followed by teaching pedagogies, and finally on technology. According to Peary, if teachers are expected to teach critical awareness of technology to their students, they should first develop this critical awareness for themselves. Peary's call for critical awareness of technologies may be explained in light of the cultural and ideological implications that Clark (2010) refers to in her proposal for a critical approach to technology.

According to Clark (2010), each technology has its own ideology that affects our cultural and communication behaviors. She strongly argued that there is a need to move away from technologies as "convenient serendipity" (p. 28) and towards an informed pedagogy that aims at developing and enhancing students' digital literacy. She compared the novelty and expected effect of new digital technologies to the introduction of the writing process pedagogy that transformed teaching in the composition classroom a few decades ago. To her, the role of the

composition teacher should include asking students to analyze the media they use, and helping

them to create their own identities as they develop varied forms of digital literacy. Clark

elaborates her incorporation of different digital media technologies, such as blogs, *Second Life*,

and e-portfolios in her classes in order to help students develop their literacies. She called for

teachers to go beyond looking at technology as a fad and to take the challenge to design and

implement courses that develop digital literacies.

At the core of Burnett and Merchant's (2011) strong argument for what they called

"critical networks" (p. 50) is the development of digital literacies by incorporating new media

technologies. In their conception, critical networks are an alternate way of perceiving and

dealing with social networks, providing a useful framework for using social media. This

framework included practice, networks, and identity. On the subject of practice, they suggest a

critical practice in which the primary goal is to examine and critique online practices instead of

simply presenting them. Moreover, networks mean the focus is on the types of relationships

developed across different networks through various textual forms rather than focusing primarily

on the text itself. In other words, the focus should shift from texts to the relationships created

through these texts. And finally, on the subject of identity, students should develop a critical

awareness of the identities people manifest online.

Calls for a critical approach to using new media technologies in teaching writing were not

restricted to examining communication relationships or developing new goals for digital

literacies. Rather, these calls extend to critically examining the design of these technologies.

Feenberg (2002) explained the importance of technology design and stated that in addition to its

use, the design of each technology determines its impacts on different aspects of society.

Emphasizing the significance of design, Arola (2010) encouraged teachers to critique the design

of Web 2.0 spaces because the dominance of templates tends to limit the choices made by users. She contended that rather than be subject to the power of the design templates, teachers should question the components and layout of these designs.

This engagement in designing online spaces resembles what Takayoshi (1995) discussed in an earlier account. Takayoshi presented earlier scholars' arguments that composition teachers should become involved in the design of the systems they would be using with students in the classroom. She argued that teachers should pay attention to the design as well as to the content of Web 2.0 spaces by foregrounding the design and increasing students' awareness of the visual and rhetorical limitations each design may impose on writing.

Complementing Arola's (2010) argument for critical consideration of Web 2.0 design, Dilger (2010) called for critically considering other elements of Web 2.0, such as "its fundamentals of writer, reader, thought, language, and their relationships" (p. 15). Dilger believed that Web 2.0 promotes functionality at the expense of critical thinking and use of its functions. He defined functionality as the services Web 2.0 can provide for its users, such as delivering content and communication with others. His main concern was the relationships between all the elements of Web 2.0, which, according to him, should be the focus of critical examination. These relationships should be identified, explored, and critically examined by the student with guidance from the teacher.

Between the first wave of calls for teachers to develop a critical approach to using technologies in their composition classes and the second wave that paid excessive attention to critical uses of new media technologies, there has been a scarcity of empirical research that explored teachers' uses of new media technologies in first-year composition classes. Such research would inform teachers and researchers in the field about whether or not teachers use

new media technologies critically. This gap in current research highlights the need for this study that aimed at exploring teachers' use of new media.

Purpose of the Study

The ultimate goal of this study was to help teachers become more critical users of new media technologies in teaching composition. Because this goal is quite broad, it was crucial to break it down into smaller achievable purposes. The first purpose was to explore and document the new media technologies that first-year composition teachers use in their classes. As technologies continuously and rapidly develop, more media and applications become available for teachers to use. Findings of my pilot study showed that because of the large number of technologies available, many composition teachers are overwhelmed by the sheer numbers. Therefore, this study explored the myriad of new media technologies that are currently in use by teachers of first-year composition classes.

Interwoven with this first purpose is the exploration of various uses of these new media technologies in first-year composition classes. Research shows that the same technology can be employed differently across various teachers and contexts. For example, a wiki can be used to encourage collaborative writing (e.g. Chao & Lo, 2009), or to peer edit writing (e.g. Lundin, 2008). Thus, it was increasingly important to know both the conventional uses (those transferred from offline environments) and the more innovative uses (those emerging and evolving in online environments) of new media technologies.

The third purpose of the study was to understand teachers' approaches to using new media technologies and whether they use these technologies critically. As a starting point to analyzing and categorizing teachers' approaches to technology, I used Feenberg's (1991, 1999, 2002) classification of uses of technology as instrumental, substantive, and critical. This

classification is useful for documenting teachers' uses of new media technologies, as well as to draw the attention of teachers and researchers to teachers' approaches to technology and how they perceive the role of technology in teaching composition.

These three purposes feed into the ultimate goal of the study, which was to help composition teachers to become more critical in their use of new media technologies in their classrooms. Critical use of technology occurs when teachers are able to select appropriate technologies to achieve pre-determined pedagogical goals. In addition to novice teachers with inadequate experience or confidence to experiment or use technology (Takayoshi & Huot, 2003), experienced teachers may not be aware of the wide range of technologies available and their multiple uses (Journet, 2007). My hope is that the findings of this study will help teachers to question their attitudes and make more informed, critical decisions about the use and integration of new media technologies.

Significance of the Study

This study is significant because it will add to the knowledge base of Composition Studies research; it can offer practical solutions to certain pedagogical problems in the field, and may stimulate more well-informed decisions and action among composition teachers.

Significance for Knowledge

This study will add to the epistemology of Composition Studies at various levels. At the theoretical level, this study embraces Feenberg's (1991, 2002, 2003, 2009) critical theory of technology, a theory that has not been widely used in Composition (e.g. Schmid, 2006; Selwyn, 2007) in spite of the large body of research on the subject that is produced every year. This theory is likely to provide a novel framework for researchers who may be interested in examining the use of technology from the teacher's perspective. At a more practical level, this

study may bring a richer and more profound knowledge about new media technologies and the large spectrum of their uses in first-year composition classes, making it a reference point for first-year composition teachers interested in integrating these technologies into their classrooms. Other than anecdotal research studies in which scholars shared their personal experiences with a given technology, there is no scholarship that has collected data about uses of new media technologies from a large number of teachers. This study should narrow that gap between the use of computers and composition research.

Significance for Practical Solutions

Research shows two major problems composition teachers face in integrating technology into their classes: teachers do not know how to select the technologies that match their projected learning outcomes and teaching contexts, and they cannot keep abreast of the breath-taking developments in technology. Composition teachers may benefit from the findings of this study as they learn how other teachers used various technologies to achieve similar objectives.

Significance for Action

Although this is primarily an exploratory study, findings may generate calls for writing program administrators to design and implement more professional development opportunities for teachers.

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Research Questions

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In order to achieve the overall goal of the study and its subsequent purposes, this study addresses the following research questions:

1. What do teachers say are the new media technologies (interactive, productive technologies) they use in first-year composition classes?

2. What do teachers say are the purposes of using each technology in first-year composition classes?

3. What do teachers' self reports about uses of new media technologies reveal about their approaches towards these technologies?

Design and Methodology

This was a mixed-method, exploratory study.

Mixed-method Design

This study required two sets of data to answer the three research questions. Numerical data came from responses to multiple-choice questions in an online survey, while verbal data came from responses to open-ended questions in the survey.

Exploratory

This study aimed at exploring the wide range of new media technologies used in first-year composition classes in U.S. higher education institutions. It also explores the variety of ways teachers use these technologies in teaching first-year composition. Additionally, the study examined teachers' attitudes towards using new media technologies.

Participants

Participants in this study were first-year composition teachers in U.S. higher education institutions. I used a list of first-year composition teachers who participated in my pilot study who expressed interest in participating in future studies. Additionally, I reached out to more teachers through listserves that target composition teachers and professionals (e.g. WPA-L).

Data Collection

To answer the three research questions in this study, I used an online survey. Surveys are "forms that ask the same questions of all individuals in the sample and for which respondents

record their answers in verbal form" (Gall, Gall, & Borg, 2007, p. 228). They are good tools for collecting data from large samples of a population as explained by Mertens (1998). Mertens believed that data in surveys come mainly from "individuals' self-reports of their knowledge, attitudes, or behaviors" (p. 105). Many researchers collect data through surveys in order to answer various questions and to understand more about phenomena regarding large populations. Anderson and team (2006a) argued that surveys are effective methodological tools to explore participants' thinking and feelings about the topic under study. For these reasons, surveys are very suitable for my study to enable: a) collecting data from a large number of first-year composition teachers, and b) collecting data about teachers' self-reports of their use of new media technologies.

Online surveys were used recently by different researchers to reach larger samples of the target population (e.g. Anderson et al., 2006a; Hutchison & Reinking, 2011). My first and second research questions asked about new media technologies and their uses in the first-year composition classes. Using new media technologies is a relatively new phenomenon that requires exploring users' practices. Surveys are an excellent tool for this type of data collection, and in fact, an online survey enabled me to reach a large number of teachers at no cost and little effort.

Data Analysis Procedures

The following procedures are used in analyzing data for this study:

- Numerical data from the survey were analyzed using SPSS software to calculate frequency counts of technologies and their uses as well as correlations between technologies, their uses and demographic data collected in the study.

- Verbal data from the open-ended questions in the survey were analyzed using NVivo software.

Limitations

This study did not employ any ethnographic observations of classroom pedagogical practices which would show how teachers actually used new media technologies in their classes. The rationale behind this was two-fold: first, using new media technologies usually requires more than one class meeting in addition to out-of-class time from both the teacher and students. This situation made observation of the entire process very difficult and unfeasible. Second, the study focuses more on teachers' reports of using new media technologies, which could be captured from their responses to survey questions. These two reasons comply with the purpose of the study. Additionally, since this is a large-scale study, it would not have been feasible to travel across the country to observe classes.

This Dissertation

After this brief introduction to my dissertation study, the following five chapters are designed as follows. In Chapter Two, I briefly introduced Feenebrg's (1991, 1999, 2002) classification of uses of technology before synthesized the published literature on teachers' use of new media technologies in teaching composition classes. In Chapter Three, I presented the design and methodology of data collection and analysis for this study. The following two chapters are dedicated to findings of the study; in Chapter Four, I reported on the new media technologies that teachers reportedly employ in their first-year composition classes and how these technologies are used; Chapter Five revolved around teachers who participated in the study and their attitudes towards using new media technologies. In the final chapter, I discussed all the findings in an attempt to discern the future of teaching composition with new media technologies.

CHAPTER TWO

LITERATURE REVIEW

The purpose of this study was to help composition teachers become more critical users of new media technologies in teaching composition. The research was designed to explore and document the technologies used by participating teachers, and the purposes they gave for using them. The study also examined teachers' approaches to using new media technologies, based on Feenberg's (1991, 1999, 2002) classification into instrumental, substantive, and critical uses. This classification was useful as a starting point for understanding teachers' beliefs about new media technology, a subject that is relatively neglected in published scholarship in Composition Studies, particularly in the field of computers and composition. I strongly believed that the analytical potential of Feenberg's classification could add another layer of understanding to current research on computers and composition, by building onto the foundation of critical research in this field.

I begin this chapter with a short narrative describing my thinking and decision-making process for selecting a particular theory and an analytical framework for this study. After discussing Feenberg's (1991, 1999, 2002) classification of uses, I synthesize the body of recently-published literature on the use of new media technology by composition teachers in first-year classes in U.S. institutions of higher education, and the variables that may affect their selection and use of these technologies.

Thinking, Contemplating, Deciding

When I started thinking about this study, I considered two inter-related issues: I needed a theory that would frame this exploratory, analytical research, as well as an analytical framework to provide a starting point for data analysis. The major problem I faced was the lack of published

research in Composition Studies on teachers' use of new media technology. I hoped to locate a number of similar studies which discussed theories that had been used by other researchers. However, faced with a lack of published research on this specific subject, I educated myself and eventually settled on a theory and analytical framework that I felt was suitable for the task.

When I read Feenberg's (1991) critical theory of technology in which he deconstructed and criticized Marxism, I found his detailed depiction of different approaches to technology to have analytical potential for this study. Feenberg's (1991, 2002) critical theory of technology originally aimed at promoting a more democratic society through the use of technology. Feenberg's theoretical approach falls under the overarching umbrella of Critical Theory as endorsed by Habermas (Dews, 1999) and Horkheimer (1975), and Critical Pedagogy as promoted by Freire (1995, 1998). Classically, critical theory aims to emancipate individuals from the social injustices created and imposed by social and political conditions. Traditional critical theory challenges hegemonic conditions in order to liberate humans from the power of these conditions and ultimately, to achieve social change. Given the diverse goals of this dissertation research, it is easy to see how Feenberg's critical theory may inform this study. However, before adopting the theory, a number of challenges had to be overcome.

The main challenge was to understand how the concepts of power relations and social change were related to the topic and purpose of this study. These high-profile values are strongly endorsed by critical theorists. In fact, they may be accurately described as ideological and epistemological stances, and they are packaged into, not only Feenberg's (1991) critical theory of technology, but into every version of Critical Theory.

After considerable contemplation, I realized that both concepts are represented in this study, though not as they are generally represented in traditional critical theory. Thinking about

how teachers use new media technologies lead me to recognize the power issues involved in the classroom. Teachers approach technology from various perspectives: When teachers select a new media technology to be a medium for communication or to achieve their pedagogical goals, they are in fact subjecting technology to their power, ignoring all the cultural and social potential of that particular technology and the possible impact it may have on their students and teaching contexts. When teachers select a new media technology because it appears to be a modern solution to many of their pedagogical problems, or when they integrate technology because students will like it, or simply for the sake of using technology, they are falling for the power of technology, overlooking how technology can be an integral element to augment their teaching and open doors to new goals.

On the other hand, a more selective group of teachers may be aware of how suitable new media technologies can help them to better achieve their goals while acknowledging both the positive and negative effects of the chosen technology on their classes and students. These teachers are able to strike a relative balance between their own power and the power of the technology.

Therefore, studying teachers' selection and uses of new media involves implicitly unpacking power relations between teachers and technology. These relations are determined by teachers' approaches to the use of technology. Therefore, understanding these power relations is likely to help teachers to develop insights into their own approaches, an essential step before developing a more critical approach to the use of technology. Thus, applying the critical theory of technology as the theoretical framework for this study appeared to be a suitable solution.

Another challenge I faced when considering the analytical potential of Feenberg's (1991, 1999, 2002) critical theory of technology was the need to adapt the theory's original focus and

context of this theory. In his first book, *Critical Theory of Technology* (1991)*,* Feenberg's main

concern was the failure of Marxism to establish a more democratic society through the use of

industrial technology and machinery. Feenberg spent much time deconstructing the Marxist

approach to technology, focusing on the relationship between technology and labor in industry.

However, industrial technology has little relevance to this study of new media and Composition

Studies. Furthermore, establishing and promoting democracy in the composition class, though a

legitimate goal, is beyond the scope of this research. Therefore, the question of whether to use

Feenberg's analytical framework still remained unanswered.

Thinking more about Feenberg's concept of democracy, I realized that he hoped that

technology would help to create a more democratic society. The idea of social change is built

into almost all critical theories, whereas the social change I envisioned in this study was

substantially different. My study envisioned social change resulting from helping composition

teachers to become more critical users of new media technology and allowing them to analyze

their own practice. Although my goals may appear unrelated to those envisioned by traditional

critical theorists (e.g. challenging disenfranchising conditions), this is a desirable social change

that computers and composition scholars have been promoting for decades as detailed in Chapter

One.

Weighing these challenges and their possible consequences for my study, I made my

decision to utilize Feenberg's (1991, 1999, 2002) classification of approaches to using

technology as an analytical framework to be complemented by an inductive analysis of data as

explained in the next chapters. This decision entailed using not only Feenberg's critical theory of

technology, but also other theories discussed in his writings, namely instrumental and substantive

theories. Furthermore, analyzing teachers' uses of new media technology requires examining

their relationship to technology in general, and these relationships involve power patterns that I discuss in the discourse of findings in Chapter Five. By selecting and utilizing Feenberg's classification, I not only secured a suitable analytical tool for this study, but was also assured that my use of critical theory research paralleled Feenbergs' purposes and context. In other words, Feenberg's classification was not fully stripped from its epistemology.

Introduction to Feenberg's Critical Theory of Technology

As Sullivan and Porter (1997) explained, and as Feenberg (1991) himself stated, Feenberg's critical theory of technology (1991, 1999, 2002) is a re-embodiment and reconstruction of Marxist theory. It can be considered a modern version of Marxism in that it considers not only the new developments in industrial technology, but also the political and historical changes that forced new patterns of relationships between man and machines. Nevertheless, confining Feenberg's theory to a subset of Marxism is unfair because he was concerned with issues of communication and democracy, or with how technology enhances communication and provides a more suitable environment for democracy.

It is worth mentioning that I used Feenberg's later writings to present and elaborate on the classification of views of technology in his theory. I used Feenberg's 1991 book for the basics of his classification of theories and views of technology, but I used primarily his later version of the theory (Feenberg, 2002), his challenge to other theories of technology (Feenberg, 1999), and some of his later articles (Feenberg, 2003, 2009). These writings present a more comprehensive view of the uses of technology and serve to link his classification of theories and approaches to the field of Composition Studies. My rationale for this choice was that in his later writings, Feenberg shifted gears to an analysis of the technology of computers and the Internet in social contexts, such as education and teaching (Feenberg, 2002), giving his theory great relevance for

our field and for this study.

To provide some perspective on my choice of Feenberg's theory with its embedded classification of approaches, some discussion of other theories was necessary.

Theories of Technology

In his book *Questioning Technology,* Feenberg (1999) proposed two basic questions about "the role of the human action in the technical sphere and the neutrality of technical means" (p. 9). Depending on the range of answers, Feenberg classified the theories. According to Feenberg, there are four theories and approaches to technology: determinism, instrumentalism, substantivism, and critical theory. I start here with a summary of the answers to these two questions, before discussing them in greater detail below.

According to Feenberg (1999), determinism describes technology as autonomous and neutral; humans have no power over technology or its development, and technology is neutral and does not interfere with the way it is used to accomplish the user's goals. The second theory, instrumentalism, perceives technology as humanly controlled and neutral. Technology as understood by inturmentalists, is controlled by humans. It is a tool or an instrument to achieve certain ends without any possible interaction between the technology and these ends. The third theory, substantivism, describes technology as autonomous and value-laden. According to this theory, technology is a social artifact that comes with its own values. These values may interact with and alter the purposes for which technology is used with little human agency. The last of the four theories is the critical theory of technology that posits that technology is humanly controlled and value-laden; technology is a social artifact that is used to achieve certain ends in a process controlled by a human user.

Feenberg (1999) used these rather simple answers in order to distinguish between the

four theories of technology. In the following section, I elaborate each of these theories in order to illustrate how Feenberg's classification is a suitable framework for this study.

Deterministic Theory of Technology

Deterministic theories of technology describe technology as autonomous and neutral (Feenberg, 1999). Autonomous has a two-fold meaning: first, technology has its determined course of development without any effect or interference from social contexts; second, technology can be explained in isolation from the social context in which it is developed or used because humans have no power over technology or its development. Smith (as cited in Friesen, 2008) explained that technological determinism is "the belief that social progress is driven by technological innovation, which in turn follows an inevitable course" (p. 13). It follows therefore, that progress is attributed to technology without any interference from the humans who use it or the social contexts in which technology is developed or used. In other words, humans do not interfere in the development of technology, which in turn does not interfere with how the user accomplishes their goals through it.

Therefore, determinism does not give any weight or credit to human agency in either developing or achieving goals with the use of technology. Similarly, determinism does not account for the social context in which technology is developed or the context of its achievements. This deterministic approach conflicts with the scope of this study whose purpose was to explore how humans (composition teachers) use new media technology. Teachers are at the center of this study, and their choices and uses of technology are the center of examination. Since determinism does not acknowledge the role of humans, in selecting and using technology, it cannot be utilized in understanding these humans or their choices. Accordingly, determinism will not be included in the analytical framework of this study.

Excluding determinism from the pool of theories of technology leaves three remaining theories that were identified and explained by Feenberg (1999). I will begin with instrumentalism.

Instrumental Theory of Technology

Instrumentalization is the common view of technology. In this conception, technology is subordinate to the goals of other spheres (Feenberg, 1991), such as politics and education. Instrumentalists view technology as a tool to be used to achieve predetermined goals, while ascribing no intrinsic value to it because it is neutral. In a later publication, Feenberg (2003) explained instrumentalism as a theory in which technology is value-free, or simply an instrument used by humans to fulfill their objectives. Instrumentalists believe that technology is neutral and, accordingly, there is no need to think critically about it or about its potential or impact. They believe that technology is a tool they can manipulate in order to achieve their goals. It has no "inner purpose" (p. 5) and should be controlled.

Explaining the neutrality of technology, Thomson (1999) stated that technology does not interact with the ends it is used to achieve. Technology is a tool that is subject to a human who utilizes it to achieve certain goals. Additionally, technology does not affect the user or the goals being achieved. In a more detailed account, Feenberg (1991) presented four dimensions of the neutrality of technology as understood by instrumentalists:

1. Technology does not interfere with the ends for which it is used. Microsoft Word, for instance, can be used to achieve a variety of ends: typing an assignment, printing out an assignment, formatting an assignment, among other purposes. The software is thought to be passive while being used to achieve these goals; it is only a medium for typing, printing, or formatting.

2. Technology can be easily transferred from one context of use to another, and cost is the main barrier to this transfer rather than politics. A teacher relying on Web-based technologies in one school can transfer the use of the same technologies to another school without considering the administrative environment, for instance, in the second school.

3. Technology is a universal truth that does not change across social and political contexts. Therefore, technology is expected to always perform the same way no matter where it is being used. Accordingly, the teacher in the previous example would expect technology to perform the same way, and at the same level of efficacy at both schools even though it is being used with different groups of students.

4. Technology is expected to be equally efficient in different settings. In other words, positive results would be expected from using technology regardless of the place or time of usage. In Composition, technology has been seen mostly as a means for elevating student writing skills (e.g. Godwin-Jones, 2008) and enhancing teaching environments (e.g. Hudson, 2007) without much consideration of the conditions or contexts of its use.

Feenberg's (1991) explained technological neutrality as perceived by instrumentalists by reinforcing the idea that technology is a passive instrument to be exploited by humans. It operates in a variety of ways and across contexts in order to achieve a range of goals at the same level of efficiency. From the perspective of the instrumentalist, not only is technology neutral in the achievement of various purposes, but it is also neutral to the contexts and conditions under which it functions. This instrumental perspective has been dominant in the social sciences and the humanities in which technology is regarded as a tool for efficiently implementing and enacting desired ends without believing technology to have any innate values that could affect the goals of the user.

Many teachers in Composition perceive technology as an instrument whose main purpose is efficiency, by assisting teacher's to achieve their pedagogical goals with greater efficacy. These goals may include better communication (e.g. Cardon & Okoro, 2010; Maloney, 2007), better student writing skills (e.g. Fulwiler & Middleton, 2012), or better teaching/learning environments (e.g. Hudson, 2007). In March 2012, when I attended the *Conference on College Composition and Communication*, almost all panelists presenting on topics relating to computers and composition used the words "tool," "instrument," "medium," and "vehicle" to describe the technology mostly new media, they were discussing. In their presentations, participants spoke of teacher's goals for using a certain technology (Blythe, 2012; Mullen, 2012; Swift, 2012) without sufficient discussion of their role in choosing and employing the technology to achieve those goals.

In addition to perceiving technology as a tool to achieve a variety of goals, composition scholars have largely adopted the opinion that computers and new media technology are an effective means for communication (see for example Blythe, 2003; Boyd, 2008; Hirvela, 2007; Kress, 1999; Lewis, 2011). This instrumental perspective of technology has prevailed in the field of Composition for many years. Teachers and scholars believed that computer technology is a neutral medium through which two or more parties interact and communicate. The published research on the use of computer technology as a medium for communication seldom described the communication activities that teachers designed for their students. Teachers used different mediums (e.g. wikis, blogs, discussion boards, and chat rooms), at different modes (synchronous vs. asynchronous), and to achieve different instructional goals (e.g. collaborative writing, peer review, and class discussions of readings). Yet their activities were seldom discussed.

The lack of reporting details of learning activities and/or the teacher's role in designing

these activities is a typical characteristic of the instrumental theory of technology. A critique of this theory will be discussed in the next section.

Critique of instrumentalism. Gunkel (2009) critiqued the perspective that computer technologies are tools for exchanging messages and information between two human interlocutors without any interference in that exchange. Gunkel refuted this view by arguing that from the technical standpoint, a computer does interfere with human interaction when for instance, it rejects a message, or archives it without permission, or generates its own message (e.g. an error message) in response to the user's action. This argument, which was supported by Cathcart and Gumpert (1985), and Pool (1985), demonstrates that computer technology, and technology in general, is not simply a neutral instrumental medium because it may implicitly disturb the communication process among humans.

Gunkel (2009) strongly opposed the concept of technology as an instrument due to its interference into the user's activities. Although Gunkel did not provide examples to illustrate his argument, I would suggest a simple technology such as email. Email service is not neutral to either the sender or the receiver. Consider, for example, the way many email services automatically filter spam messages without the user's permission, with the result that the server may spam important messages. An email service may also interfere when a user tries to send a message without a subject line, as G-mail does by issuing a warning message. These examples refute the neutrality of technology even at the technical level.

Complementing Gunkel's (2009) critique of the technicalities of using a computer technology as a neutral medium for communication, Wertsch (2002) critiqued the dynamics of communication through computer technology in an attempt to root out the widely-accepted idea of neutrality held by many composition teachers. He discussed technology's functional

interference in the communication and learning process, as well as the new means of computer-based communication which allow participants to meta-comment on one or more posts by other participants. To explain this phenomenon he described computer-based asynchronous communication, a feature that gives participants ample time and a more comfortable setting to read and comment on other participants' contributions. Such factors are absent in face-to-face communication. Subsequently, Wertsch concluded that the innate characteristics of computer technology and computer-based communication have affected both the process and characteristics of communication. Wretsch's (2002) conclusion takes computer technology beyond instrumentalism, in which computer technology is described as an instrument or a neutral medium of communication. He demonstrated how technology adds layers and dimensions to communication practices, while instrumentalization theory emphasizes the neutrality of the media or the tool. In Wretsch's perspective, technology brings its own features and values to communication, and consequently, to the learning process.

With the advance of new media technologies, the technical and functional features of computer technology discussed above become more developed and interactive. Gunkel, (2009) described the phenomenon as "another social actor with whom one communicates and interacts" (p. 66). Both Feenberg (2002) and Selber (2004a) expanded on this concept, describing technology as a social artifact. This is a core principle of the substantive theory of technology described below.

Substantive Theory of Technology

According to Feenberg (1991), substantive theory represents technology as a social artifact with inherent cultural values and goals that may dominate the values and goals of its user. In this interpretation, the use of technology can prompt the user to change personal goals

and values. In Jacques Ellul's view, technology can be a "new type of cultural system that restructures the entire social world as an object of control" (Ellul as cited in Feenberg, 1991, p. 7). This perspective ascribes hegemonic attributes to technology that, like a superpower, can change and restructure the social world in which it is used. For example, chatting and instant messaging have changed how people communicate with others around the world. They provided people with an instant and affordable means of communication, replacing the expense and inconvenience of placing international phone calls. This change in behavior and means of communication represents a change in the social world wherever technology is used.

Explaining this change in behavior, Feenberg (1991) cited Heidegger's argument that technology dominates us, and that we, the users of technology, are transformed by the power of the technological processes in which we are engaged. Many teachers, for instance, realized that by making use of the insert-comment feature of MS Word they could provide more extensive and detailed feedback for their students' assignments. As a result, many teachers switched to this technology instead of writing their comments by hand (e.g. Farag-Allah, 2008; Silva, 2012). Moreover, the introduction of the Internet and email technologies fundamentally changed how teachers communicate with their students, with face-to-face conferences being replaced by electronic mail and discussion forums (e.g. Hirvela, 2007; Hudson, 2007). These examples illustrate how technology has altered social and cultural beliefs and long-held values in the classroom.

In composition classes, the affordances of web-based technologies such as blogs and wikis, resulted in changes in the medium and dynamics of peer review, as teachers moved increasingly to using online sessions (e.g. Chang, 2012; Guardado & Shi, 2007). With these new media technologies, the dynamics of peer review sessions are transformed (Heift & Caws, 2000;

Liu & Sadler, 2003). Because students can take more time to read and comment on each other's drafts, they are able to focus on deep-level writing concerns rather than on surface-level concerns (Matsumura & Hann, 2004; Tuzi, 2001). Wertsch (2002) named these longer and deeper feedback comments, "meta-comments." An interesting corollary is that web-based technologies not only promoted these changes, they also made the new practice more appealing than traditional peer review sessions had been in the past.

In addition to possessing its own values and goals, technology is a social artifact that may change a situation and interfere with the user's goals, according to substantive theory. Feenberg (2002) explained that for substantivist technology may start with abstract relations with the human user and their goals. However, as the user engages more with the technology, it can create more integrative relations. This change in relationship is attributed to technology's potential and its hegemonic force, which are capable of generating new goals that may become a more "powerful and persuasive alternative" (p. 12) than the original goals set by educators. Thus, substantive theory goes beyond the idea that technology is a passive tool, as described by instrumental theory. On the continuum of theories of technology, substantivism is at the opposite end of the spectrum from determinism.

Elsewhere, Feenberg (2003) elaborated further on substantive theory, arguing that technology is chosen because it has intrinsic value; its value consists in helping the user to achieve predetermined goals, as well in achieving other goals which are set in the course of using the specific technology. For example, a teacher may require students to type their assignments in Microsoft Word so that their documents can be formatted in accordance with academic standards. As students start typing in Word, they become aware of the spell-checking function that identifies and fixes their spelling errors. To students, submitting an error-free assignment is

more important than submitting a properly-formatted document. This situation illustrates how the embedded values of the technology claimed more usefulness for the user than the teacher's (or the students') original intent.

From a substantive perspective, technology is not a tool or a medium; it becomes a social environment that dictates particular rules and lifestyles. An illustration of this change is the dramatic change in the practice of celebrating birthdays. Before the spread of the Internet, people celebrated by going to birthday parties, sending a greeting card and maybe a gift, or phoning the birthday person. When the Internet became more available, many switched to sending e-cards to the birthday person's e-mail. Today, with the popularity of social networking sites, birthday messages are simply posted to the person's profile page on a social media site. Thus, the Internet has reduced direct human interaction to a few words posted in cyber-space, a clear demonstration of how technology has rewritten our social practices.

Feenberg (2002) strongly contended that each time we choose to use a technology, we are unconsciously choosing to change some aspect of our social life. Our choice of technology shapes us as humans. It follows that if a human who uses technology is shaped by that technology, then a teaching/learning context is also shaped by the teacher's choice of technology for the class. Because of the impact that technology has on its users, teachers must play an active role in making informed and critical decisions as to which technologies to use and how to use them in their classes. This active role challenges the substantive view of technology as explained in the following section.

Critique of substantivism. Applying substantive theory to the realm of education, Papert (1987) presented its central tenet in somewhat different terms. Instead of using the term substantivism, he substituted *technocentrism*. Technocentrism means that the technical object

becomes the center of attention. Technocentrics believe that computers have a positive impact on users with minimal interference or guidance from them. They expect computers to advance learning and thinking, and push the human factor into a back seat. Papert challenged this technocentric approach contending that technology, particularly computer technology, should not be given a higher status than the human user, or given credit for achieving extraordinary benefits. Rather, humans use computers to achieve things that computers are incapable of achieving on their own.

In a later rejection of the technocentric approach in the context of composition classes Takayoshi (1995) proposed that the technocentrists' claim that computers are responsible for positive changes in the composition class problematizes the place of technology in teaching from being a teacher's choice to playing the role of the teacher in the class. Takayoshi pinned the responsibility for this technocentric, or substantive approach, on researchers in the field of computers and composition who emphasize the role of computers at the expense of the teachers who choose to make use of computers. Frequently, researchers' focus has been directed to the technologies themselves or to students and their claimed learning improvement with no empirical scholarship about the teacher who is ultimately responsible for choosing and integrating technologies into the classroom, and for designing activities that allow students to learn better. In articles reporting their use of technology, most teacher-scholars ascribed numerous benefits to technology, giving it the primary credit for these benefits. This substantive approach to technology, as Takayoshi (1995) strongly contended, perceives technology as the optimal solution that can resolve all educational problems. Takayoshi stated that many scholars in the field of computers and composition believe that "computers would automatically lead to improvement in student writing, composition instruction, student learning, and classroom

dynamics" (pp. 49-50).

Much recently published research on the subject supports Takayoshi's assertion. The research demonstrates a broad consensus on the many benefits of using a given computer technology, with scholars ascribing all improvements in student performance to the chosen technology. The reported benefits included better English literacy skills (Zhang, 2010), a strong voice in writing (Tougaw, 2009), enhanced student attention to audience (Rosinski & Squire, 2009), effective collaborative writing (Carr, Morrison, Cox, & Deacon, 2007; Lundin, 2008), better communication (Cardon & Okoro, 2010), active participation and engagement (Beeland, 2002; Maloney, 2007), critical thinking and creativity (Lundin, 2008), improved writing performance (Arslan & Şahin-Kizil, 2010), and writing fluency (Turner & Katić, 2009).

In these articles and many more, the authors concluded that the given computer technology being used was responsible for reported improvements. Researchers used phrases like "blogging has the potential to help construct individual identities" (Zhang, 2010, p. 266) and "wikis, blogs, social networking, and so on --all encourage a more active, participatory role for users" (Maloney, 2007, p. 2). Such attitudes toward new media technology marginalize the role of the teacher who uses the technology, attributing all achievement and improvement to the potential of the new media technology alone.

The substantive and instrumental views of technology create a dichotomy in the the perception of technology and its role in instruction

Dichotomy of Theories of Technology

Instrumental and substantive theories share what Feenberg (2002) called the "take it or leave it" attitude (p. 8). If we adopt the instrumental view of technology, we choose to accept the technological designs and prescribed uses of technology for its efficiency at completing tasks.

Conversely, if we adopt the substantive perspective, we decide to surrender to the cultural domination of technology unless we decide to give up on all technology and retreat to a simpler, technology-free lifestyle. The two views do not give us a middle ground or offer a balanced approach to technology. Nevertheless, I included both views in this analytical framework because many composition teachers can be situated on either end of the continuum of theories in their use of new media technologies. While many teachers see new media technologies as tools for achieving their objectives and a medium for communication and delivery of content, many others see these technologies as the solution that will magically boost their teaching contexts and produce desirable effects in their students' writing skills. The prevalence of these views required the inclusion of both the instrumental and substantive approaches in this analytical framework so as to capture all possible perspectives on using new media technology in first-year composition classes.

Critical Theory of Technology

This theory holds the middle ground between instrumental and substantive theories, between technology as a tool and technology as the solution. Feenberg's (1991, 2002) critical theory of technology understands technology as more than the tool of instrumentalism, whereas it rejects the super power of technology of substantivism. Critical theory of technology describes technology as a choice made by individuals, a choice that leaves its imprints on us and on our future choices. As teachers of composition, our choice of new media technologies for our classes broadly affects the technology choices we will make in the future after experiencing the positive and negative repercussions of our original choice. In order to make such decisions, we must be freed from the illusion that technology is only a tool and from the equally erroneous illusion that technology is responsible for every positive outcome. In other words, we need to be critical users

of technology.

Feenberg's (1991, 2002) critical theory of technology rejects the instrumental view that technology is neutral because it takes into account the political, social, and cultural conditions in which technology is used. Technology is not neutral in its design and development, nor it is neutral in its implementation. The critical theory of technology, according to Feenberg, considers technology as ambivalent; it fluctuates between different design paths and can be used in different ways. Simultaneously, the critical theory of technology challenges the high-handed authority of substantivism (Feenberg, 2003) by recognizing the perils of humans being controlled by technology and by providing more choices in the use of technology. Critical theory acknowledges that the main problems of using technology are not associated with technology itself but with the user's inability to control and manipulate it. Humans should be able to control technology instead of being controlled by technology, and this will allow them to achieve more varied goals.

Feenberg (1991, 2002) asserted that the critical theory of technology does not simply combine certain elements of instrumentalism with other elements of substantivism. Critical theory borrows the concept that technology can be controlled from instrumentalism, but it does not consider technology to be a mere tool or medium for delivering content; rather it describes technology as a framework within which human users work and function. From substantivism, on the other hand, the critical theory of technology borrows the concept of technology as value-laden. These values, however, are context-bound, as Selwyn (2010) strongly attested, and can have a different impact in different settings. Selwyn explained that the focus of critical theory is on interpreting the use of technology within a social context. Similarly, Takayoshi (1995) described the critical theory of technology as a representation of the reciprocal relationship

between technology and culture that has been ignored in both instrumental and substantive theories. Thus, critical theory is unique and distinct from both instrumentalism and substantivism.

The critical theory of technology calls for human intervention in technology to make it more controllable and adaptable to the context of its use so as to achieve the goals of the user. Feenberg (2002) presented two significant concepts that, I believe, are central to the critical theory of technology. The two concepts of concretization and associated milieu were first introduced by the French philosopher Simondon in 1958.

Concretization means "the discovery of synergisms between technologies and their various environments" (Simondon as cited in Feenberg, 2002, p. 186). It means that predesigned and structured technologies can play social and functional roles, moving away from their original abstract functions. Feenberg elaborated on this concept stating that a fundamental feature of concretization is that any technology with its embedded potential (or values, in the language of substantivism) for technical progress is capable of accommodating certain social needs and solving social problems (or goals, in the language of instrumentalism). In selecting technology for a specific environment, compatibility between the technical and natural elements of that environment should be a basic consideration. In education, the teacher's prime role should be to choose technology that is compatible with his or her beliefs and with the technical and social particularities of the context in which this technology will be used. In other words, the teacher is expected to create an associated milieu, or "the combined technical and natural conditions" (p. 187).

An *associated milieu* mediates between the designed and structured technologies and the environments where these technologies are used. As Feenberg (2002) stated, machines such as

computers need to be adapted and smoothly integrated with all their elements within the environment. The teacher's role is to link students to a given technology or a set of technologies by setting instructional goals and promoting certain practices and attitudes. The decision a teacher makes about the use of technology in the classroom leads to specific results. Accordingly, Feenberg's (1991, 2002) critical theory of technology is used in this study as a convenient framework for exploring teachers' approaches to using new media technologies. Within this framework their choices of technologies and the particular ways they implement these technologies in first-year composition classes will be analyzed.

This brief discussion of Feenberg's (1991, 2002) classification and his explanation of the instrumental, substantive, and critical approaches to technology illuminates the rationale behind choosing Feenberg's classification as an analytical framework for this study. Feenberg's classification was used because it offered a fresh lens for analyzing teachers' uses of new media technologies with students in first-year composition classes. I argue that Feenberg's classification of the three dominant theories of technology, along with the concise definitions he gave for each theory (complemented by research-based operational definitions in Chapter Three), can be a wholly novel way to conduct critical research in the field of computers and composition, a tradition that has not been in flux in this field, as I discuss in the next section.

Critical Research on Composition and Technology

According to Sullivan and Porter (1997), critical research on the use of technology is research that aims to explore and examine pedagogical practices, not only as a critique (see Ruefman, 2010; Wells, 2009), but as a springboard for future improvement. Along the same lines, Oliver (2011) asserted that critical aspects of using technology have been mostly ignored in the huge canon of published scholarship. This absence of critical perspectives caused some

scholars (e.g. Czerniewicz, 2008) to doubt the robustness of existing research, labeling it

"'professional studies," rather than scholarly ones, or., studies in which teachers describe their

pedagogical methods as opposed to research that systematically explores, examines, or analyzes

a phenomenon in the classroom context.

In this study, I aimed at unpacking teachers' uses of new media technologies in their first-

year composition classes by exploring the technologies they use and the purposes of using them.

Unpacking these uses was not the ultimate goal; rather, the goal was to help teachers be more

critical about the technologies they select for their composition classes, as advocated by Sullivan

and Porter (1997).

The lack of critical research on writing technologies was extensively described by

Sullivan and Porter (1997) who offered a number of explanations for this gap in research.

Teacher-scholars investigating the use of new media technologies in the composition classroom

have aggregated their efforts around a limited number of questions mostly concerned with the

potential benefits of using a wide spectrum of technologies. Sullivan and Porter found that

researchers showed a tendency to ask the same types of questions, such as, "What is THE effect

of THE computer on cognitive development?" (Papert, 1987, p. 23). They critiqued these types

of questions, asserting that they tend to produce similar answers. Consequently, they fail to

advance the field because they impede the accumulation of comprehensive knowledge.

As an example, in a study that aimed at exploring the use of wikis in teaching (Carr et al.,

2007), the research question was "in what ways could wikis assist collaborative learning?" (p.

268). This type of question reflects the substantive perspective, a perspective that believes

technology itself can "assist" or make a difference. This type of question limits the research in

computers and composition to technologies, by ignoring the other elements present within the

teaching context, especially the teacher.

I argue that knowledge resulting from this type of research is questionable for two reasons: it lacks comprehensiveness and it is not useful to other teachers. It is not comprehensive because it does not account for all the ramifications of integrating a certain technology into the composition classroom because this knowledge is collected from one angle of integrating technology in teaching composition. Moreover, the resulting "knowledge" cannot be very useful to readers of such research because they have no way of judging whether a given technology would be useful in their particular teaching context. Teachers need details about which features of a technology were or were not employed, what activities the teacher used to integrate this technology in class, the rationale for using a particular technology over others, and the instructional objectives that the use of this technology would help to accomplish, as well as many other details necessary to enable teachers to make use of the findings of published research. As I worked on my research, I considered the drawbacks of these studies. I was intent on providing all possible details about new media technologies and their actual use in teaching first-year composition. Unsatisfied with what seemed to be the dominant type of questions being asked by other researchers in the field, my initiative was to provide these details for the benefit of composition teachers and researchers who would read the published results of this study.

In addition to the serious problem of limited research questions, Sullivan and Porter (1997) contended that the ultimate aim of critical research should be social change. One of the forms of this change can be "increased power for computer users" (p. 20). As teachers become more aware of the approaches to using technology that drive their pedagogical and technological choices, they are likely to become more empowered to change what is unsatisfactory in their practice, and to make informed decisions about future use of technologies in their classes. This

change may be what Sullivan and Porter meant when they stated that critical research should push for "critical reflection, challenge, and then positive action" (p. 21), or future improvements in practice. This interpretation of Sullivan and Porter's view of social change resonates with their own concept of critical research as research that aims at improving future practice in the use of technology.

Sullivan and Porter (1997) presented a concrete definition of practice as "action that through a certain amount of repetition and experiential testing has become a habit or strategy that works and that is or can be passed on to others" (p. 22). In relation to this research, this definition means that when I examine teachers' pedagogical practice with new media technologies, I mean repeated practice that a teacher has been using over a period of time. This interpretation was used for certain survey questions (see Appendix A) that aimed at exploring teachers' recent choices and uses of new media technologies.

New Media Technologies

The continuing evolution and rapid development of new media technologies requires that the methods used for integrating them into the classroom be continually revised (Bloch, 2008). Bloch believed that all new media technologies require some adaptation and manipulation by the teacher to "meet the specific goals for teaching writing" (p. 48). Bloch's belief echoes Takayoshi's (1995) assertion that as computers gain more status in the composition class, teachers need to consider the effects of computers on their pedagogical choices and, of course, on their students. In one of his latest articles, Feenberg (2009) mentioned that once a new technological innovation stabilizes, researchers start to pay more attention to its social and political aspects. This study is one attempt to focus on the use of new media technologies by first-year composition teachers, as the technology continues to shift and stabilize into new forms.

Research on new media technology has generated many new terms that may or may not mean the same thing. In the following section I discuss a number of these terms and their definitions before I offer my interpretation of the term "new media" as I use it in this study. It is worth mentioning here that I do not claim this discussion of terms and definitions to be exhaustive, since this is beyond the scope of this study. This discussion was intended to account for the choice of certain definitions over others.

Terms and Definitions

Examining some of the published research on the use of new technologies in teaching over the past few years, I located at least six terms used by different scholars to mean similar or relatively similar things. Some of these terms are umbrella terms under which a variety of technologies can be grouped, such as new technologies (McVee, Bailey, & Shanahan, 2008) and computer technologies (Grover, 2010; Subramaniam, 2007). Other terms are more confined to the Web as a medium, such as Web 2.0 (Fahser-Herro & Steinkuehler, 2009; Holtzman, 2009; Maloney, 2007; Motteram & Brown, 2009; Pegrum, 2009; Sturm, Kennell, McBride, & Kelly, 2009). More recently, a few more terms came to life to denote the more modern technologies available, such as digital media (Braun, 2006; Journet, 2007), digital technologies (Francis, 2010; Wells, 2009), and new media (Ball, 2004; Burnett & Merchant, 2011; Cardon & Okoro, 2010; McKinney, 2009; Ruefman, 2010). Each of these terms imply a technology or a set of technologies as well as the outcomes of using these technologies. I briefly discuss the technologies and outcomes that are packaged with them below.

Technologies. In her definition of media, Selfe (2007) meshed hardware and software components, stating that media are "the technology on which – and the technological systems through which – information is delivered or stored: computers, drawing paper, photographic

paper, television, CDs, DVDs" (p. 195). Technology hardware dominated this definition, leaving little room for software which she defined as "technological systems." Another characteristic of this definition is the way it confined media to a means of delivering or storing information, overlooking the extensive use of media in producing information and multimodal texts. Using this definition of media with terms like digital or new media does not adequately represent all the possibilities of using new technologies for producing and sharing knowledge.

Throughout his book, Kress (2003) used the terms new technologies, new media, new information and communication technologies interchangeably, arguing that the two main features of these technologies are multimodality, with particular interest in images, and interactivity that allows the reader to "write back" (p. 6) in a two-way communication process. Building on Kress's (2003) understanding of new media technologies, Ruefman (2010) closely captured the spirit of these technologies that "allow the reader to transcend the writer/reader boundaries and actively participate in the creation and distribution of a text, as well as act as a consumer" (p. 29). Ruefman's interpretation of new media technologies reflects the developments in new social media technologies that encourage more interaction and communication between the producer and consumer of multimodal texts, texts "appealing to two or more of the reader's senses" (p. 36). Despite the seeming thoroughness of Ruefman's interpretation, it overlooked the media through which interaction and communication take place.

Another term that is widely used in the sphere of instructional technology is Web 2.0. Web 2.0 refers to web-based communities (Pegrum, 2009; Rüschoff, 2009) and applications (e.g. blogs, wikis, and social networking sites) that facilitate interactivity, communication, collaboration, and user input (Holtzman, 2009; Maloney, 2007; Motteram & Brown, 2009; Sturm et al., 2009). Web 2.0 has been an appealing term to many scholars over the course of the past

decade because these technologies can serve as a platform for achieving many pedagogical objectives, such as open communication, engagement of both producers and users of text, collaboration, and knowledge manipulation, as asserted by Elliott (2009). The term Web 2.0, however, suffers from two critical problems that disqualify it from being a comprehensive term.

The first problem is that Web 2.0 represents the middle wave between the information-oriented web, known as Web 1.0, and the semantic web, or Web 3.0 (Pegrum, 2009). Pegrum explained that Web 3.0 refers to the "*semantic web*" that relies more on synthesizing information from the web, and the "*geospatial web*" that makes use of location to index and archive information (p. 21). Although Pegrum alluded to the future nature of the Web in his interpretation of Web 3.0, it is safe to say that this future is actually here and now. The semantic web became available through Really Simple Syndication (RSS) feeds that collect news of interest to the user from different sites so that they can be read in one place, while geospatial web became available in geo-tagging as Facebook video- and picture-tagging features and as Google Maps' place-tagging service. The rapidly-approaching Web 3.0 technology makes the term Web 2.0 a candidate for rapid withdrawal from our technical lexicon.

The second problem is that Web 2.0 technologies are by definition limited to web-based technologies and sites. This limited focus of the term marginalizes other systems, to use Selfe's (2007) word, that can be operated and used outside the Web, such as moviemaking and audio editing software packages that students can use in multimodal composing. This limited concept of new technologies is not adequate to express or encompass many of the learning outcomes associated with new technologies.

Outcomes of technologies. I used the word *outcomes* rather than *products* because some technologies (e.g. Web 2.0) may produce communities of interaction as well as texts or

compositions. "Outcomes" is a more encompassing term than "products."

Like technologies, the outcomes of new media technologies have been labeled differently by different scholars. While Ball (2004) talked about new media texts that incorporate semiotic modes beyond print media, Selfe (2004) gave a more detailed definition of new media texts, describing them as "texts created primarily in digital environments, composed in multiple media (e.g. film, video, audio, among others), and designed for presentation and exchange in digital venues" (p. 43). In a later account, Takayoshi and Selfe (2007) labeled these texts as multimodal texts, emphasizing the status of images and sound at the expense of alphabetic text. Although Ball, Selfe, and Takayoshi and Selfe did not tell us how these texts are composed, it can be assumed that online and offline technologies are employed to create these texts. Yet, the definitions of new, multimodal texts overlooked the means of disseminating or sharing these texts, a drawback for which Web 2.0 technologies can compensate.

The major outcome of Web 2.0 technologies is to create communities of two-way communication between users or, as Rüschoff (2009) asserted, the goal of Web 2.0 spaces is to share information, boost communication and creativity, and increase collaboration. These spaces are read/write, participatory environments where any user can contribute to the dialogic knowledge-building by adding comments. This promotes "open communication, decentralization of authority, freedom of share and re-use" (Sturm et al., 2009, p. 369). Web 2.0 enables open communication and user-generated responses to texts by other writers, thus complementing multimodal texts. Providing a platform for sharing and opening channels of communication and possibilities of collaboration through feedback can lead to representation of new media texts.

This brief discussion of the terms and definitions commonly used to describe new computer technologies and the pitfalls of many of these definitions reveals that most of

definitions revolve around a single element of new media, namely the technologies, while a second element, the text produced, remains peripheral.

A new Perspective

As this was a critical research study aimed at exploring classroom uses of new media technologies by first-year composition teachers, a definition that embraces all the contextual elements of its use was necessary. These elements include the user, the technology(ies), the text produced, the communication resulting from sharing this text, the reader/viewer of the text, and the medium of dissemination and interaction. I agree with Feenberg (2002) that new media do not exist in a vacuum but in a social context. If a technology is not used, then it does not exist in a context (Lei & Zhao, 2007). In other words, the existence of technology assumes its use.

I argue that the definition offered here encompasses these elements. I see new media as technologies that enable a user to incorporate two or more digital modes (e.g. text, hypertext, images, video, audio) to produce a text that can be shared through digital channels (e.g. Web 2.0 sites) and that can generate multi-directional communication that utilizes users' receptive (reading and listening) and productive (writing and speaking) skills.

This definition, I believe, represents not only the technologies themselves, but also the contextual factors surrounding the use of these technologies. These are:

1. Modality: the author uses two or more modes in producing texts through new media. Modes include alphabetical text, visual (e.g. still images, animated images, videos), and audio (e.g. music, sound effects, narration);

2. User: the author or producer of a new media text can be the receiver of additional texts produced by the reader or viewer;

3. Interactivity and communication: new media provide for multi-directional interactions instead of one- or two-way interactions when the author and the viewers or readers engage in that manner. Think of the commenting tool on Facebook, YouTube, or blogs where users do not simply comment on the original text but on each others' comments as well; and

4. Engagement of users: interpreting new media texts and interacting via any medium entails the use of at least one receptive skill (reading or listening) and one productive skill (writing or speaking). Using multiple skills and senses ensures deeper engagement by the user.

This contextual definition of new media reflects the purpose of this study: exploring composition teachers' perceptions of using new media technologies with their first-year composition students.

<div align="center">**Teachers and Using New Media Technology**</div>

Bruce (1999) argued that technology goes beyond the hardware and software we see and use. He described it as "an expression of the ideologies, the cultural norms, and the value systems of a society" (p. 225). Bruce's argument was supported by Feenberg's (2002) assertion that the existence of technology implies its use in a context. These arguments about the importance of context for understanding technology imply that to understand a given technology and how it works, it is necessary to examine the context of its use. Using technology may become so complex that it necessitates dynamic understanding not only of the given technology, but also of its relation to social contexts and human users (Hawisher & Selfe, 1999). Moreover, Takayoshi (1995) contended that the social conditions related to the integration of the technology can cause the technology to succeed or fail. She also observed that for decades our field has

stripped computers, and technology generally, from their social and cultural properties and conditions, to promote their use as tools which assist in changing outcomes. Hawisher and Selfe, and Takayoshi agreed that technology should not be described as a tool for learning apart from the context in which it is used.

Context of Teachers and Technology

One of the flaws in the research on the use of technology in computers and composition is the absence of discussion on the social context of its use. By social context I mean the teaching/learning environment that a teacher creates to embrace his or her use of technology. Elements like the teachers' beliefs, their choices of technology, their way of integrating technology, their instructional goals, and their assessment plan all constitute that environment. Sullivan and Porter (1997) said that in order to understand "what counts as knowledge" (p. 17) in a given situation, Research should aim at noticing and exploring all surrounding conditions of that knowledge. The contextual element was missing in most published scholarship in the field of computers and composition because research concentrated heavily on describing the technology and the learning that took place in technologically-mediated composition classes without depicting the environment in which this technology was used or in which the learning took place.

Selwyn (2010) added a more critical dimension to this argument by claiming that most of the published research on technology is concerned with student learning using a specific technology. Selwyn argued that there is a lack of research on how technology is actually employed in the classroom or in the small social context of the classroom where the technology is being used. Researchers need to examine the social context surrounding the use of technology because without knowledge of these contexts, published research should be labeled "learning

technologies" rather than instructional technologies. When the main focus is "on the role of technology in facilitating, supporting and (it is assumed) enhancing the act of learning" (p. 67), the researcher overlooks the role of instruction in the learning process.

Emphasizing the significance of describing the contexts in which technology is used, Duffelmeyer (2002) presented the concept of *relational thinking*, or "the ability to make connections between the microconditions of one's experiences and the cultural macroconditions that affect them" (p. 360). Relational thinking is a feature of critical literacy and pedagogy that lends itself to research in computers and composition. Although the concept was ostensibly created to describe students' use of technology, it can be applied to teachers as well. In order to understand teachers' selection and uses of new media technology, it is necessary to explore the microconditions of their pedagogical choices, their prior knowledge and experience with using new media, and the institutional macroconditions that may have an impact on the microconditions.

Situating these macro- and microconditions within the research being done in this field, a number of scholars have named certain elements as integral to the description of the social context of technology in the classroom. At the macro level, institutional support (Eldred & Toner, 2003; Francis, 2010; Selber, 2004a; Wetzl, 2010) and training opportunities (Faigley, 1999; Ninacs, 2008; Spodark, 2003; Takayoshi & Huot, 2009) were the two elements most emphasized in the literature. At the micro level of the composition class, on the other hand, a number of elements were highlighted, such as student needs and experience (Dewitt & Dickson, 2003; Selber, 2004b; Selfe, 2003), technology affordances (Hawisher & Selfe, 1999), and the teacher's role (Bruce, 1999; Friesen, 2008; Hawisher & Selfe, 1991; Selfe, 1989; Takayoshi, 1995; Takayoshi & Huot, 2003).

Notwithstanding the importance of all these elements to the subject at hand, the focus of the current study was on one macrolevel element, namely institutional support, and one microlevel element, namely teacher's role in the selection of certain new media technologies to achieve their goals. The choice of these two particular elements is related to the purpose of this study, which aimed to explore teachers' use of new media technologies in first-year composition classes. Given the study's purpose, a focus on the teacher's role in selecting and using technologies in composition classes is essential. These decisions may be closely related to and affected by institutional factors as discussed in the next section in which I present the macrocondition of institutional factors before I move to discussing teachers' use of technology and the need to develop a new terrain of research focusing on teachers to complement the large canon of research on technologies and student use of technologies.

Institutional support. The role of institutional contexts, where teachers work and use new media technology, can be crucial in either encouraging or discouraging the use of that technology. While Selber (2004a) argued that composition teachers should think globally about departmental and institutional demands, Francis (2010) argued forcefully that some teachers may abstain from using technology due to the lack of support from their institutions. Expanding on the role of institutions, and relating that role to the composition teacher, Eldred and Toner (2003) explained that some institutions may push their instructors to develop technology-rich syllabi and produce technologically developed literacies. Teachers in these institutions may not understand the value of using technology and may adopt certain technologies merely because they are available and favored by administration. On the other hand, other institutions may restrict their teachers' access to or choices of new media technologies either due to monetary limitations or the absence of a vision of the importance of new media technology. Teachers must be aware of

institutional policies and attitudes toward new media technology before delving into it.

Ninacs' (2008) dissertation on adopting digital writing at Miami University is a good example of the role of the institution in initiating and maintaining support for teachers' use of new media technology. In this example, the College Composition Program initiated the change and advocated the use of digital technologies to produce multimodal texts. Ninacs detailed the practice of consensus-building developed by the administration to enable the staff to smoothly integrate the new technologies. The strategies Ninacs described emphasize the role institutions can play in teachers' decisions to use new media technology. The multi-dimensional consensus building program included different types of support: physical support included technology upgrades on campus and changes in classrooms to accommodate the new curriculum changes; human support included workshops for faculty and training for graduate assistants. An important aspect of the consensus-building strategy at Miami University was allowing the faculty to make their own pedagogical decisions without mandating any. This buy-in strategy was implemented through professional development and discussion opportunities, which brings to the surface the need for training as part of institutional support.

Faigley (1999) strongly asserted that the more training teachers receive and the more support they receive from their institutions, the more they are willing to integrate technology in their teaching. Institutions can offer training events on pedagogical choices and concerns about using new media technology in teaching, much as was done at Miami University (Ninacs, 2008) and in the writing program studied by Takayoshi and Huot's (2009). Takayoshi and Huot described the institutional context of adopting digital technologies in teaching composition. Among the factors Takayoshi and Huot presented in their study, were training opportunities offered to the diverse faculty in that institution. Training opportunities included "a book

discussion group, teaching groups, and a series of weekly workshops focused on curricular goals and composing technologies" (p. 93). Findings indicated that the teachers visualized themselves as learners of integrating new technologies in their composition classes, and they felt they were scaffolded as they started using these technologies. Therefore, Takayoshi and Huot recommended that the administration should initiate training programs for faculty who "might be unaware that some technology or use of technology could enhance and support their learning and teaching goals" (p. 109). This recommendation highlights the importance of institutional support as a macrocondition of a teacher's choice to use new media technology.

Teachers' Role

At the micro-level of the composition class where the technology is actually used, I argue that the teacher's role is the most crucial element in introducing and using technology in the composition classroom. I strongly support Feenberg's (2002) argument that the teacher is responsible for setting the tone for the use of technology in class. Setting the tone includes creating relationship patterns, whether between teachers and their students, among students themselves, or among both parties and the technology. If the teacher does not use the technology to revolutionize the learning and social environment in the classroom, the students lose much of the potential benefit. In other words, if teachers continue to use the same teaching tools, merely supplementing their old tools with the new technology, if they ignore the learning outcomes that can be achieved with the successful integration of technology (Ertmer & Ottenbreit-Leftwich, 2010), then technology becomes an add-on rather than an integral part of the teaching context. Therefore, the teacher's role is central to the success or failure of any technology used in teaching.

In the belief that teachers play a central role, not only in choosing and integrating

technology, but also in the success or failure of its use, prominent scholars in computers and composition have urged teachers to make informed technology-related decisions for their classes, which was the ultimate goal of this study. In addition to Selfe's (1989) argument that composition teachers need to keep exploring the implications of new understandings of technology-related literacy presented in Chapter One Takayoshi (1995) argued that as technologies become more and more integrated into the composition classroom, teachers must gauge the effect these technologies may have on themselves, their students, the social context of class, and most importantly, on their pedagogical choices.

This awareness of new media technologies and their potential benefits and threats to the teaching context is what many scholars call the critical approach to technology. In the introduction to their edited collection on teaching composition with computers, Takayoshi and Huot (2003), and in a later account Bloch (2008), argued that teachers are critical users of technology when they are aware of the consequences and effects of using technology in their classes. These consequences include both benefits and drawbacks of using a given technology, and they usually result from what Bruce (1999) called the social and cultural aspects of each technology. According to Bloch, a "realistic and sometimes critical view" of technology (p. 88) requires teachers to make many decisions about which technology to use, how to use it, and with which group of students, so that the teachers can engage students in a transformative learning experience. Accordingly, a critical perspective of using new media technologies in the composition class entails an analysis of technologies, and more importantly, an analysis of teachers' assumptions and beliefs about using new media in their classes, a topic that has been largely overlooked in the literature on computers and composition. This lack of research highlights the significance of this study whose purpose was to help teachers become more critical

users of new media technologies and to make more informed decisions regarding its use in teaching composition.

Teachers' Uses of New Media Technologies

A number of scholars (Ertmer & Ottenbreit-Leftwich, 2010; Kanuka & Anderson, 1999) suggested that teachers' belief systems directly and indirectly affect their use of technology in their classes because, as Takayoshi and Huot (2003) explained, teachers' pedagogical choices of integrating technology in the writing class are closely related to their prior assumptions and beliefs. Ertmer and Ottenbreit-Leftwich elaborated on this idea, stating that the main factor in the decision to use (or not to use) technology is the teacher's understanding of the role technology can play in achieving course objectives. When teachers perceive that role of technology in a more positive light, they are more likely to decide to use it in their classes. Kanuka and Anderson added that these decisions include which technologies to use and how to use them.

Furthermore, Grover (2010) asserted that in order for teachers to use technology in a productive manner, they need to "examine their professional motives" (p. 176). Through examination and reflection, teachers come face-to-face with their beliefs and assumptions about technologies. She strongly contended that understanding teachers' "heuristic assumptions" about technology is a key factor in predicting the likelihood that they will use technology in the future. These heuristic assumptions include "feelings, tacit knowledge, and past experiences" (p. 177). Ultimately, through the reflection process, teachers may arrive at a fresh understanding about the usefulness of technology in their classes. Ertmer and Ottenbreit-Leftwich suggested that this change could happen on a number of levels: beliefs and attitudes toward technology, and knowledge and exploitation of technology.

Despite the fact that these and other scholars have discussed the importance of teachers'

uses of technology, there is nevertheless a point to be made: there is still a lack of research investigating the choices and uses of technology made by first-year composition teachers, including their usage of new media technologies in teaching composition. In the next section, I will synthesize a number of scholarly articles that looked into teachers' uses of technology done in closely-related fields, such as education; in other contexts, such as high schools; or in other countries, such as Canada. In borrowing from research in other fields, I uphold Takayoshi's (1995) contention that computers and composition can benefit from research done in other disciplines. Such research is likely to enrich investigations by identifying emerging trends, and by clarifying other aspects that have not received adequate attention in our field. Since scholars of computers and composition have not covered this terrain of research on teachers' uses of technology, it is useful to review what scholars have done in other fields in order to enlighten our own practice.

Studies on Teachers' Uses of Technology in Other Disciplines

Designed from a more psychological perspective, Subramaniam's (2007) study explored secondary science teachers' perceptions of computer technology in Singapore. Subramaniam believed that teachers use computer technology ways that reveal their perceptions of the technology. One of her findings was that teachers envisioned their use of computer technologies as a journey toward achieving the pedagogical objectives of the course. This approach to technology comes under instrumental use of technologytheory, according to Feenberg's (1991, 2002) classification, where the focus is on content, and computers serve as the delivery medium. In these classes, computers were used only to help students consolidate the course concepts, rather than using embedded characteristics of technology itself that could affect the ultimate achievement of course objectives.

Another finding in Subramaniam's (2007) study showed that some teachers believed that the social interaction resulting from the use of computer technology was "liberating for the students" (p. 1065). According to these teachers, it gave students an opportunity to build and form their own knowledge as they interacted with their colleagues outside of the teacher's authority. On the other hand, some teachers viewed the use of computer technology as "domesticating" because computers were used to help students better understand and engage with the content. Subramaniam called these attitudes toward technology "mindsets" (p. 1067), and she believed these mindsets meant teachers used technology as tools for learning and teaching without acknowledging the potential of the computer technology being used. Nevertheless, reported findings demonstrated that, as they communicated with each other, students actually made use of technology affordances to bypass the teachers' authority. This ability to communicate and skirt authority was not among the teachers' original goals for using the technology; rather, the cultural and social potential of computer technology allowed these behaviors to surface without the teachers' consent or understanding.

In the field of computers and composition, Eldred and Toner (2003) argued that some teachers believe that technology should be used to support rather than to augment their teaching. In other words, technology is used to achieve prior goals without exploring the possibilities that can emerge from the use of technology. Subramaniam's (2007) findings, supported by Eldred and Toner's argument, reveal that these teachers do not believe in the value technology beyond its capacity to deliver content or as a tool for achieving objectives. In Feenberg's (1991) classification, these attitudes would fit into the instrumental view of technology. Meanwhile, these findings highlight the need to examine teachers' assumptions and beliefs about technology because of the obvious divergence between their beliefs and the reality of the classroom. In other

words, learning about a teacher's pedagogical choices may inform us about their approaches toward technology or its role in the classroom; examining actual uses of technology may help create a more detailed picture of teachers' approaches to technology, which was the purpose of this study.

Reporting on two studies in a very different context, Nahachewsky and Begoray (2010) explored teachers' uses of new digital media. Twelve teacher educators from six colleges in Canada participated in the first study, while three senior high school English Arts teachers participated in the second. I discuss only the first study because it relates to the subject of this study. Findings from interviews with teacher educators revealed that they integrated new media technologies in their classes for three reasons: previous experience, a desire to introduce their students to new literacies, and their sense that "society was rapidly embracing new communication methods" (p. 423). That is, teacher educators believed that they needed to be more inclusive in their classes and to have more literacies presented to future teachers since these literacies were quickly spreading in society. The teachers' attitudes showed that they took student preferences and needs into consideration. Although the study was done in the context of teacher education, these teachers' attitudes correspond to what a number of scholars in computers and composition argued.

Mauriello and Pagnucci (2003), for instance, argued that when designing technology-rich curricula, teachers should consider students' needs and concerns. Kress (1999) suggested that teachers design futuristic curricula that aim to give today's students the knowledge and skills they need to survive in tomorrow's world. As visuals become more and more common in communication media, composition curriculum should not overlook them anymore. Although findings from Nahachewsky and Begoray's (2010) study supported arguments originating in the

field of computers and composition, to date, these arguments were not supported by research on composition teachers who integrate new media technologies in their classes to understand why composition teachers bring certain technologies into their classes, and how they actually use them.

Studies on Teachers' Uses of New Media Technology in English Studies

Closer to the field of composition and computers, a small-scale study by Lewis (2011) explored the use of MySpace by two English teachers in a literary analysis assignment. Lewis conducted a demographic survey to obtain a better picture of how her participants used new media technologies in their personal and their teaching lives. To obtain data, Lewis interviewed the teachers and collected their lesson plans. The two teachers in this study reported that they decided to use MySpace as a means of communication among students because they considered the students to be technologically savvy due to their age. The teachers thought of MySpace in primarily instrumental terms, using it as a medium of communication among students without acknowledging the potential of this particular social network for their students.

One of the participants had taught English for 10 years before participating in the study. She stated that before deciding to integrate a new media technology into her classroom she wanted to take some time to be more comfortable using it outside the class first. The second teacher, who had taught English for 25 years by the time of the study, reported that she did not spend much time using the new media technology outside class before using it with her students, saying that she "elicits students' help, referring to them as 'experts'" (p. 287). This teacher felt that by using MySpace, students could gain a better understanding of the characters they were analyzing. She thought that by creating a public profile representing one of the characters on MySpace, students would develop better skills in analyzing characters.

These teachers' self-reports were very interesting and revealed the teachers' approaches to using new media technologies in their classes. Since the first teacher in Lewis' (2011) study had just begun using new media technology in class, her perception of technology as an instrument and a medium of communication is not surprising. Selber (2004a) presented James Kalmbach's view that using technology as a tool or instrument is important to teachers who are new to using technology; teachers with limited knowledge of computers but vast knowledge and writing experience tended to employ technology as an instrument to achieve their pedagogical goals. Although this claim has not been empirically investigated in computer and composition research, it adds a new lens through which to understand uses of new media technologies by composition teachers.

On the other hand, the second teacher's approach to technology appeared to be more critical. She not only worked to develop her students' critical analysis skills, but she also made use of their knowledge and expertise with the technology, which Selber (2004a) described as an appropriate way to help students gain critical literacy. This second teacher's approach to technology contradicted the arguments posed by earlier scholars, who stated that veteran teachers may be reluctant and resistant to the use of technology in teaching. Mauriello and Pagnucci (2003) adopted Tompkins's argument that experienced teachers fear to tread on new ground or to explore novel technological options for their classes. Experienced teachers, they argued, are anxious about showing that they are learning the new technology by experimenting with their students.

Similarly, Eldred and Toner (2003) cited Cynthia Selfe's presentation in which she argued that traditional teachers may be reluctant to welcome and integrate technology into their writing spaces. They may even be skeptical of students' digital literacy skills. Selfe warned that

ignoring technology in the classroom may strip students of literacy skills and knowledge, and may stunt instructional practice. In Lewis' (2011) study above, the second teacher's approach to using MySpace with her students without being technologically savvy herself refutes these claims. . She used MySpace with her students without being technologically savvy herself, and built on her students' technological skills to supplement her own. More research on a larger population of teachers is needed to confirm or refute these claims about the relation between teachers' years of experience and their willingness to use new media technologies in their classes. Additionally, these claims need to be examined in the field where they originate, computers and composition, which was the purpose of this study.

In a wide-scale study, Hutchison and Reinking (2011) researched the perceptions of literacy teachers regarding the integration of information and communication technology (ICT) into their teaching. The participating teachers taught at different educational levels, and the data consisted of responses to an online survey disseminated in the US. Before starting their study, Hutchison and Reinking argued that many teachers' integration of technology in their teaching has been "minimal or superficial" (p. 313), or, in the best case scenario, it has lagged far behind developments in technology. They also made a distinction between what they labeled technological and curricular integration of technology. Technological integration "reflects a stance that views ICTs as separate from, or not fully integrated into, the curriculum," whereas curricular integration "entails complex and dynamic interactions between technology, pedagogy, and content knowledge" (p. 314). Their brief discussion of both types of integration shows that while technological integration parallels the instrumental or substantive approaches to technology, as Feenberg (1991) described them, curricular integration parallels Feenberg's critical approach to technology.

The findings of Hutchison and Reinking's (2011) study revealed a major discrepancy between teachers' perceptions of the importance of integrating computer technology and the actual use and integration of technology. That is, although many teachers reported that they believed that technology could augment and enhance their teaching practice, they refrained from actually using it in their classes. Similar views were reported by McVee, Bailey, and Shanahan (2008) who studied teachers and teacher educators. Participants in this study believed that the new technology was important for their practice, but they were still confused as to the best way to integrate it into their teaching. Most teachers used different technologies in their personal and communication domains, but they were nevertheless reluctant to use them in their teaching practice. This is not surprising, if we pair this finding with Francis' (2010) conclusion that the availability of so many new media technologies creates a sense of anxiety in certain teachers who feel they are inadequate to the challenge. These conclusions justify the research undertaken for this study which was designed in part to catalogue new media technologies and their pedagogical uses in order to help teachers to choose appropriate technologies for their first-year composition classes.

The more important finding in Hutchison and Reinking's (2011) study related to teachers whose usage of computer technology that turned out to be more a technological than curricular integration. Hutchison and Reinking found that teachers' use of technology served their traditional goals instead of creating new goals that exploit the unique features of the technology. Two-thirds of the participants in this study stated that they used technology as a supplement to their conventional pedagogical practice despite their belief in the benefits of integrating technology. Among the reported obstacles to integrating technology were lack of institutional support, a lack of understanding of the benefits of technology, and lack of knowledge about

methods of integration.

These interesting findings, though from a relatively different population of teachers than the one in this study, support the need for large-scale, systematic research on teachers' uses of new media technologies in Composition. Relying on small-scale, scattered research efforts, such as individual teachers' self-reports, does not provide a complete picture of how composition teachers choose and use new media technology and thus does not promote knowledge within this field of study. Hutchison and Reinking (2011) argued that to date there were no empirical data about the attitudes and beliefs of teachers in literacy classes, and I extend the same argument to Composition

Studies on Teachers' Uses of New Media Technology in Composition

The few research studies that examined teachers' use of new media technologies in the field of computers and composition did not explore the teachers' approaches to technology. For example, Vie (2008) studied the personal experiences of 127 instructors and 354 students who used two social networking sites, MySpace and Facebook. Vie's purpose was to examine the digital divide between the new generation of students and the older generation of teachers. In her survey, the majority of teachers did not use either site because they mostly thought these sites were designed primarily for students and, as a result did not use either of them. Many teachers claimed to have too little time to spend learning or using technology which made them reluctant to incorporate technology into their writing classes. Based on these findings, Vie concluded that many teachers oppose the use of social networking in their classes because they perceive it as a threat to power and authority hierarchy in class.

Teachers' reluctance was also explained by Rourke and Coleman (2010) who contended that some teachers were afraid to leave their comfort zone, and that using technology made them

nervous and hesitant to experiment. They preferred to confine themselves to the simple technologies they knew and have used for some time. Vie (2008) concluded that to date, composition teachers have not given Web 2.0 sites the attention they deserve, because her sample of teachers had an instrumental approach to computers, a finding that ties in quite neatly with Feenberg's (1991) classification used in this study. The instrumental approach to technology, and particularly in relation to the two social networking sites, needs further investigation among composition teachers who actually use new media technologies in their classes to unpack their understanding of the role this technology may play in their classes.

In another large-scale study, Anderson, Atkins, Ball, Millar, C. Selfe, and R. Selfe (2006a) explored composition teachers' practice with multimodal composition and the technologies they used in to produce multimodal texts. Through a detailed online survey (Anderson et al., 2006b) the team of researchers collected data on a number of areas related to using new media technologies. These included teachers' choice of technologies, institutional factors, and assessment practices. Some respondents to their survey voiced a need for "a more course-specific/focused survey" (p. 80). Since the respondents taught a variety of courses (e.g. research writing, business writing, and creative writing), they hoped for a survey that focused on a specific course so their answers could be more concrete and focused. The authors asked, "How would the survey responses be different if we had specifically targeted instructors who were only currently teaching Composition classes?" (p. 80). They called for this type of narrowed questions in future research. My study was thus a response to this call for focused research.

In a limited-scale case study, Ruefman (2010) conducted research to explore the technology choices of three teachers. Ruefman's dissertation research had three objectives: to identify the new media technologies used in the composition classroom, to explore the rationales

teachers had for using certain technologies, and to describe instructional practices in the composition classes using ethnographic methods. Ruefman studied three composition classes that relied on different levels of technological integration: a traditional class, a hybrid class, and an online class. His major argument was that without understanding the pedagogical choices that drive teachers to integrate technology into the composition class, we cannot claim any benefits or problems from using technology.

Although Ruefman's (2010) study was one of the rare examples that unpacked teachers' choices of technology in different types of writing classes and their rationales behind these choices, he did not make any claims about how these choices represented the three teachers' beliefs about technology in general, or new media technology in particular. Yet, one of his findings pointed to the impact that institutional factors made on teachers' choices and use of technology. In my study, I aimed to extend Ruefman's objectives to include an exploration of teachers' approaches to using new media which, I argue, are more encompassing and revealing than rationales. Furthermore, instead of using ethnographic observation, I relied on survey data in which self-reports from a large sample of teachers illuminated their uses of new media technology.

CHAPTER THREE

METHODOLOGY

Purpose of the Study

The purpose of this study was to explore teachers' choices and uses of new media technologies in teaching first-year composition classes, and to examine teachers' approaches towards using new media technologies. The study explored the wide range of new media technologies that teachers said they had used and the different purposes of using them.

Towards that end, this study utilized a mixed-method design, collecting numerical and verbal data to answer the following research questions:

What do teachers say are the new media technologies (interactive, productive technologies) they use in first-year composition classes?

1. What do teachers say are the purposes of using each technology in first-year composition classes?

2. What do teachers' self reports about uses of new media technologies reveal about their approaches towards these technologies?

Research Design

This mixed-method, exploratory, analytical study aimed to collect two sets of data to answer the research questions.

Mixed-methods

The use of mixed methods in research is gaining ground because, as Kirsch (1992) argued, the different methodologies complement each other, offering richer insights into the phenomenon being examined. This complementation between quantitative and qualitative research methods results from combining the positive aspects of both methods (Wells, 2009).

According to Lauer and Asher (1988), mixed-methods research allows more room for "reciprocity among modes of inquiry" (p. 7). In other words, numerical and verbal data can be used dialogically to answer the study's research questions.

In this study, two sets of data were needed: numerical data that came from respondents' answers to closed questions in the survey, and verbal data coming from answers to open-ended questions.

Exploratory/Analytical

To explore composition teachers' uses of new media technologies in teaching first-year composition classes, I began with a description of how teachers claimed to use these technologies, and then I analyzed these uses according to Feenberg's (1991, 2002) classification. Lauer and Asher (1988) defined exploratory research as research that describes the phenomenon under scrutiny with minimal or no interference in the environment where data are collected. In this study I explored the range of new media technologies selected by first-year composition teachers and the different uses of these technologies in their classes. The purpose of the study was to describe and analyze these uses as reported by the teachers themselves. Following Denzin and Lincoln's (2008) strong call for researchers working with qualitative data to utilize analytic techniques in their rigorous endeavors to understand social activities, I analyzed teachers' uses of new media technologies before I used those uses to analyze teachers' approaches to using new media.

According to Lauer and Asher (1988), in exploratory, analytical research, the researcher's knowledge comes into play when creating and applying coding schemes to qualitative data. In this study, the researcher's knowledge was manifested in the selection of the theoretical and analytical framework (Feenberg, 1991, 2002), as well as familiarity with many new media

technologies and modes of production in composition classes (print and digital), and expertise in the writing process. In addition, I had the experience of conducting a pilot study from which a number of themes had emerged.

Research Context

Data for this study were collected from teachers' responses to a survey disseminated entirely through the Internet. Therefore, the context of the study was any U.S. institution of higher education. According to The Carnegie classification, these could fall into three main categories: four-year universities that grant Bachelor's, Graduate, and Doctoral degrees; four-year universities and colleges that offer Bachelor's and Graduate degrees only; and two-year colleges and community colleges that grant associate degrees (Eckel & King, 2004). Since virtually any first-year composition teacher working in U.S. higher education could participate, these institutions are the *de facto* context of the study.

Participants and Sampling

Given the goals of the research, the target population could have potentially encompassed all collegiate-level teachers who had used new media technologies during the previous year or in the semester in which the data was collected. This population would include professors, associate professors, assistant professors approaching tenure and newly-hired assistant professors, full-time and adjunct lecturers and instructors, post-doctorate professors, and graduate teaching assistants (Anderson et al., 2006a). However, due to the exceptionally large size of this group, I made use of purposeful sampling to narrow the target population.

Due to the fact that this was an exceptionally large population, I used purposeful sampling to reach the target population of teachers.

Purposeful Sampling

The objective of purposeful sampling is to target participants who are most likely to be "information-rich" (Gall et al., 2007, p. 178) to answer the respective research question. To obtain this type of respondent, I sample first-year composition teachers who, belong to any of the particular groups listed below:

- A personal email list of 60 first-year composition teachers who participated in the pilot study and expressed their willingness to be contacted for further research,

- Listservs of composition teachers (Anderson et al., 2006a), such as Writing Program Administrators (WPA-L), TechRhet, and Writing Program Administrators Graduate Organization (WPA-GO),

- Representatives of doctoral programs to the Doctoral Consortium in Rhetoric and Composition whose email addresses are available on the website; they were asked to forward the survey to teachers and teaching assistants in their respective institutions, and

- A personal email list of 25 teachers whose emails had been collected from networking at conferences, such as *Conference on College Composition and Communication (CCCC)*, *Computers and Writing (C&W)*, and the *Computer Assisted Language Instruction Consortium (CALICO)*.

<div align="center">

Data Collection Methods

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The three questions this study asked required different forms of data collected through the online survey.

First Data Source: Surveys

Many research handbooks (Gall et al., 2007; Lauer & Asher, 1988; Mertens, 1998; Stake, 2010) recommend the use of surveys because of the low cost and effort required to reach large

populations of respondents. Researchers also use survey data to answer a variety of questions and to better understand phenomena among large populations (e.g. Anderson et al., 2006a; Hutchison & Reinking, 2011; Wells, 2009). In addition, surveys can be used to collect verbal data from a large population of participants and to collect descriptive data about the practices of that population, as Lauer and Asher argued. This argument was supported by Mertens who asserted that survey data come mainly from "individuals' self-reports of their knowledge, attitudes, or behaviors" (p. 105).

For all these reasons, a survey was used which included both closed and open-ended questions. In the close-ended questions, participants' self-reports of their uses of new media technologies yielded data about the technologies they used and their purposes for using them in teaching first-year composition. On the other hand, responses to the open-ended questions demonstrated how participants understood the use and role of technologies in their classes.

Anderson and team (2006a) classified the two types of surveys used in research in Composition Studies. Classifying them on the basis of focus and target population, they described surveys as either classroom-based or large-scope surveys. As the name suggests, the first type is more suitable for researching the population of students in a class, whereas the wide-scope survey samples a population of "universities, departments, programs, students, and staff" (p. 61). The second type was the better option for this study because the inclusion of a large population of teachers, holding many positions in various types of colleges and universities was expected to yield a broad range of relevant data.

Online surveys. Online surveys, or those designed, disseminated, and administered on the Internet, have become very popular and widely used in recent years. Sue and Ritter (2007) suggested the use of online surveys if researchers are working with a large sample that is widely

distributed geographically, which was the case in this study. Recent studies of composition teachers who used multimodal composition (Anderson et al., 2006a) and US literacy teachers who used information technologies (Hutchison & Reinking, 2011) employed online surveys.

In their book on online surveys, Sue and Ritter (2007) reported on an earlier study by Schaefer and Dillman that demonstrated that a greater number of respondents showed tendency to answer open-ended questions in emailed surveys than in mailed ones, and they tended to give longer answers in the electronic versions. In a later, often-cited study, researchers compared responses to open-ended questions in a web-based survey to responses to the same questions in a paper-and pen survey, and found that the former yielded longer responses (Smyth, Dillman, Christian, & McBride as cited in Dillman, Smyth, & Christian, 2009). These findings could be due to the relative ease of typing over writing by hand. An alternative explanation could be the relatively larger space provided for answers in online surveys compared to the limited space in paper surveys.

In this study, a critical data source was the teachers' detailed accounts of their use of new media technologies and their reasons for choosing to use them. This was imperative to answer the second and third research questions. Since the open-ended questions required a space large enough for respondents to record detailed responses, the online survey seemed more appropriate for this study.

Among the conditions Sue and Ritter (2007) listed for selecting online surveys instead of paper, is participants' expected access to the Internet. Since the academy relies heavily on electronic communication, it is unlikely that first-year composition teachers would not have regular access to the Internet in their place of work. In fact, Dillman, Smyth, and Christian (2009) proposed that for participants like university professors, who are expected to have stable,

regular Internet access, online surveys are an effective tool for collecting data.

Another consideration listed by Sue and Ritter (2007) is the researcher's access to and ability to design a web-based survey. In my case, I had free access to Qualtrics, a web-based survey application, through Indiana University of Pennsylvania (IUP). This meant that no special funding was required to purchase an expensive software package or to obtain a license to use a web-based survey application. As for my ability to design an online survey, I gained proficiency from conducting the pilot study. My relatively limited experience in designing web-based surveys was complemented by the comments from pilot study participants and by advice from the Applied Research Lab (ARL) team at IUP.

Design and sections. As this study explored first-year composition teachers' uses of new media technologies, the design and sections of the survey emerged from the research questions the study addressed. The survey started with an electronic copy of the consent form (see Appendix C) to which participants needed to agree before they started taking the survey. By clicking the "Next" button, participants granted their approval to participate in the study. In addition to the section on demographic information of participants, the survey was made of three sections (see Appendix A) corresponding to the research questions as Table 1 demonstrates. The first section in the survey had questions to answer the first two research questions, whereas the second and third questions were meant to help understand the macroconditions of using new media as discussed in detail in Chapter Two. The demographic information section (Section IV) was placed near the end of the survey because it does not require much effort or concentration from the participants to complete. If participants were tired by the end of the survey, they did not need to recall information or experiences, reflect on practices, or articulate verbal responses to go through the demographic section. This section was placed at the end of the survey done by

Anderson and team (2006b).

Table 1

The Relationship between Survey Sections and Research Questions

Research Questions	Section of the Survey
RQ 1 & 2	Section I: New media technologies and their uses
RQ 1,2 & 3	Section II: Teaching context
RQ 1, 2 &3	Section III: Experience with technology
General	Section IV: Demographic information

In designing and crafting the survey questions, I consulted several resources. The first was my own survey used for the pilot study. Some of the questions on that survey could be transferred to the current survey. However, some questions required better wording as suggested by some of the survey respondents. The second resource was surveys developed by other researchers whose studies shared a partial focus and similar target population with this study (Anderson et al., 2006a; Hutchison & Reinking, 2011). Consulting published literature to construct survey questions was encouraged by Hutchison and Reinking. Similarly, Lauer and Asher (1988) recommended using questions "that have been shown to be useful and non-ambiguous" (p. 65). This criterion applied to questions that yielded rich data in my pilot study survey in addition to questions that had been validated in the other two surveys I consulted. The third resource was my assumptions about the participants' practices regarding their use of new media technologies (C. Bazerman, personal communication, April 17, 2012).

The survey questions included primarily closed-ended questions with one open-ended question. In addition to the ease of closed-ended survey questions to respondents (Sue & Ritter, 2007), they are used to collect many data that can be easily quantified and analyzed (Gall et al., 2007). This type of question was suitable for collecting data to answer the first two research

questions on new media and their uses.

On the other hand, open-ended questions are good for collecting more descriptive data (Gall et al., 2007) such as attitudes and details of practice, and more complex data than can be collected in closed questions (Lauer & Asher, 1988). Moreover, these questions were used to collect options that the researcher may have overlooked or was not aware of (Sue & Ritter, 2007). For example, when given the opportunity to add technologies to a list that I believed to be exhaustive, respondents to the pilot study added many new technologies and uses which I had not considered. These additions enriched my findings and helped shape this study.

Nevertheless, open-ended questions were used sparingly in this survey to avoid respondents' boredom or fatigue (Dillman et al., 2009). Because open-ended questions require a good deal of thinking, reflecting, and recall, some respondents might give up before completing the survey, or at best, might give brief answers, as Sue and Ritter warned. In an attempt to avoid these pitfalls, open-ended questions were limited to those questions that either solicited ideas that were unfamiliar to me (e.g. the "other" option in all sections of the survey), or to verbal articulation of thoughts and practices (e.g. question 2 in sections I).

It is worth mentioning here that some definitions and examples were used to clarify the survey questions and to avoid the use of jargon, as well as to enhance clarity of both the questions and the responses (Gall et al., 2007). The wisdom of Gall et al.'s advice was evident when reflecting on certain responses and comments that were given in my pilot study. For instance, I mistakenly assumed that 'Web 2.0 technologies' was a common term, but some respondents were unsure what I meant by it, and others said they had no idea what they were. Interestingly some respondents from both groups listed technologies that can be categorized under Web 2.0 technologies (e.g. blogs, wikis, YouTube videos) as 'other.' This forced me to

reconsider my assumptions about composition teachers' knowledge of terms. As a result, I decided to add definitions of some constructs, such as new media technologies, and to provide examples of others to avoid ambiguity. The apparent ambiguity of some items in my pilot study triggered the need for validation of the current survey.

Validation, piloting, and redrafting. Validating the quality of the potential answers to be collected through the survey is a necessary step to ensuring the internal validity of the instrument. Onwuegbuzie and Johnson (2006) equated validity with quality in mixed-methods research. Feilzer (2010) asserted that in developing the survey, the researcher expects that survey-takers will understand the questions in the same way that they are intended in order to ensure high quality responses.

Survey questions should meet two criteria to achieve internal validity. The first criterion comes from Dillman, Smyth, and Christian (2009) who explained that a question can be considered valid when it measures the constructs it is designed to measure. Gall, Gall, and Borg (2007) provided the second criterion, stating that survey questions are valid when they capture "the respondents' true opinions" (p. 229). If questions are ambiguous or yield answers that do not help to answer the research questions, the responses are not valid, which will cast doubt on the findings. Certain measures have been established by researchers to validate responses to surveys.

The first stage in validating a survey is to have others to check it. These people may be experts in fields related to the survey's subject, as Dillman and team (2009) suggested, and/or they may be focus groups. Many researchers (Anderson et al., 2006a; Braun, 2006; Hutchison & Reinking, 2011) used both types of validation in their studies.

If experts are used, they should be selected to represent various areas of technical

expertise, which is helpful for reviewing different sections of the survey. After examining a paper copy of the survey questions, the reviewers decide whether certain questions should be added to get more accurate responses regarding the constructs in the study. Additionally, some reviewers may suggest a different set of responses to the closed-ended questions to ensure more varied answers. For this study, I sent an electronic copy of the first draft of the survey to some experts in the field of using technology in teaching composition. This group included some well-established researchers in the field, in addition to some faculty members who have solid experience with research methodologies. Even though members of both groups reviewed the complete survey, the first group mostly validated the technical questions about the technologies, while the second group validated the purposes and demographic questions. The groups of experts were asked to put their comments and suggestions in writing to improve the validity and outcome of the survey.

As mentioned above, previous research studies (Anderson et al., 2006a; Hutchison & Reinking, 2011) also used focus groups for validation. In this study, two focus-group meetings (Dillman et al., 2009) were held at the same time that the experts were engaged in providing their feedback. The focus groups were composed of fellow doctoral candidates who were selected on the basis of their interest in using new technologies in teaching composition. They were asked to review the wording of the questions, and to comment on the variety of answers provided for the close-ended questions. During the meetings, they actually completed a paper version of the survey and were given ample space to write their impressions, their problems with understanding certain items, or any other problems they may have noticed. In order to have a rough estimate of the time needed to complete the survey, the participants were timed, and the time was included in the cover letter to the sample population when the survey was launched. The focus group

members stayed for a feedback session in which they discussed the process and gave suggestions for improving the survey.

Upon receiving feedback from the expert groups and the focus-group meetings, the second stage of editing began. At this time, as recommended by Lauer and Asher (1988), I edited the groupings of the questions, the lists of choices, and the wording of problematic questions that participants had suggested in the first stage of validation. In their study on multimodal pedagogies in writing programs, Anderson and his team of researchers (2006a) edited their survey and changed it from eight sections to seven, but they did not report whether the number and grouping of questions changed. This missing information was available in Hutchison and Reinking's (2011) study where they explicitly stated that "several additional examples of ICTs were noted during the focus-group meeting, and additional questions were generated to inquire about those ICTs" (p. 317). Hence, I redrafted the survey using the compiled feedback and recommendations that I received in this first stage.

Piloting the second draft of the survey among a small group of respondents that resembled the target population was recommended by a number of scholars (Dillman et al., 2009; Gall et al., 2007; Lauer & Asher, 1988) and carried out by a number of researchers (e.g. Hutchison & Reinking, 2011; Wells, 2009). The purpose of this stage was to review initial responses from a subgroup of the target population. I randomly selected 10 participants from those who responded to my preliminary pilot study to be the respondents in this new survey. As in the first stage of validation, the survey had large blank spaces for respondents to record their answers, as well as any additional feedback on the order of questions or the level of probing in the questions (Mertens, 1998). Examining the answers of this subgroup of participants resulted in preparation of the final draft of the survey.

The last stage of validation was more technical in nature. For this review, the online version of the survey was prepared and tested by two doctoral students and me. The purpose was two-fold: to test the usability of the survey before disseminating it to the sample population, as done by Anderson and team (2006a), and to test the aesthetic and visual format of the survey, which was highly recommended by Sue and Ritter (2007). This stage of technical and visual validation is peculiar to web-based surveys. Technical validation includes testing the compatibility of the survey platform with different web browsers, testing the ease of navigating the different sections, and the logic of moving between sections. The visual validation, on the other hand, analyzed the appearance of the survey with respect to design, colors and fonts, and the number of questions per page. After this last stage of validation took place, the responses recorded by me and the other two testers were deleted to avoid altering the results. By the end of this stage, the survey was ready for implementation and dissemination.

Dissemination. In their study, Anderson and team (2006a) suggested three ways to disseminate a web-based survey: personal contacts, listserv members, and conference participants. In the case of this study, the survey was disseminated electronically by sending the Uniform Resource Locator (URL) of the survey to prospective participants by email (Sue & Ritter, 2007). The URL was accompanied by an embedded cover letter (see Appendix D) that introduced the study. The survey had a six week window for participation, to provide an opportunity for a large number of participants to complete it.

The participants included three groups:

- Personal contacts: These included participants in my pilot study who had given me their email addresses when asked if they were willing to be contacted for future research. An email was sent to these participants using the Blind Carbon Copy (BCC) function to

conceal their identities and their email addresses from other participants. This list of personal contacts also included colleagues known to use new media technologies in their first-year composition classes.

- Listserv members: As a member of a number of listservs for composition teachers, I was able use these listservs to send emails. An email with the URL and a cover letter was sent to the Writing Program Administrators List (WPA-L), and TechRhet List. A similar email was sent to doctoral students who work as teaching assistants or associates in their programs. These students were reached through the Writing Program Administrators – Graduate Organization (WPA-GO) list, and representatives of rhetoric and composition doctoral programs to the Doctoral Consortium in Rhetoric and Composition. In a personal communication with Joyce L. Neff, the chair of the Consortium, I was granted permission to use the program representatives' email addresses available on the website to send them the email to be forwarded to graduate teaching assistants in their respective programs (J.L. Neff, personal communication, April 23, 2012).

- Conference participants: As an active presenter in high-profile conferences, such as the Computers and Writing Conference and CALICO, which focus on using technology in teaching, I had access to first-year composition teachers who are interested in, and may be using new media technologies with their students. At the end of each of my presentations at these conferences, I asked participants if they would be interested in participating in my study. A sign-up sheet was provided for attendants to provide their contact information. I used the emails from these lists to disseminate the survey.

Mertens (1998) warned about the low response rate typical of web-based surveys and recommended sending the survey URL to multiple contacts in order to increase the rate of

response. Furthermore, many scholars (Hutchison & Reinking, 2011; Sue & Ritter, 2007) encouraged following up the original email with email reminders in order to boost the response rate. For this study, I sent out email reminders at two-week intervals (weeks three and five) before the survey was closed.

Second Data Source: Content Analysis

Huckin (2004) defined content analysis of texts as "the identifying, quantifying, and analyzing of specific words, phrases, concepts, or other observable semantic data in a text or body of texts" (p. 14). Qualitative content analysis helps unpack the thematic patterns in written texts. For this study, only one type of written text was collected for analysis: the answers to open-ended survey questions.

The goal of the content analysis was to gain a richer understanding of first-year composition teachers' uses of new media technologies in their classes. As Hsieh and Shannon (2005) stated, content analysis aims at gaining "knowledge and understanding of the phenomenon under study" (p. 1278). Hsieh and Shannon discussed three approaches to content analysis of qualitative data: conventional, directed, and summative. The difference between the three approaches lies in the way the data is coded.

While conventional analysis primarily allows the codes to emerge from the data without using any theoretical frameworks to guide this process, directed analysis relies heavily on the codes provided by a certain theory or set of theories, and summative analysis focuses on the meaning and interpretation of certain words and phrases. Since linguistic or word-level analysis did not serve the purpose of qualitative content analysis in this study, the summative approach to analysis was not utilized. Instead, I generated all codes by using a combination of conventional and directed content analysis, by using Feenberg's (2002) classification or, in cases in which

Feenberg's classification did not apply, creating codes which emerged from the data. More discussion of coding the verbal data is provided below.

Data Analysis

Onwuegbuzie and Johnson (2006) introduced different types of mixed-methods research. Among these is conversion data analysis in which data are transformed from qualitative to quantitative data or vice versa. This type of analysis closely parallels the methods used in this study in which analysis and interpretation are done on both types of data. In this study, numerical data from the survey were analyzed qualitatively to identify the different new media technologies used and themes of their uses. Similarly, codes generated during qualitative analysis of the verbal data were counted and analyzed quantitatively. This cross-analysis of data sets is known as meta-inference and transcends each set of data to encompass the whole.

After retrieving the data from Qualtrics, the data were prepared for analysis and reduced to manageable size (Creswell, 2002; Ruefman, 2010) before conducting a series of numerical and verbal data analysis processes. This process ended with a visual representation of data and data interpretation.

Data Preparation and Reduction

Data from the demographic and closed-ended questions of the survey were exported into a file format compatible with the SPSS software package used in quantitative data analysis. Simultaneously, data from the open-ended questions were exported to the NVivo software package for qualitative analysis. All participants in the survey were coded for later cross-analysis of data.

While running frequency tests on the numerical data, some items on the lists of choices provided in the online survey were found to be problematic and were thus merged with other

items during data analysis. I discuss these decisions in more detail in the next two chapters.

As to verbal data, a total of 164 participants answered the open-ended question (second survey question) with the 164 responses totaling 9,738 words. Seven of these answers were unusable because participants typed random letters into the space in order to avoid the logic I used in designing the survey that mandated respondents to answer this question. My assumption is that those respondents wanted to complete the survey without having to answer this particular question. Another 11 participants listed the technologies and their purposes briefly without providing any details. Although these responses were used in answering the second research question about uses of new media technologies, they were not included in answering the third research question for which more details were needed. Therefore, these 18 responses were deleted, reducing the total number of responses to be analyzed to 146 with 9715 total words.

Numerical Data Quantitative Analysis

In this study, numerical data came from two sources: answers to closed questions and numbers representing codes and categories of verbal data. These numbers were used to run descriptive statistical tests. To answer the first two research questions of this analytical, exploratory study, I needed descriptive statistics of frequency and percentages (Gall et al., 2007; Srnka & Koeszegi, 2007). Descriptive statistics answered the first and second research questions, yielding frequencies and percentages of both new media technologies used by first-year composition teachers and the specific uses of these technologies. These frequencies were important to identify the commonly-used technologies, as well as of the most frequent uses of each technology.

For the third research question, I first made a thematic analysis of the data (see below for a more detailed discussion), and then ran frequency tests on the codes to identify the percentages

of participants who appeared to adopt an instrumental, substantive, or critical approach to using new media. This step was important to better answer the third question. On the one hand, the qualitative thematic analysis painted a picture of the adopting any of the approaches to using new media meant,; on the other hand, the numerical analysis revealed the percentages of teachers who seemed to adopt each approaches.

Verbal Data Qualitative Analysis

Verbal data in this study came from answers to the open-ended questions on the survey. Qualitative analysis of verbal data was done deductively and inductively. According to most authors (Creswell, 2002; Marshal & Rossman, 2011; Mertens, 1998; Stake, 2010), qualitative analysis starts with two fundamental steps: data coding and data categorization.

Data coding and categorization. Srnka and Koeszegi (2007) recommended reading all the data prior to developing codes. For this study, I read teachers' responses to the open-ended question in the survey thoroughly. Teachers' self reports were the basis to answer the second research question about uses of new media technologies. In addition, I also used some of these answers to support findings of the first research question, as I discuss in Chapter Four. Furthermore, these self reports were the springboard for analyzing teachers' approaches to using new media technologies. Hence, this set of data was read multiple times at different stages in the data analysis process to answer all research questions.

Due to the lack of previous research on uses of new media technologies, I relied on anecdotal scholarship to generate a tentative list of uses for the fourth survey question (please refer to Appendix A). I also used that list as a starting point for analyzing teachers' responses to the second survey question before analyzing those responses inductively for all possible uses of new media technologies. During that process, I took notes and recorded initial thoughts and

possible themes regarding the uses of these technologies. This helped me capture all possible themes and identify iterative ones.

After analyzing teachers' responses in answer to the second research question, I had to re-read the responses to answer the third research question. Unlike the previous stage, this round of reading was guided by Feenberg's (1991, 2002) classification of approaches to using technology. However, when I started the deductive analysis of teachers' self-reports, I realized that Feenberg's classification was not adequate for explaining teachers approaches to using new media technologies as reported in this study. Feenberg provided operational definitions of the three approaches to using new media technologies: instrumental, substantive, and critical. These parameters were used to generate the initial coding scheme used in analyzing the verbal data in this study as Table B.1 in Appendix B illustrates. Yet, Feenberg's definitions were by far inadequate to capture all teachers' approaches as many of participants' self-reports were left uncoded. It became clear that the codes would have to be generated using other means.

My initial idea was to use previous scholarship to generate codes that would more accurately explain the teachers' approaches to using new media technologies more accurately. The codes displayed in Table B.2 in Appendix B complement those in the previous Table B.1. However, even the more comprehensive coding scheme generated through published scholarship to enrich and complement Feenberg's classification, did not yield an adequate range of operational definitions. In order to draw a more detailed picture of the teachers' approaches, new definitions that emerged directly from the survey data were added to the coding scheme. The final coding scheme is displayed in Table 2.

Table 1

Deductive Data Coding System from Feenberg's Classification and Literature Review

Categories of users	Theme 1	Theme 2	Theme 3	Theme 4
	General attitudes and beliefs about technology	Uses of technology	Pedagogical uses/integration of technology	Pedagogical benefits of technology
Instrumental **Code: I**	**Code: GA** 1. Technology is a tool 2. Technology is neutral with no value in itself 3. The main purpose of technology is efficiency 4. technology should be controlled 5. technology is a medium for delivering content 6. Technology is an add-on 7. People expect positive effects from using technology	**Code: GU** 1. People use technology to achieve previously-set/traditional goals 2. The purpose of using technology is better achievement of goals 3. Technology doesn't affect the goal of the user 4. Technology can be used in the same way in different contexts 5. Cost is the main barrier to transferring uses of technology across contexts	**Code: PU** 1. Technology supplements teaching 2. Technology supports teaching 3. No interference with technology or its design 4. Use technology as it was intended to be used 5. No/little description of the context of using technology 6. No/little description about the role of teacher in using technology	**Code: PB** 1. Technology elevates students' skills 2. technology enhances teaching environments 3. Technology enhances communication 4. Technology improves writing skills 5. Technology helps students to consolidate concepts
Substantive **Code: S**	1. Technology has its own goals and values 2. Technology is the center of attention (uses?) 3. Technology in itself can make a difference	1. The goals of technology may change or interfere with those of the user 2. Technology may generate new goals (may even replace the original	1. Technology changes from being a teacher's choice to playing the teacher's role 2. No acknowledgement of teacher role; attributing all benefits to	1. Technology advances learning and thinking 2. Technology improves student learning and writing 3. Technology improves instruction

		ones) 3. Technology can change the context in which it is used 4. Technology has positive effects on its users 5. Technology needs minimum guidance	the potentials of technology	4. Technology improves class dynamics 5. Technology improves English literacy skills 6. Technology gives students a strong voice in writing 7. Technology enhances student attention to audience 8. Technology enables effective collaborative writing 9. Technology results in better communication 10. Technology encourages active participation and engagement 11. Technology is good for critical thinking and creativity 12. Technology improves writing fluency
Critical **Code: C**	1. Technology is a choice we make 2. Past choices of technology affected present ones, and present ones will affect future ones 3. Technology is a	1. The same technology can be used in different ways 2. Technology may have different effects in different contexts 3. Interference or intervention with	1. Teachers acknowledge the cultural, social, and political conditions of using technology 2. Benefits or problems are not a result of the technology itself but of how the teacher	1. Teachers want to introduce their students to new literacies 2. Teachers aim at developing students' critical thinking skills through technology

framework within which the user works 4. Humans should control technology to achieve more varied goals 5. Users are aware of the positive and negative effects of technology	technology is encouraged to achieve the user's goals 4. Interference or intervention with technology is encouraged to make it adaptable to the social context 5. There is compatibility between technology and its social context	uses/controls/manipulates it 3. Technology is compatible with the teacher's goals 4. Technology is compatible with the context in which the teacher uses that technology 5. The teacher links students to technology by setting goals 6. The teacher links students to technology by promoting practices and attitudes 7. The teacher links students to technology by adapting the technology to suit students or the context 8. Critical analysis of technologies 9. Teachers make decisions about which technologies to use, in what way, and with which groups of students 10. Teachers are aware of the role technology can play in achieving their goals

	11. Teachers take students' needs, concerns, and preferences of technology into consideration 12. Teachers pay attention to and emphasize visual literacy 13. Teachers make use of students' knowledge and experience with technology (sometimes to supplement the teacher's)

Srnka and Koeszegi (2007) also recommended the use of *thought units* or units of meaning as the basic unit for data coding. Thought units "comprise one idea communicated, no matter whether it is expressed in a sentence, a verb object sequence, a single word" (p. 36). This concept was adopted for the analysis of verbal data in this study. Applying this theoretical idea to data, the unit of analysis was either a new media technology or a different use of the stated technology within the same participant's response. For example, one participant said, "Blogs allow for reflection and new ideas from feedback. Wikis allow for collaborative writing." This response contained two different new media technologies, blogs and wikis. The thought unit containing each technology was considered a unit of analysis. Thus, this participant's response contained two units of analysis and each received its own code.

Another participant who wrote about presentation software said that it was used to "Introduce elements of visual design; practice public presentations." This response incorporates two different uses of presentation software. The thought unit here was the phrase containing a distinctive use of the technology. Thus this response has two thought units, and consequently received two codes. This systematic coding resulted in 1,099 total codes of data.

Data coding validation. To validate data coding, and consequently findings, a research assistant was asked to analyze 10 percent of data in each data set (Creswell, 2002; Srnka & Koeszegi, 2007). Twenty random responses totaling 978 words were selected and copied to two separate files for data coding validation. I shared the coding scheme with the research assistant and we agreed on a method of coding. After we both used the coding scheme for the selected portion of data, I calculated the Pearson product-moment correlation coefficient (Pearson's *r*) to obtain inter-coder reliability (Gall et al., 2007). Inter-coder reliability was very weak with $r = 0.03$. The research assistant and I discussed our coding methods and the unit of coding. After two

more rounds of validation, we reached a high level of inter-coder reliability of *r = 0.779,* which meant the coding scheme was valid to code the complete set of data.

Data Representation and Interpretation

The use of data displays has been historically and traditionally associated with numerical data analysis because of the relative ease of generating tables and graphs based on numbers, particularly when a computer software package is used to analyze data. Nevertheless, a number of handbooks on qualitative methods encourage researchers to visually represent their data. In their book, Miles and Huberman (1994) supported presenting qualitative data into displays that would enhance understanding of these data and the relationship between different segments of data. Creswell (1994, 2002) also contended that tables, figures, and visuals should be integrated with the narratives discussing the interpretations of data. In this mixed-methods study, data displays were used to present both types of data, and cross-tabulations of survey data were used to facilitate visual representation of numerous data fragments which, in turn, provided the reader with a better understanding of the various elements of the study.

Incorporating excerpts of participants' verbal responses into the interpretative narratives not only supported the conclusions, but also helped the reader to contextualize these conclusions.

Ethical Considerations

In addition to approval by the Institutional Review Board (IRB) protocol prior to collecting data, a consent form (see Appendix C) was disseminated to participants before data collection. The first page of the online survey was an electronic version of a consent form (Sue & Ritter, 2007) which authorized the use of the data in this study.

CHAPTER FOUR

NEW MEDIA TECHNOLOGIES USED IN FYC CLASSES

I started this study with the overall goal of helping writing teachers become more critical users of new media technologies in teaching composition. Towards that end, I segmented that broad goal into three purposes: documenting new media technologies teachers used in teaching first-year composition (FYC) classes, exploring the uses of these technologies in FYC classes, and teachers' approaches to using new media technologies. Therefore, the study addressed three research questions:

> RQ 1: What do teachers say are the new media technologies (interactive, productive technologies) they use in first-year composition classes?

> RQ 2: What do teachers say are the purposes of using each technology in first-year composition classes?

> RQ 3: What do teachers' self reports about uses of new media technologies reveal about their approaches towards these technologies?

After quantitative and qualitative analysis of numerical and verbal data collected via the online survey, I found that answers to the first two research questions can be thematically organized around two major themes: new media technologies and FYC teachers. The two themes are not functionally separable though they are separated here for the sake of presenting and discussing the findings. The theme of new media technologies is the essence of this chapter while the theme of FYC teachers is discussed in the following chapter. Findings about new media technologies suggest that Composition Studies is facing a paradigm shift where engaging technologies are redefining the prime value of print text in relationship to multimodal texts.

These findings offer teachers a starting point for selecting the appropriate new media technologies to match their instructional goals and aspirations.

New Media Technologies Used in FYC Classes

The first research question this study aimed to answer involved the new media technologies (interactive, productive technologies) that composition teachers say they use in first-year composition (FYC) classes. The purpose of that question was to catalogue the new media technologies used in teaching FYC classes. In order to answer this research question, I created the first question in the online survey (see Appendix A).

In their response to the first survey question, 164 participants chose the various new media technologies they used in their FYC classes. Additionally, 45 of these participants listed other technologies under the 'other' option in the question. I first conducted a quantitative analysis on the responses in order to calculate frequencies of use for each new media technology. Afterwards, I counted and categorized the other technologies listed by participants. Some of these technologies were particular examples of technologies in my original list. For example, ELMO and Glogster are web-based presentation applications. Such technologies were counted and grouped with the original ones on the list for more accurate findings. On the other hand, there appeared some technologies that did not belong to the original list. These included Learning Management Systems (LMS), such as Moodle and Blackboard, video/audio authoring and editing software packages, such as iMovie and Windows MovieMaker, and e-portfolio-building software like Mahara. Instances of each technology were counted and added to the frequencies presented in Figure 1.
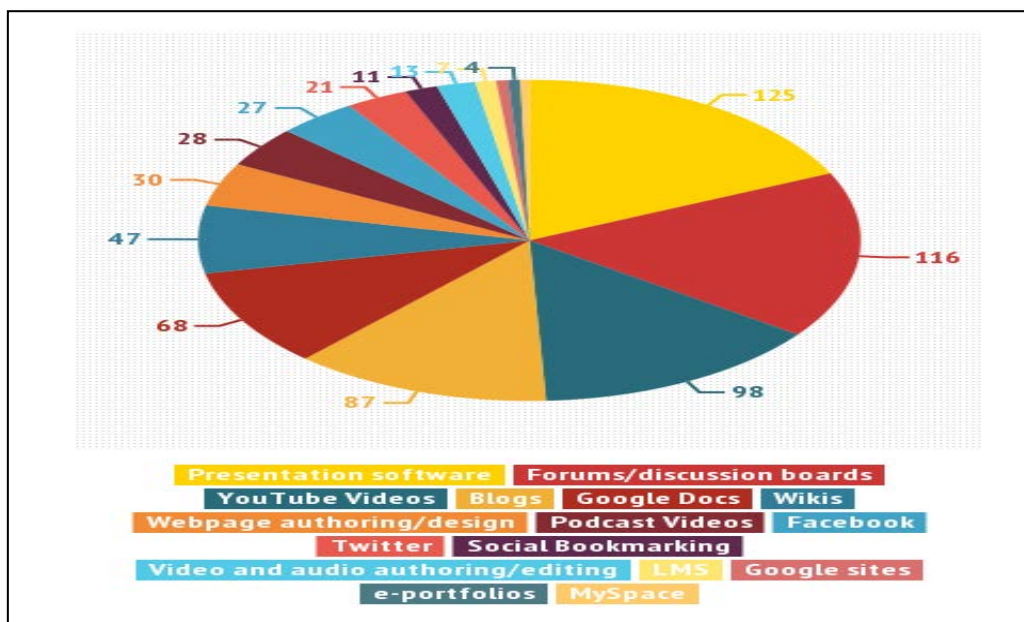
Figure 1. Frequencies of new media technologies used in FYC classes.

Figure 1 demonstrates the new media technologies that were originally in the survey and those added by participants. After careful examination of the frequencies of using each technology, I decided to exclude *MySpace* from the data analysis. The first reason for excluding *MySpace* was that only two participants marked it as a new media technology they used, making *MySpace* the least-used technology among participants. Furthermore, and upon examining these two participants' responses to other survey questions, I found that one of them did not explain how they actually used *MySpace* in class while the other used it in a way that resembles the use of *Facebook*. Consequently, I added the two instances of using MySpace to those of *Facebook* as a means of reducing data and facilitating discussion on the findings. Table 3 demonstrates the frequency count after this data reduction.

Table 3

New Media Technologies Teachers Use in FYC Classes

Technology	Frequency	Percentage
Presentation software	125	76.2
Forums/discussion boards	116	70.7
YouTube Videos	98	59.7
Blogs	87	53
Google Docs	68	41.4
Wikis	47	28.6
Webpage authoring/design	30	18.3
Podcast Videos	28	17
Facebook	27	16.4
Twitter	21	12.8
Social Bookmarking	11	0.6
Video/audio authoring/editing	13	0.78
LMS	7	0.4
Google sites	4	0.2
E-portfolios	4	0.2

It is important to note that even though the survey question was quite specific in asking

participants to choose the new media technologies they required their FYC students to use to

complete coursework, a number of teachers reported the technologies they used in planning and

managing their course work, such as LMSs. This point is discussed in more detail in the

discussion of technologies and their uses in FYC classes.

As I examined the new media technologies participants reported using, I realized that

these technologies could be categorized into three groups: text-rich technologies, media-rich

technologies, and management technologies. This categorization helped in creating a matrix of

all new media technologies reported in responses to the first survey question as illustrated in

Table 4.

Table 4

Matrix of New Media Technologies Used in FYC Classes

Category	Technology
Text-rich Technologies	Forums/discussion boards
	Blogs
	Google Docs
	Wikis
	Facebook
	Twitter
Media-Rich Technologies	Presentation software
	YouTube Videos
	Webpage authoring/design
	Podcast Videos
	Video/audio authoring/editing
Management Technologies	Social Bookmarking
	LMS
	Google sites
	E-portfolios

Before discussing the new media technologies reported in participants' responses to the survey question, it is important to note that although I made some references to answers to other survey questions, the following section focuses primarily on discussing the new media technologies used and the reasons participants cited for using them. In later sections, I discuss the actual uses of new media technologies as reported by teachers. The reason I separated sections about technologies from sections about uses was to emphasize the various uses rather than just the technologies. In other words, the uses were not categorized by technology; instead, they were categorized by pedagogical purposes as you can see below.

Text-rich Technologies

Text-rich new media technologies are those technologies used to produce alphabetical text in digital spaces. The main purpose of these technologies is print text production. These technologies include forums and discussion boards, blogs, Google Docs, wikis, and social media

networks. A discussion of each technology and the reasons teachers gave for using it follows in later sections.

   Forums/Discussion boards. Among the text-rich new media technologies reported by participants in the study, forums and discussion boards took the lead as more than 70% of participants reported using them with students in FYC classes as demonstrated in Figure 2. A discussion board is "A web application for holding discussions and posting user generated content" (Bell, 2009, p. 265). Bell mentioned conversations as the main purpose of using discussion boards in class. Another objective of using discussion boards in class is language fluency in the form of interaction and discussion (Selfe, 2003).

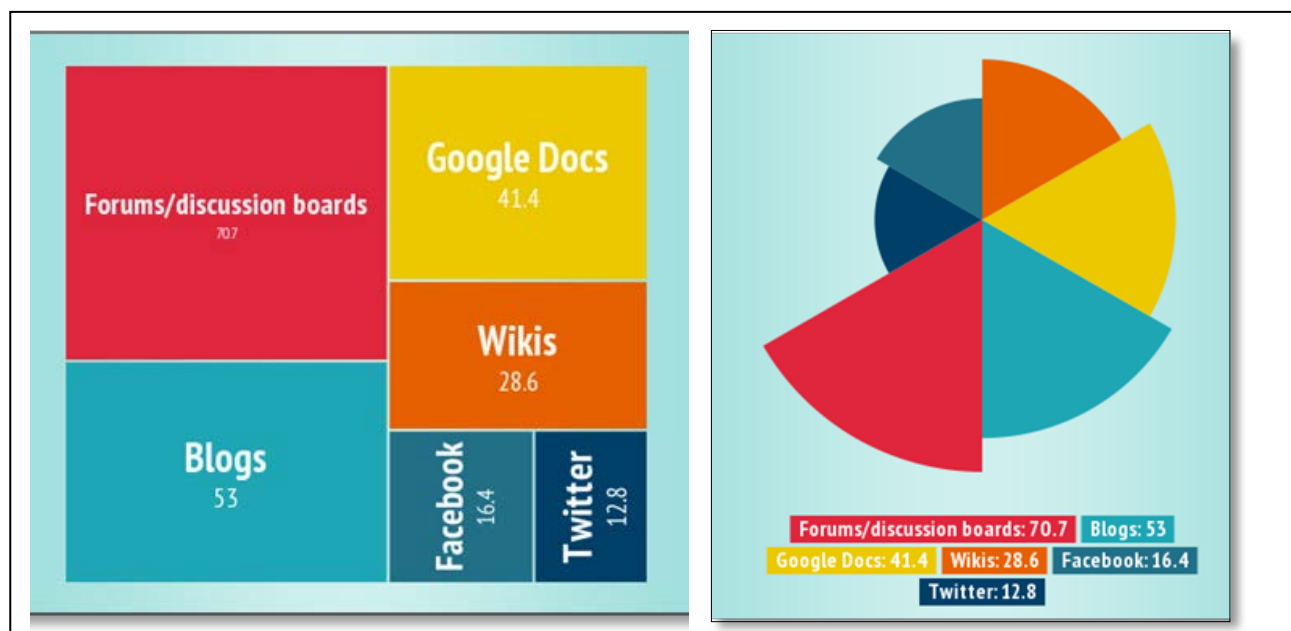*Figure 2.* Text-rich new media technologies used in FYC classes.

   Teachers participating in the survey provided a number of reasons why they chose discussion boards as a space for writing production. An important reason was the asynchronous nature of discussion board posts which helps students think and formulate their responses without the pressure typically associated with class discussions. The asynchronous nature of

discussion boards is particularly useful for disenfranchised populations of students who might be shy to speak up in class. For example, one participant described students in their college, stating, "we have a sizable population of immigrants, and they especially use the discussion board to comment on class topics that they did not have a chance to talk about in class." This finding supports Bloch's (2008) argument that writing in digital spaces allows shy, uncomfortable, and marginalized students to better articulate their ideas as they write without time or place constraints. Another teacher provided a different reason for using discussion boards in class, stating that individual posts can work as a repository of short writing that can be used towards writing a complete essay. A third reason given for using discussion boards was that discussion boards encourage students to "do a lot of informal writing." This informal writing could be in the form of the discussion and communication Bloch and Selfe (2003) pointed out.

What is interesting about these findings is that some teachers reported using the forums and discussion boards embedded in the Learning Management System (LMS), such as Moodle and Blackboard, provided by their home institutions. This finding suggests that teachers were more likely to use technologies available to them rather than going out and discovering other technologies, mostly web-based ones. Using technologies hosted in LMS's solves the problem of student access because these technologies are free and easy to use. Using LMS-housed technologies can also be a choice some teachers make in order to assure student privacy. LMS-housed technologies assure that only the teacher and classmates can access student writing.

Blogs. As Figure 2 illustrates, blogs ranked second among text-rich new media technologies as 53% of participating teachers reported using them in their FYC classes. Blogs are personal or institutional websites where authors publish news of interest, personal views and analyses of news, and comments on current events. In addition to being another medium for

informal writing, a number of teachers said blogs "have the added benefit of being a real world form." One teacher's response explained this by saying that blogs offer updated information and news written in a more everyday language, which makes them better reading choices than articles in readers and textbooks. Another teacher talked about reading blogs for analysis activities in which the teacher and students engaged in analyzing writing conventions of authentic texts on blogs. This use of blogs is in accordance with Bell's (2009) claim that consuming and creating blogs may help students develop critical reading and writing skills. When students analyze authentic texts on a blog, they are likely to develop not only better reading skills, but also more awareness of what their writing in a digital space should look like. Such awareness should help students write better in a digital space. As Bell explained, creating a blog may make students more aware of their writing choices and the media in which they write. Some teachers' reports in this study supported Bell's explanation. Teachers claimed that writing on a blog was expected to prepare students for writing in digital environments, which seemed to be an important goal for many teachers "because so much composition is happening in digital spaces," as one teacher stated.

According to a number of participating teachers, discussion boards and blogs were a good way to integrate new media technologies while teaching in a traditional classroom. About 38% of participating teachers reported teaching their FYC classes in classrooms that are equipped with only a computer connected to a digital projector. One teacher "incorporated forums and blogs as out-of-class activities" to overcome the problem of students' lack of access to computers in class. This finding opens the door to teachers who are interested in integrating new media technologies into their classes but are faced with in-class obstacles. Access problems include colleges that cannot provide computer-equipped classrooms for composition classes and students

who cannot afford their own electronic devices to access the internet. Out-of class writing activities on blogs and discussion boards may enable teachers to integrate some forms of new media technologies into their classes despite those obstacles, which highlights the value of text-rich technologies in the writing class.

Google Docs and wikis. Google Docs seem to be gaining attention from FYC teachers. About 41% of participating teachers reported using them as seen in Figure 2. However, it does appear that wikis are falling from favor in FYC classes. Only 28.6% of participants reported using them. One reason for the decline in the use of wikis in college writing classrooms might be because Google Docs serve as a practical medium for peer-review and collaborative writing (Bell, 2009; Bloch, 2008; Denton, 2012), and with the widespread diffusion and ease of using Google Docs (Yang, 2010), it is possible that the withdrawal of wikis from FYC classes is imminent.

Teachers who reported using Google Docs for collaborative writing projects gave a number of reasons for their choice. One reason was that students in the same class can see their peers' document markups and learn from them. Moreover, Google Docs have a chat feature which many teachers find an engaging way to workshop with their students. As one teacher explained, "the chat feature and the use of colors helps collaboration really stick with students." In other words, and according to participants, the features of Google Docs help students to better understand collaboration and to become more engaged in the revision process. Brodahl, Hadjerrouit, and Hansen (2011) argued that the chat and comment features in Google Docs offer "a means for written metacommunication" (p. 78), or communication that occurs at different levels: editing, commenting, and chatting. Because students engage in multiple levels of communication on Google Docs, they may be able to better understand and benefit from

collaboration.

Meanwhile, a number of teachers seemed to prefer wikis for students to coordinate their group projects and as a medium for publishing their final writing products to a larger audience. One teacher added that they used a wiki in collaborative projects because many students may have to use wikis at their work place, so "thoughtful engagement with wikis has real-world application for students." Along the same lines of caring for students' future needs, another teacher stated that they used a wiki in class because they "want students to have guided practice writing in online environments because that is their future." Due to the fact that these reasons were associated more with collaboration and online writing than with wikis *per se*, and with the perceived relative ease of Google Docs compared to wikis, I believe wikis will not be used in the writing class for long, ceding their place to Google Docs.

Social media networks. The two famous social media networking sites Facebook and Twitter were reported to be used by 16.4% and 12.8% of participants, respectively. Although both sites are generally known for their heavy use of multimedia, I grouped them with text-rich new media technologies based on the reported uses and purposes of using them in FYC classes. While Facebook was mostly used as a means of communication between teacher and students, Twitter was used more for producing text and enhancing students' writing skills.

Due to the assumption that Facebook is "used by virtually all students" as one teacher put it, an increasing number of teachers relied on Facebook as an easy way of keeping in touch with students. For example, for some teachers Facebook became an alternative to email communication with students. In a very recent study, Childs (2013) used a Facebook closed group instead of email to communicate with her students because they said they checked their Facebook pages very often during the day. Reid (2011) and Shih (2011) also used Facebook due

to its popularity among their students. According to Shih, the popularity of Facebook can help in "easing primary obstacles to communication" (p. 830). This argument could explain the use of Facebook private groups for communication and out-of-class discussion as reported by three participants in this study. As Facebook becomes more ubiquitous in students' lives (Elavsky, 2012), the walls of Facebook private groups may replace discussion boards very soon.

While Facebook was used mostly for producing text through communication and discussion, Twitter was used for enhancing students' writing skills. Twitter's restriction of limiting text to 140 characters per tweet has encouraged teachers to use Twitter to develop "more focused writing skills" as one teacher claimed. Due to character restraint inherent in Twitter's format, Hosterman (2012) also advocated using the platform to enhance the linguistic abilities of students. This finding ties in neatly with what McWilliams, Hickey, Hines, Connor, and Bishop (2011) argued, i.e., that Twitter can be a viable platform for developing students' literacy skills beyond simple reading and writing.

However, not all college instructors view Twitter as a useful technology to use in their classes. In a recent study by Lin, Hoffman, and Borengasser (2013), less than one percent of professors said they used Twitter in class. Professors in that study perceived Twitter to be of "low value" (p. 40), compared to wikis, blogs, podcasts, and YouTube videos. Privacy issues were reported as the biggest reservation for professors electing not to use Twitter. In order to overcome this concern, Lin, Hoffman, and Borengasser suggested creating a class hashtag to filter course-related tweets, which I believe could protect professors' and students' privacy while using Twitter in class. Neither professors nor students have to follow each other in order to engage in activities on Twitter; they all can contribute to the same hashtag and see each others' tweets while maintaining their privacy. Creating a class hashtag was mentioned by one

participant in this study as a feasible way of collecting students' tweets in response to class readings. Therefore, this study provided some evidence that Twitter can be easily integrated into classes without many worries about privacy.

The seeming preference for text-rich new media technologies among participants in the survey was not a surprise. This preference was argued earlier by Ranker (2008) who said that the linguistic mode of expression is still the preferred mode in the academy. Jones (2010) also strongly asserted that college writing classes tend to ignore other modes of expression. In a more recent publication, Shipka (2013) reiterated Prior's argument that the field of Composition privileges written texts over other forms of expression and composition. This argument seemed to be strongly supported by teachers participating in this study. According to Selfe (2009), the field's focus on written communication inhibits students from utilizing the semiotics they are familiar with when writing in the composition classroom. It is as if teachers are depriving students from exploiting their cultural capital to their academic advantage. Accordingly, composition instruction needs to move towards new ways of meaning-making beyond the emphasis on the verbal form (Williams, 2001). In what seemed to be a response to Williams' call, many teachers who participated in this study reported integrating media-rich new media technologies in their FYC classes, indicating a growing tendency for college writing teachers to implement new methods of meaning-making in their classrooms.

Media-rich Technologies

Technologies that require incorporation of different modes of expression (e.g. images, sound, and videos) and other media of production and dissemination (e.g. video authoring software and the Web) are considered media-rich technologies. These technologies shown in Figure 3 can be used to produce media-rich texts, or what is increasingly known as multimodal

texts, and to distribute these texts digitally. These technologies include presentation software, YouTube videos, webpage authoring, podcasts, and video/audio authoring software.
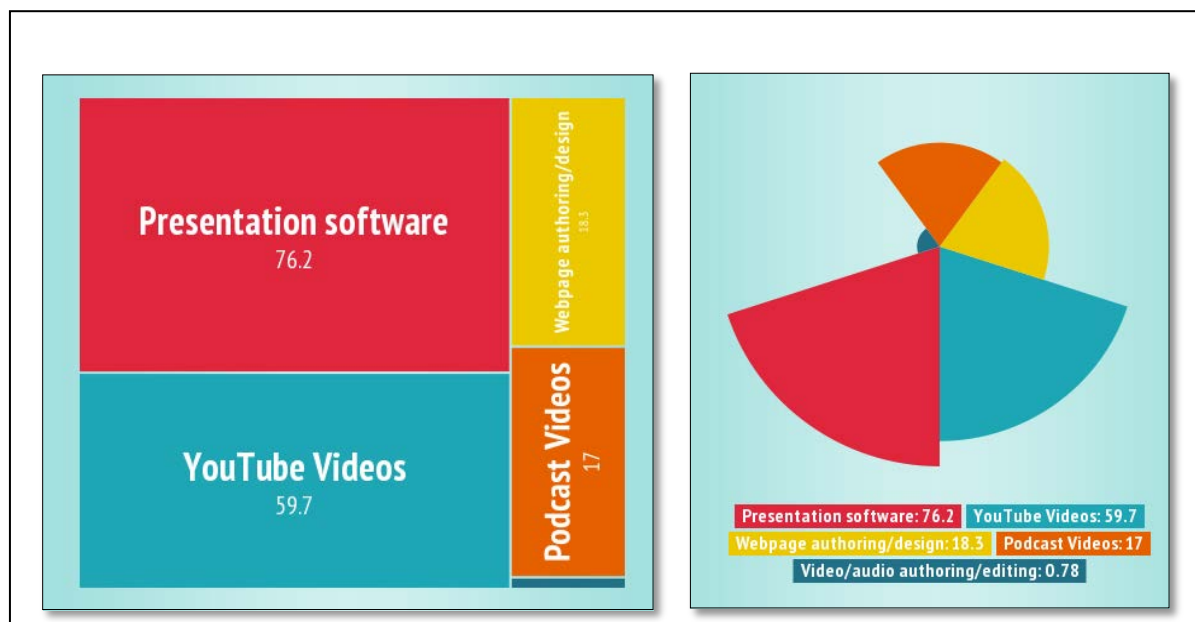

Figure 1. Media-rich technologies used in FYC classes.

Presentation software. Presentation software packages and applications seem to be very popular among participating teachers as 76.2% of them reported using one or more types of presentation software in their FYC classes. The availability and relative ease of using these technologies, particularly MS PowerPoint Presentation and Prezi, may have contributed to the reported widespread use of presentation software. One participant accounted for choosing these two technologies by saying, "they're both fairly accessible programs that most students have some experience with." The same reason was recently given by Katz and Odell (2013) who argued that PowerPoint is a long-standing presentation software that has been used for years in our classes.

Although presentation technologies appear to be used mainly for presenting students' work to their classmates, some teachers selected those technologies for other reasons related to

visual rhetoric. One teacher extensively elaborated on this, stating,

"I ask my second semester comp students to convert written arguments into a visual argument using either PowerPoint, Prezi, Windows Movie Maker (or other resources available to them). My goal is to encourage student to think about visual rhetoric in a more deliberate way."

Another teacher justified choosing Prezi stating, "its spatial affordances allow students to organize ideas [in their presentations] and see connections," which is also related to helping students understand and practice visual rhetoric. Apparently, these teachers and others are starting to see presentations as a form of text, and therefore, presentations are becoming an alternative mode of assignment as recommended by Katz and Odell (2013). Furthermore, these teachers' approaches can be seen as a response to Kress (1999), who called for teachers to design curricula that acknowledge visuals as they become more present and dominant in different communication media. Kress' argument dovetails with Katz and Odell, who argued that presentations can be used to teach students about transfer of rhetorical choices across modalities and modes.

YouTube videos. Participating teachers in the survey reported many uses of YouTube videos in their FYC classes. A number of the 59.7% of teachers who said they used YouTube videos claimed they used the videos as models of multimodal work that students watched before designing their own videos. What is more, because of the availability of YouTube videos, many teachers said they used YouTube as a way of providing supplementary visual materials meant "to supplement course readings" and "to illustrate points, ideas, or concepts." The reasoning behind the use of YouTube videos as reported by participating teachers shows that students did not actually use YouTube videos to complete course work as the survey question originally asked; teachers seem to rely on YouTube videos in their instruction and delivery of materials and in

illustrating course topics.

       Podcasts. Contrary to YouTube videos being used as supplementary technology, podcasts, used by 17% of participants, were used more as production technologies. A podcast is "a collection of digital media files which is distributed over the Internet" (Bell, 2009, p. 272). Although podcasts can be in audio or video format, all 28 podcast users in this study reported using the audio format, sometimes called an audio essay. Most participating teachers agreed that podcasts in their FYC classes were created as a "media intervention" to make print essays easy to circulate digitally. Teachers believed that creating podcasts increased students' audience awareness. Moreover, teachers asked their students to create audio podcasts in order to help students learn about "the features of the essay and about the affordance of sound and other media" through highlighting "the rhetorical choices of different genres." These teachers' rationale for adopting podcasts in their FYC classes supports Alter's (2007) contention that when a written essay is translated to an audio or visual form, the writer makes a series of decisions about which ideas to transfer and which to leave behind. As a result, designing and creating podcasts is expected to elevate not only students' multiliteracy skills, but also their critical thinking ones, a point I further elaborate below.

       Video/audio authoring. Because video/audio authoring software are closely related to the previous three technologies, I chose to discuss them before webpage authoring, even though the latter is more widely used, as you can see in Figure 3. There are two reasons for the minimal use of video/audio authoring technologies: The first reason is that these technologies are mostly used for producing multimodal texts that can be produced using more familiar and easier technologies, such as MS PowerPoint. Many teachers allow their students to choose a preferred technology to produce their multimodal projects. For example, one teacher said, "students are

given an array of choices and asked to re-mediate one of their essays into digital form. They may choose from Microsoft Photostory, Prezi, PowerPoint, Glogster, Wix (website development), or any digital mode they choose." This teacher's statement is typical of many other participants in this study. Apparently, students "do opt for a PowerPoint or Prezi" due to their previous experience using these technologies.

The second reason for the apparent minimal use of audio/video authoring technologies is that a number of teachers do not want to spend much class time teaching students about new technologies because they do not believe it is the writing teacher's job. One teacher argued that "It is not the job of a composition instructor to teach technology." Other teachers believe students should teach themselves how to use these technologies because they think "it's important for them [students] to teach themselves, as they will be doing that the rest of their lives." Additionally, one teacher stated that teachers prefer not to use technologies they do not know and to stay within their "comfort zone." These teachers' positions correspond to Edwards-Groves' (2011) assertion that teachers' familiarity with technology determines which technologies and the degree to which these technologies will be integrated in the classroom. Edwards-Groves' argument explained Rourke and Coleman's (2010) contention that some teachers believe that using a particular technology may take them out of their comfort zone. Therefore, those teachers might tend to maintain the status quo in their classes to avoid learning anything new or putting additional effort into designing and managing their courses (Elavsky, 2012). Despite this reluctance to learn or integrate new media technologies into their classes among participants in this study, and judging by recent publications (e.g. Childs, 2013; Ellis, 2013; Kinnear, 2013; Reiss & Young, 2013; Shipka, 2013), video/audio authoring and editing technologies are being used more often by composition teachers, and are likely to gain more

ground in the composition class.

Webpage authoring/design. Approximately 18.3% of participants reported using webpage authoring technologies in their FYC classes. These production technologies were used by students to design websites that served a number of purposes as discussed below. The major reason for choosing webpage authoring and design technologies is teachers' belief that "students need to learn to be rhetorical producers of webtexts and pages instead of just consumers of them." As a case in point, another teacher stated, "most students just use the web and do not think about web rhetoric until they actually compose for the web." Another teacher accounted for using webpage authoring "as a way to provide students with a (potential) audience and therefore more concrete rhetorical context."

Teachers' interest in elevating students' critical composing by writing for the web is not new. Turnley (2005) demonstrated a similar interest as she asked and taught her students to design webpages. Her argument was that as students compose and author web pages, they need to "reflect critically on their composing" (p. 132). Turnley's goal was to help students make what she called "situated design choices" through rhetorical analysis and understanding of the cultural context of the web page. Her method of achieving that goal originated with the call by Wysocki (2001, as cited in Tunley, 2005) for teachers to encourage and instruct students on how to reflect on the relation between visuals, text, and design in web authoring.

This discussion of media-rich new media technologies that composition teachers said they had used in their FYC classes points to the crucial role that multimodal composing can play in teaching the fundamentals of rhetorical analysis and critical thinking to college students. Edwards-Groves (2011) rightly argued that multimodal writing leverages the skills and literacies developed by students outside of class to help them learn better inside the classroom. Linking the

everyday and academic lives of students, and situating writing in students' worlds requires us to turn to multimodality because it is the form that students use outside the classroom (Jones, 2010). Accordingly, composition teachers are encouraged to take a greater role in coping with students' literacy knowledge and needs by adopting pedagogies that are more multimodal. The findings of this study offer composition teachers a starting point for exploring and experimenting with new media technologies in their classes due to the myriad benefits offered by these media as reported by participating teachers in their self-reports in this study.

Management Technologies

As shown in Figure 4, management technologies, or those technologies teachers use to manage their classes, were not largely reported by participating teachers. Yet, it is important to discuss them briefly.

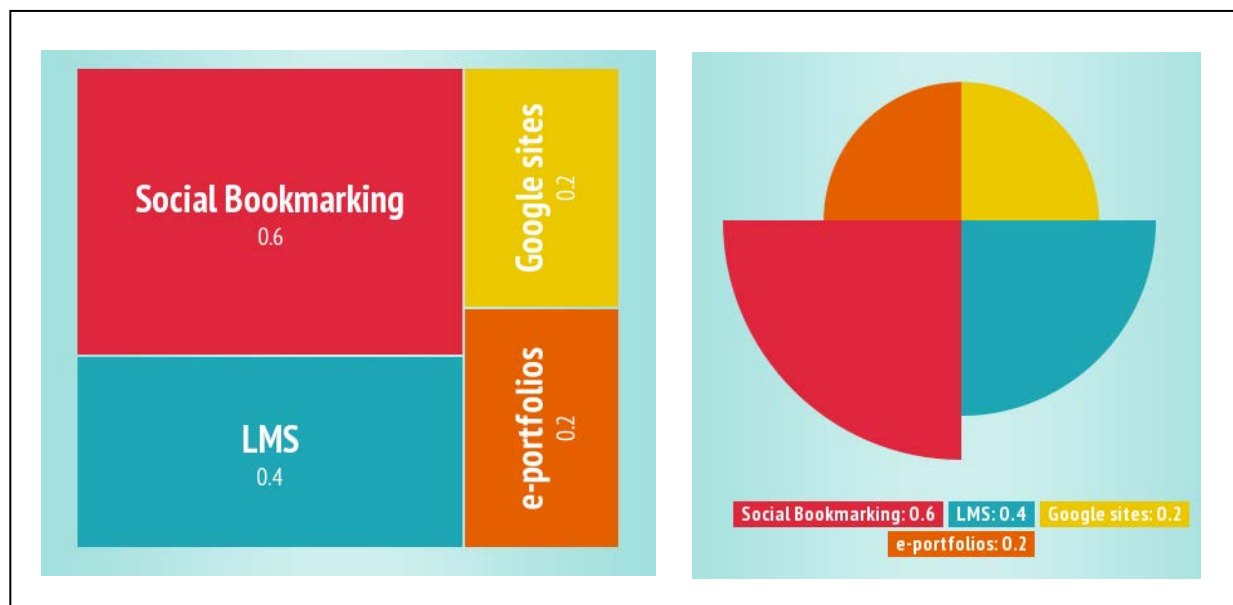*Figure 2.* Management new media technologies used in FYC classes.

Social bookmarking. Social bookmarking is an Internet-based service that allows users to "store, organize, search, and manage" (Bell, 2009, p. 274) web-based resources for research

and writing purposes. The one social bookmarking technology elaborated on by a participating teacher was Diigo. The teacher used Diigo in order to manage reading online texts. That participant believed writing teachers "have to teach students how to research and read texts online, too, as a part of inquiry" and that Diigo can help achieve that purpose. It was quite surprising that the other 10 teachers (see Table 3) who chose social bookmarking technologies in the survey did not mention how or why they used these technologies in their classes. A possible explanation for this lack of elaboration could be due to the typical and somewhat standard use of social bookmarking technologies for managing online resources for research purposes. Participants may have thought that there was no need to discuss what they may have assumed to be typical and known uses. Another explanation involves the wording of the second question on the survey (see Appendix A) which asked teachers to discuss two of the technologies they used in their classes. Teachers may have thought that other technologies they used required more elaboration than social bookmarking, so they did not provide details about it.

Learning management systems. I noticed that there was a discrepancy between the number of participants who added learning management systems (LMS) as one of the new media technologies they used to the 'other' option in the survey first question (*n=7*), and the number of those who actually talked about using an LMS in their FYC classes in their responses to the second survey question (*n=17*). The percentage in Table 3 represents the first group. This discrepancy necessitated a more careful look at each participant's response. As I examined those responses, I found that three of the seven participants in the first group mainly talked about using the LMSs provided by their institutions to manage and organize their coursework. For example, they used LMSs for sharing notes and handouts, posting assignments, and sending announcements to their students. The other four participants in that group and the 10 participants

who did not add LMS to their list of new media technologies talked more about using the new media features, such as blogs and discussion boards, housed in the LMS in their FYC classes. This deeper look at participants' use of LMS helped me to understand the discrepancy in numbers. It is important to note that LMSs are not in themselves a new media technology; they provide teachers and students with easy and free access to some new media technologies, namely blogs and discussion boards. Therefore, LMSs will not be discussed any further in this study; rather, new media technologies housed in LMSs will be discussed in the respective contexts of answering research questions.

Google Sites and e-portfolios. The next management new media technology considered according to Figure 4 is Google Sites. Google Sites were reported mainly as an e-portfolio platform. The main reason for the popularity of Google Sites is that they are free and have an easy interface. Additionally, Google Sites are easily designated public or private, allowing students to continue to edit work privately and to share it with the public when ready. In addition to Google Sites, other e-portfolios platforms were reported by participating teachers. These platforms included blogs, websites, and Mahara, the specialized e-portfolios building software. Teachers who reported using Mahara seemed to agree that using the platform was mandated by their institutions but gave no further details about how they used it. Although e-portfolios are becoming more integrated into the writing class, and despite the fact that they are a digital technology (published on the Web) that can enhance students' audience awareness and visual design and rhetoric (Lane, 2012), they cannot be considered a new media technology. E-portfolios are not production or interaction technologies; they are primarily showcasing technologies used to share student work that was produced with other technologies. In keeping with this understanding of e-portfolios, I chose neither to include them in my survey as a new

media technology nor to discuss them further.

The above detailed discussion of the text-rich, media-rich, and management new media technologies that teachers said they had used in their FYC classes, provides answers to the first research question addressed by this study. This catalogue of the different types of new media technologies allows teachers who are interested in integrating these technologies into their FYC classes to learn about the wide spectrum of technologies available with a fair idea of their potential benefit. The rapid growth of new media technologies can overwhelm teachers who are interested in using technology but cannot choose the right one(s) for their classes and teaching contexts. Therefore, this extensive discussion can be a reference point for those teachers to pick the technologies they perceive as useful. In order to further assist composition teachers with the process of selecting the appropriate new media technologies for their classes, the discussion now turns to the purposes teachers said they wanted to achieve by using these technologies.

Purposes of Using New Media Technologies

Answers to three survey questions (questions 2, 3, and 4) helped to create a detailed portrait of the purposes and the ways participants used the aforementioned technologies in their FYC classes. It is important to note that I will draw from collective answers to the three questions in my discussion below to avoid redundancy. Another note worth mentioning is that while question three on the survey asked participants to choose between analyzing and producing multimodal texts as activities associated with new media technologies, analysis of answers to that question and question two revealed that teachers' uses of multimodal texts and new media technologies in general were more complex than that simple binary. Accordingly, findings about analysis or production of multimodal texts will be incorporated with other purposes and uses of new media technologies. I believe this should not only help with data reduction, but also with

presenting and discussing uses of technologies in a more cohesive manner.

In the upcoming section I discuss the different uses of various new media technologies in FYC classes as reported by participants in this study. I had two options when categorizing these uses: to either categorize them by technology or by goals and purposes. After some contemplation, I chose the second option. My rationale for this choice is related to one of the purposes of this study: to help composition teachers to make informed decisions about how to use new media technologies to achieve their teaching goals. In other words, I want teachers to think of their goals first, and then choose the new media technology that best suits them and not the other way around.

Qualitative analysis of participants' responses resulted in five major categories of uses of new media technologies in FYC classes, which is demonstrated in Figure 5. Those categories were text production, skill building, community building, teaching, and developing new literacies. After rigorous contemplation of these themes, I realized that uses of new media technologies categorized under developing new literacies largely intersected with the sub-theme of multimodal texts, categorized under text production. I also realized that using new media technologies in preparing and managing classes and delivering instruction are neither closely related to the scope of this study nor do they answer my research questions. Therefore, as a means of data reduction, and for the sake of having a more focused discussion that answers my research questions, I merged developing new literacies with multimodal texts, and decided not to include uses of new media technologies in teaching in this discussion. This new categorization resulted in the themes displayed in Figure 6.
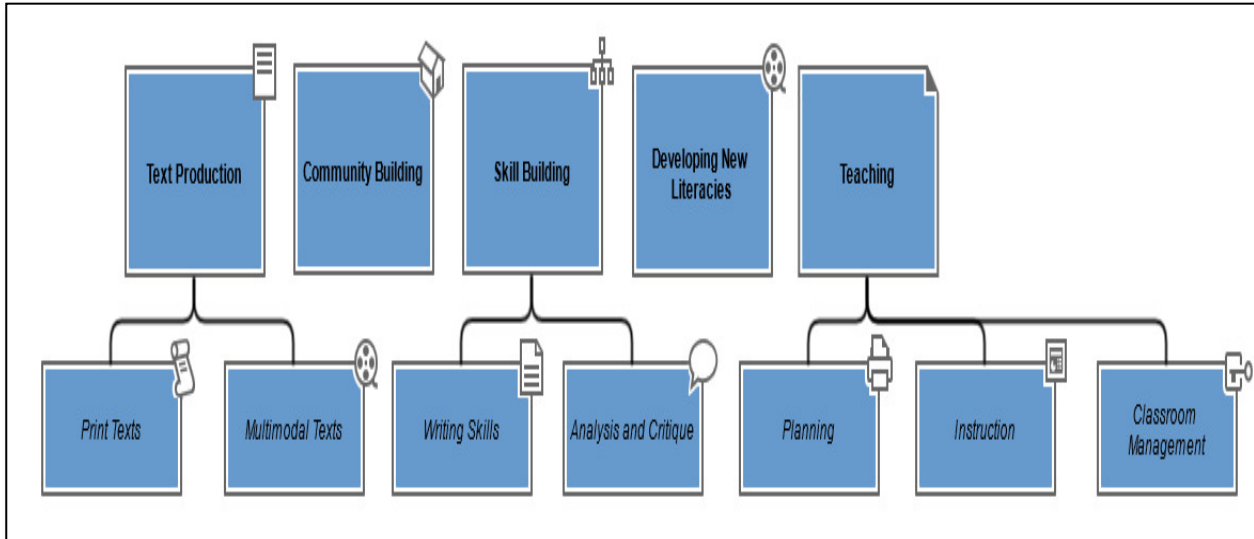
Figure 3 Preliminary themes of uses of new media technologies

Under these categories there will be a discussion of sub-categories, technologies used to achieve each group of purposes, and benefits of using particular technologies. A word of caution before I move forward: categorizing findings under major themes and sub-themes is meant to ease the presentation and organization of findings more than to draw lines between themes. In other words, there can be some overlap between many of the themes as you will see later. Hence, using themes is not intended to create isolated themes of findings or to give the impression that each theme is a category independent from others.
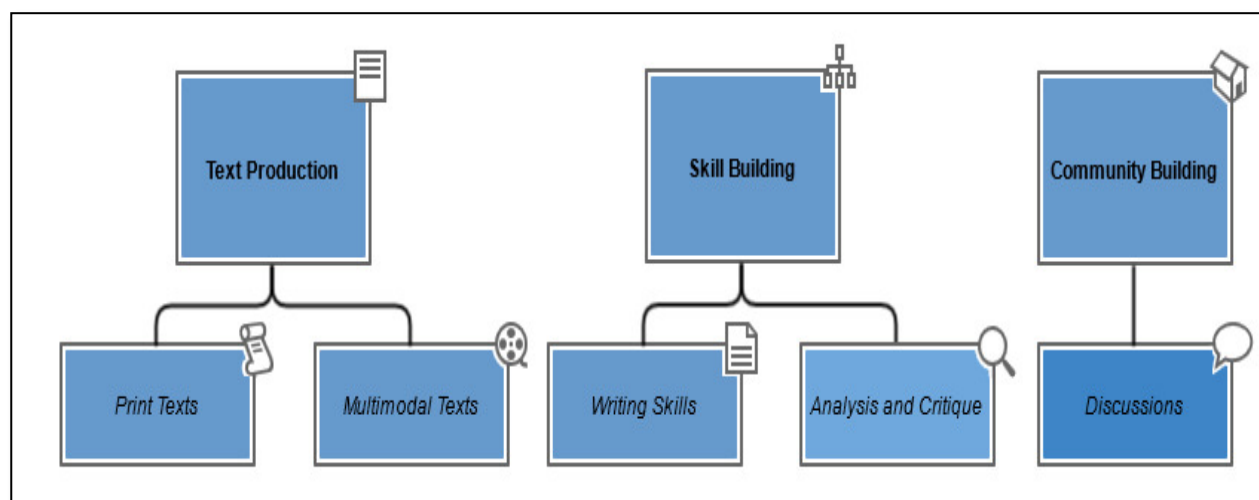
Figure 4. Final themes of uses of new media technologies.

Text Production

Because this study examined the uses of new media technologies in first-year composition classes, the expectation was to find that text production was a major purpose that teachers aimed to achieve. It is obvious that composition teachers aim for their FYC students to produce texts in a variety of forms and modalities. The texts teachers described in their self-reports included both print and multimodal texts. Print texts are solely alphabetical even if produced and disseminated in a digital space, whereas multimodal texts incorporate more than one mode of expression, such as images and sound, and are disseminated digitally.

Print texts. As discussed earlier, composition teachers emphasize production of print text because enhancing writing skills is a core purpose in college writing classes. Participants in this study remained faithful to that core purpose saying that they had asked their students in FYC classes to use a variety of new media technologies to perform various activities in order to produce a lot of print text. Figure 7 summarizes the many purposes and activities related to print texts and the technologies mostly used in producing them which I discuss in later sections. As you can see in Figure 7, teachers seemed to have two overall purposes for using new media

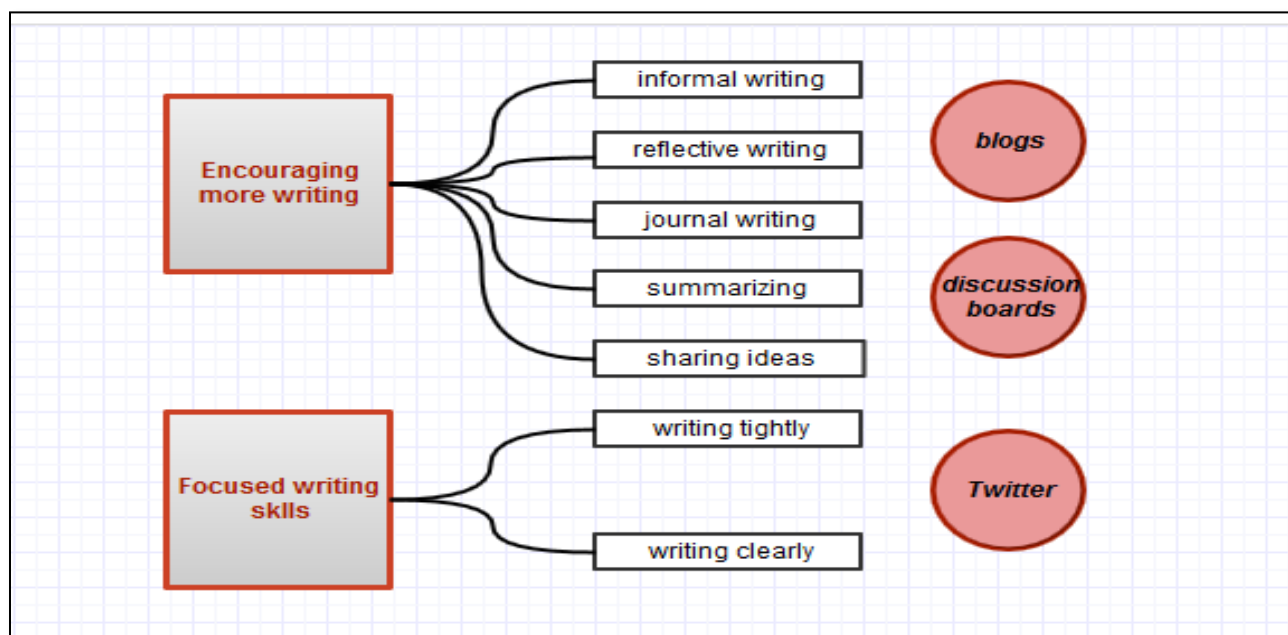technologies to produce print text: encouraging more writing and developing more focused writing skills.

Figure 5. Purposes, activities, and technologies for print text production.

Encouraging more writing. Participating teachers mentioned a number of purposes related to the production of print texts. They talked about the everyday activities they created and implemented in class to achieve these purposes by employing a variety of new media technologies. The first important purpose was to encourage students to write more, particularly in digital spaces because, as one teacher stated, "so much composition is happening in digital spaces." To achieve this purpose, different teachers asked students to complete various writing activities. Activities included writing informal or low-stakes writing assignments that encouraged students to write freely. Informal writing seemed to be a popular form of writing that many participating teachers valued. Interestingly, some teachers described blogs and discussion boards where students wrote as an "informal setting." This description might have been used because many teachers restricted access to class blogs and discussion boards to class members

only, making those spaces more informal and non-threatening to students, a condition that is likely to encourage them to write more. Teachers may have considered these digital spaces to be informal settings because of the nature of writing produced in comments and discussions. As a case in point, some teachers said they allowed students to use informal language as a means to encourage them to write more.

Two other inter-related activities that many teachers reported using were reflective writing and journal writing. These two activities were usually used for students to respond to the assigned readings without having other students read or comment on these reflections or journals. Personal blogs, rather than class blogs, appeared to be a good place for students to practice these two activities. One teacher combined these two activities, saying "I often ask my students to maintain a blog over the course of the semester so that they can work on reflective writing practices and critical thinking activities in response to readings." These examples of using blogs correspond to the nature of blogs that emerged as a form of digital writing intended for journal writing (Krishnaiyer, Mushahar, & Ahmad, 2012; Lankshear & Knoble, 2008). As Krishnaiyer, Mushahar, and Ahmad argued, bloggers are more expressive and empowered when blogging because they have more time to reflect and think about their ideas. Maintaining a blog over a long period of time, or a semester as the teacher said, was recommended by D. Selfe (2003). Although neither D. Selfe nor the teacher explained their argument, I, too, contend that students must continuously blog to reap the benefits of that writing medium. As students continue to write and reflect on their work within the blog space, they may develop better writing and reflection skills, which is not likely to result from one-time use. One teacher added that another benefit of reflective and journal writing is that by writing responses to readings on personal blogs, students have "more ownership of their work than a discussion board."

Other teachers also discussed two additional activities they believed encouraged students to produce more print text. The first activity was summarizing group face-to-face discussions and posting these summaries to a discussion board for the entire class to see. In addition to this group activity, several teachers talked about the individual activity of sharing ideas in preparation for essay writing. Because this activity is more individual, teachers used blogs rather than discussion boards. I assume this choice of blogs involves students' ownership of their text when it is published on their own blogs instead of on the whole-class discussion board.

Developing focused writing skills. Besides encouraging students to write more, teachers reported another purpose for using new media technologies. Developing more focused writing skills seemed to be a very important objective for many teachers participating in the study. Some examples offered as developing more focused writing skills were "writing with brevity and clarity" and "writing tightly and concisely." One teacher explained how they used Twitter to tweet responses to readings using a class-specific hashtag. The teacher explained that tweeting about class readings kept students engaged outside of class. Another participating teacher claimed that when students had to fit their summary within the 140-character limit of Twitter, they learned to write succinctly. This use of Twitter is a live example of Grosseck and Holotescu's (2009) suggestion of using microblogging as "a tool for assessing opinion" (para. 10).

This discussion of the purposes and activities of using new media technologies to produce print texts in the FYC class corresponds to the argument that, in spite of the changing waves in the field of Composition, the field still values print text above any other possible form of expression. Nevertheless, the field is in fact witnessing a shift towards multimodal texts as discussed in the next section.

Multimodal texts. Many teachers are adopting more varied pedagogical approaches to teaching rhetoric and composition in FYC classes. One of these approaches is teaching visual rhetoric and multimodality to FYC students in order to achieve several rhetorical purposes. Teachers who took part in this study gave detailed accounts of using visual rhetoric and multimodality rhetorically by describing the purposes they sought to achieve, the activities they designed, and the new media technologies they adopted. Figure 8 illustrates the purposes and activities that teachers reported.
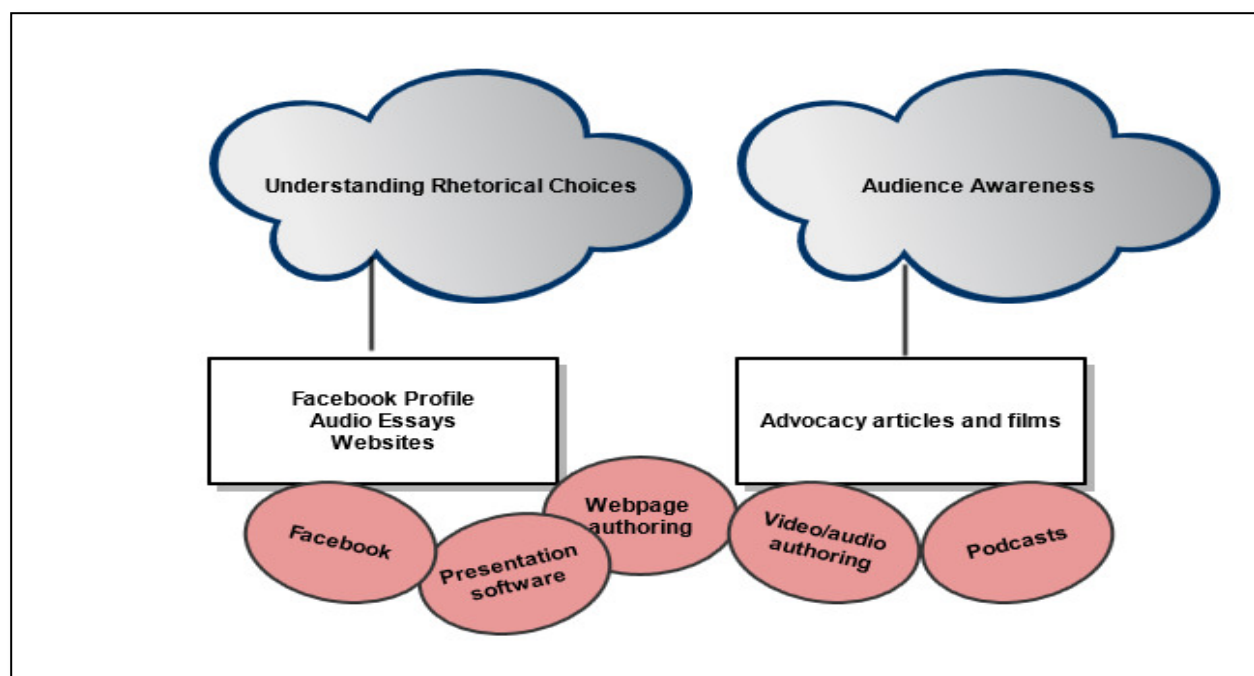
Figure 6. Purposes, activities, and technologies for multimodal text production.

Understanding rhetorical choices. According to the teachers in this study, the overarching purpose for using visual rhetoric and multimodality in FYC was for students to develop a better understanding of rhetorical choices across modalities. Teachers wanted students to make better choices when composing multimodal texts. Though this initial approach seems broad, a number of teachers narrowed their purpose to helping students understand the rhetorical

choices of different genres in varied rhetorical situations. As abstract as this purpose might seem, teachers described particular activities they designed to engage their students in multimodal writing. One interesting activity a teacher reported was creating a profile page on Facebook "that represented their intellectual and scholarly identity." The teacher asked students to create that page using images, videos, links to articles, and music and songs that helped them represent their identity as students and their scholarly activities. Such an activity is expected to have encouraged students to consider a range of rhetorical choices in order to best represent themselves professionally in the virtual space of a social media networking site.

Creating audio essays in the form of podcasts was another rhetorically important activity a number of teachers reported to have implemented in their classes. Judging by the number of participating teachers who talked about assigning audio essays in their classes, it appears that audio essays are becoming quite popular in FYC classes. In addition to teachers' accounts of implementing audio essays in their classes, there is a surfeit of recent scholarship discussing the use of audio essays in the composition classroom (e.g. Adsanatham et al., 2013; Hawkins, 2011; C. L. Selfe, 2009; Stedman, 2012). According to teachers in this study, creating an audio essay made students consider "rhetorical choices in different genres." More specifically, one teacher noted that changing a written argumentative essay to an audio essay enabled students to not only think about "features of the essay" but also about "the affordance of sound and other media." Another benefit of asking students to produce an audio essay from their written essay is that the process "gives students practice focusing on the stylistic details of their writing." Jones (2010) bolstered this teacher's claim by contending that creating an audio essay helps students better articulate their thoughts and arguments. Jones added that audio essays give students a strong voice that mostly transfers to their written essays. These activities are progressive approaches to

achieving traditional rhetorical purposes in the FYC class through the use of new media technologies and creative assignments in untraditional genres.

Under the umbrella of untraditional genres, some teachers' assignments included multimodal texts, such as the production of webpages and videos. Teachers who designated website design as a multimodal activity claimed that Webpage authoring was an easy-to-use medium with which many students were familiar. Similarly, teachers who asked students to create videos also believed that using presentation software or a video authoring software would be easy for students. One teacher gave a more profound reason for asking students to create a video that incorporated images. They argued that students who work with images "gain a better understanding of Creative Commons and copyright for the twenty-first century." This attention to using Creative Commons is likely to enhance students' ability to integrate sources fairly and effectively in their texts in both print and multimodal media. Such findings about multimodal texts consolidate Ranker's (2008) and Kress' (1999) argument that as students move between images, text, and sound, they transform their learning across modes.

These teachers' reports indicate how multimodal work in different modalities, such as audio essays, websites, and videos, can be geared towards achieving sophisticated rhetorical purposes by drawing students' attention to the affordances of other media and considering their choices in different rhetorical situations. Yet, this is not the only rhetorical purpose for producing multimodal texts.

Understanding audience awareness. Interwoven with the important purpose of considering rhetorical choices is the need to understand audience awareness. When using the term audience I mean to suggest a group of readers not only limited to teachers and students, but also to the many unseen readers found when multimodal texts are circulated widely on the Web.

One teacher discussed an assignment in which students were required to write an online advocacy article. In that article, each student advocated for a policy change on a political, social, or cultural issue through the integration of videos, images, music, and hyperlinks to other sources. Not only did that assignment increase students' awareness of the possible authentic audience for their articles, but it also encouraged them to make informed decisions about web rhetoric as the teacher contended. The teacher said, "Most students just use the web and do not think about web rhetoric until they actually compose for the web. This is challenging for them to do well and changes the way they look at web sites."

Another teacher argued that writing multimodal texts for the Web changes students "from consumers of the Web to producers of it," which I believe both contributes to their sense of ownership over their writing and enhances their rhetorical choices. Similarly, another teacher asked students to design an advocacy film on a particular civic or political issue. The teacher said they told students "that the film should attempt to persuade a specific audience and have a specific purpose." In an earlier study, Dubisar and Palmeri (2010) concluded that political remix videos enable students to employ their own thoughts and beliefs to reach larger audiences. Their conclusion can be extended to advocacy films.

The discussion of print and multimodal text production as a primary theme of findings in this study demonstrates that while many teachers still believe print text is superior to other forms of expression, which emphasizes alphabetical text in on- and off-line modes, composing using other modes of expression is finding its way into the writing class. The discussion also highlights the sophistication of purposes and activities associated with producing multimodal texts. I argue that because creating multimodal texts can be perceived as a non-mainstream practice in Composition, teachers who assign such work try their best to tie their work to more authentic

purposes and more creative assignments to achieve those purposes. Those teachers, as seen in the self-reports discussed above, often set more advanced rhetorical goals in order to position their approaches to multimodality more legitimately in the field of Composition. These teachers are enacting what Edwards-Groves (2011) called "the multimodal writing process" (p. 62). This pedagogy should be included in new writing practices in the writing classroom. Within such an arrangement students not only write recursively across stages of the writing process but also compose recursively across modes and media. However, as Williams (2001) warned, shifting interest to visual forms of meaning-making without considering the verbal, tends to instill a dichotomy between verbal and visual forms. There is an urgent need for a balanced pedagogy that acknowledges both forms for building students' skills using new media technologies. This is discussed in the following section.

Skill Building

The second sub-theme of uses of new media technologies in the FYC class is the importance of building skills in writing and in analysis and critique. It is significant here to mention that upon discussing these skills, teachers who participated in this study assumed and expected their use of new media technologies or adoption of certain activities to help students develop these skills. However, only few testified as to whether or not particular skill sets were actually developed. A possible explanation for this lack of discussion of students' actual gains may be due to the phrasing of the survey question that did not ask respondents to address students' gains. This phrasing conforms to the purpose of this study which relates to teachers' use of new media rather than students' gains. The two sets of skills teachers discussed in their self reports are writing skills, and analysis and critique skills. The following sections discuss these skills in relation to the activities teachers used to develop them.

Writing skills. In their self reports on using new media technologies in FYC classes, participating teachers' goals of developing writing skills seem to be, unsurprisingly, the essence of their teaching. Particularly, three writing skills appear to be crucially important to participating teachers: peer review, collaborative writing, and audience awareness.

Peer review. Peer review is a vital component of the writing process and writing pedagogy in the composition class. It has been labeled differently and practiced in various forms over time. Over the years, the practice of peer review has moved from face-to-face in-class sessions to online spaces (Chang, 2012; Guardado & Shi, 2007; Shih, 2011). Hence, it was not a surprise to find that 101 participants in the study chose peer review from the list of activities in survey question four (see Appendix A). Two significant phenomena about peer review appeared in teachers' self reports in response to the second survey question.

The first phenomenon is that out of these 101 participants, only 21 chose to mention peer review in their self reports. Furthermore, six of these 21 participants provided some details about the dynamics or new media technology used in the peer review process in their classes, whereas the other 15 only associated the technology with the activity without giving further details. A possible explanation for the lack of discussion of peer review in teachers' self reports could be that peer review has been so well established in the writing classroom that teachers may have thought there was nothing more to add to our understanding about the process; therefore, they neglected to elaborate. The process is usually carried out in a fixed sequence regardless of the medium used: exchanging drafts, reading and giving feedback on drafts, and revising subsequent drafts according to that feedback.

The second phenomenon involves the technologies employed to conduct peer review. As Figure 9 illustrates, the 21 participants who mentioned peer review preferred Google Docs over

other new media technologies. Google Docs were reported to be used by eight participants,

discussion boards were used by six, and blogs and wikis were used by four and three

participants, respectively. Furthermore, teachers who said they used Google Docs provided more

details about their reasons for choosing that particular technology. This finding could be

explained by the relatively recent introduction of Google Docs and its use in the writing

classroom. Participating teachers may have felt obliged to justify their choice of a novel

technology in the peer review process. Teachers said that Google Docs are easy to use and they

thought they were "useful" and "work nice" for peer review. One teacher accounted for the ease

of Google Docs saying that, "Commenting on other students' drafts is really easy, and all of the

students can see each other's comments in real time," which the teacher described as
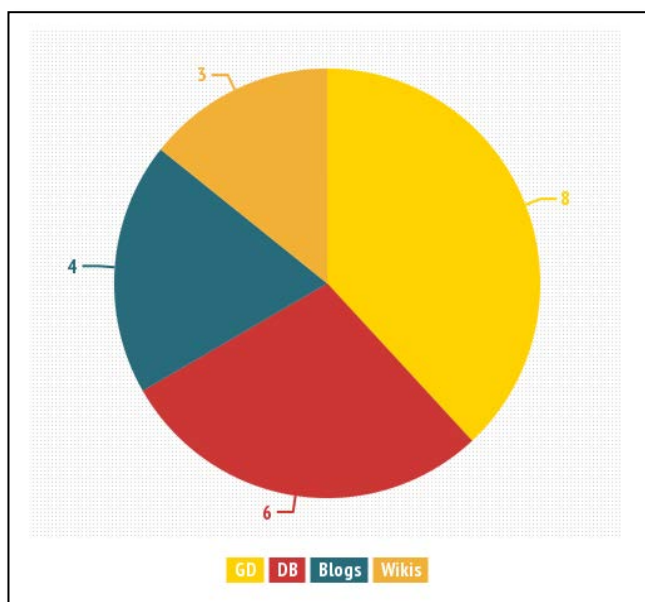
"beneficial."

Figure 7. New media technologies used in peer review.

The perceived benefit of using Google Docs in the peer review process was suggested

earlier by Yang (2010) who reviewed Google Docs and their potential benefits for the writing

class. Yang claimed that real-time interaction on Google Docs may develop students' critical

thinking as they watch their peers' writing unfold in front of them. One teacher said that using Google Docs in peer review "helps students to have all group members' comments in the same place." Furthermore, Denton (2012) suggested that the simultaneous editing of documents is made easy through Google Docs. Denton anticipated that the comments and chat features of Google Docs would make students more engaged in the peer review process. It is significant here to mention that findings in this study concerning the use of Google Docs in peer review are the first empirical support for all previous claims about the benefits of Google Docs.

On the other hand, teachers who chose other new media technologies for their students to use for peer review did not provide many details. One teacher said they used discussion boards for peer review workshops because doing so "frees up class time for other issues we need to cover." The same teacher provided a more important reason for choosing discussion boards. They claimed that the online workshops "often produce more substantial feedback from students on their peers' drafts as they have more time to think about their comments." This finding confirms previous research findings which suggested that online peer review allows for deeper feedback and richer comments (Heift & Caws, 2000; Liu & Sadler, 2003). When performing online peer review, students take more time to reflect on their peers' drafts before they write. This added time and focus allows for students to respond using what Wertsch (2002) called meta-comments, or reflective comments on more than one aspect in the peers' writing.

When describing the use of blogs as a platform for peer review, two teachers talked about "peer feedback" and "peer response" on weekly blog posts without mentioning essay drafts. Such statements mean that teachers may not have used blogs for peer review on essay drafts as the common practice of peer review goes.

Surprisingly, beyond the minimal mention of selecting a certain new media technology or

of giving reasons for not having chosen it, not a single teacher discussed their own role in the peer review process in their classes. Although the dynamics and details of peer review are beyond the scope of this study, I expected some teachers to talk about how they designed those sessions in order to improve the skill and practice of peer review in their classes. I hoped to gain more insight into peer review practice, especially on new media technology platforms. However, this does not change the role of peer review as the heart of writing instruction.

Collaborative writing. With the social turn in Composition studies, collaborative writing emerged as an integral application of writing as a social act. Ede and Lunsford (as cited in Hirvela, 1999) defined collaborative writing as "two or more people working together to produce one written document in a situation in which a group takes responsibility for having produced the document" (p. 9). One of the earliest accounts of utilizing computers and online writing spaces later in collaborative writing is Takayoshi's (1995) assertion that the use of networked computers in the composition class can be a way of asserting the social nature of writing. This assertion was supported later by Bloch's (2008) argument that writing on networked computers started as a direct application of writing as a social activity. Computers enable writers to collaborate in meaning making because, as Bloch explained, writing on networked computers or on the Internet has created new communities of practice composed of students sharing the same writing space. Hence, digital composition is perceived as fundamentally collaborative (Eldred & Toner, 2003) and that collaborative project may lead to more profound writing achievements (Faigley, 1999).

As in the case of peer review, many participants in this study appear to prefer Google Docs for completing collaborative writing projects and improving students' sense of collaboration. Among the 24 participants who discussed collaborative writing in their responses to the second survey question, 15 said they used Google Docs, while six said they used wikis,

and three reported using blogs, as Figure 10 demonstrates. Unfortunately, collaborative writing was not listed as one of the activities in the fourth survey question, so there is no way to compare numbers of those who cared to talk about collaborative writing in their verbal accounts, to those who just marked it on the list.
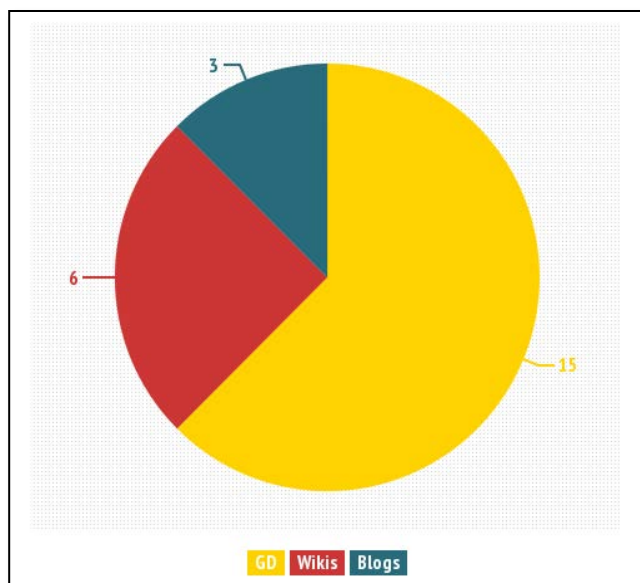
Figure 8. New media technologies used in collaborative writing.

Similar to teachers' statements about using Google Docs in peer review, statements about using Google Docs in collaborative writing shed little light on the nature of utilization of this emerging technology in the long standing process. In addition to the perceived ease, usefulness, and feasibility of Google Docs, the synchronous editing and collaboration feature seems to be quite attractive for teachers. According to two teachers, synchronous editing "get[s] my students thinking about collaborative authoring practices" and allows them "to watch collaborative ideas grow." The two benefits are interconnected because as students watch their writing evolve in real time, they reflect on how each group member constructs ideas, articulates them, and revises and changes them. These reflections should add to students' inventory of writing experiences. Once more, these benefits of using Google Docs in collaborative writing provide empirical evidence

for previous suggestions and expectations of Google Docs (Denton, 2012; Yang, 2010).

Besides the familiar projects of group research essays, one teacher reported using Google Docs to construct collaborative assessment rubrics for the writing assignments in their class. According to Denton (2012), instructors could build collaborative rubrics by either asking for students' feedback on a ready rubric, or by collecting students' suggestions for the rubric before constructing one from those suggestions. However, the participating teacher in this study neither specified nor elaborated on which method they may have used to construct the rubrics they mentioned.

Compared to the relatively detailed accounts of using Google Docs in collaborative writing, wikis and blogs were briefly mentioned by one teacher as collaboration platforms that may allow "the process of inquiry to be collaborative." A viable explanation for the failure to provide details about using blogs and wikis in collaborative writing projects could be the considerably longer period during which these technologies have been used in the writing classroom and the large body of research discussing them (Bell, 2009; Bloch, 2008; Lundin, 2008; Maloney, 2007; Weingarten & Frost, 2011; Wichadee, 2010). Practice and research on a particular topic are likely to create the feeling that the topic is well-established and that it is similarly perceived in the field, which could discourage teachers and researchers from going into detail about that topic, assuming that everybody is already aware of it. The situation changes when discussing the third skill: audience awareness.

Audience awareness. Another skill that is closely tied to the social turn in Composition is audience awareness, or the sensitivity the writer develops for real and possible readers of their writing, or what Ede and Lunsford (1984) called invoked and addressed audience, respectively. As participating teachers talked about how they used new media technologies to help students

develop audience awareness, they often referred to what they labeled as either the "authentic" or the "public" audience, with the former mostly referring to classmates, and the latter to an out-of-class audience. In this study, 20 participants discussed their use of different new media technologies in relation to audience awareness. As Figure 11 shows, nine teachers reported using blogs, and four reported using discussion boards to teach students about audience. Blogs have been traditionally associated with public audience (Bell, 2009; Bloch, 2008; Krishnaiyer et al., 2012) and are used by teachers to give their students "a different, perhaps better understanding of audience awareness," as one teacher explained. On the other hand, although discussion boards were not discussed much in relation to audience in previous scholarship, I assume they can be effective at drawing students' attention to the authentic audience of classmates since discussion boards are usually closed to class members. Therefore, teachers' reports in this study confirm Bloch's proposition that new media technologies can be used as writing spaces where students write and publish their written texts for either their small class community of practice or for a larger community of outside readers.
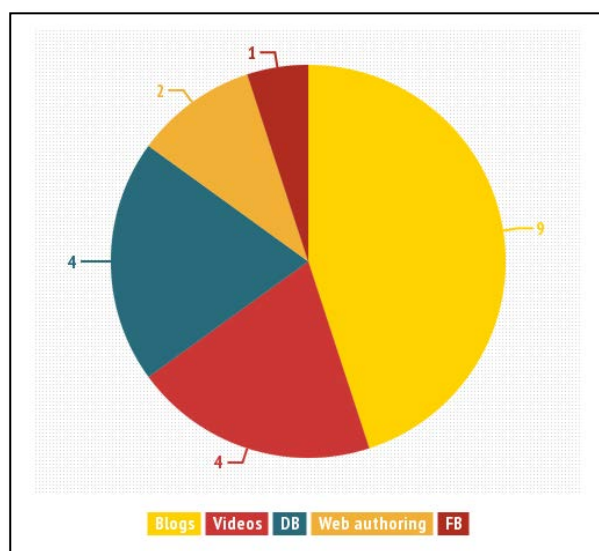

Figure 9. New media technologies associated with audience awareness.

With the spread of multimodal projects in the writing classroom, teachers seem to take the initiative to find means for teaching their students about audience, in addition to public writing on a blog. Creating videos and designing web pages are novel ways to reach an audience beyond using alphabetical texts. Although Bloch (2008) discussed how using hypertext, links to external websites, images, videos, and sound in blog posts can facilitate communicating a blogger's views to an audience, in this study, seven teachers explained how multimodality can be used to draw students' attention to the audience's needs. Two teachers stated that they asked their students to create videos based on either topics discussed in class or a topic of their choice while "keeping the rhetorical appeals and their audience in mind." One teacher strongly attested that their students "learn valuable rhetorical skills, including audience awareness," during the process of designing and creating their own videos or still images.

Besides creating videos, webpage design was reported as another multimodal approach to teaching students about audience. One of the two teachers who discussed this point explained that as students design their own webpages, they "would include visual communication because it speaks to a larger audience." This multimodal approach to audience is what Kinnear (2013) recently called a "mediational means" (p. 191) of meaning making. Kinnear asked her students to create visualizations of their data in a research writing class. She contended that using visuals in writing adds another layer to appealing to the audience. For decades, writers have addressed audiences using definitions, examples, and details, but with the integration of new media technologies and visuals, other modes of expression can play a significant role in teaching students about addressing their audience.

The use of a variety of new media technologies in FYC classes obviously has its merits in boosting students' writing skills, especially in regards to their ability to perform peer reviews,

write collaboratively, and consider audience. Not only does the above discussion reveal many teachers' heavy reliance on new media technologies to achieve their instructional goals, but it also demonstrates a shift to more recent technologies and untraditional approaches to achieve those goals. Technologies like Google Docs, with its innate features, appear to be replacing the long-established wikis and discussion boards in the core practices of peer review and collaborative writing. Simultaneously, a multimodal approach to addressing authentic and public audiences seems to tap into students' everyday use of multimedia to achieve this crucial goal in the writing class. Yet, new media technologies are not limited to only these uses in FYC classes; they can also be used to build critical thinking skills.

Analysis and critique skills. The desire to develop students' skills in argument, analysis, and critique predominates in our composition classes. One can hardly read a scholarly work or engage in an academic discussion that does not include critical thinking and rhetorical skills as a core purpose that teachers strive to develop or strengthen. The composition teachers who participated in this study displayed great loyalty and commitment to achieving these essential goals. They mainly talked about the analytical and critical thinking skills they hoped to develop in their students through the use of different new-media activities.

Analytical skills. When asked in the third survey question to choose between activities of analysis or production of multimodal texts they already used in FYC classes, 42.8% of participants said they had used analysis activities while 43.6% chose production activities, as seen in Figure 12. This seemingly equal utilization of multimodal texts for analysis and production activities did not provide much insight into the nature of these activities or how they were used in class. Furthermore, these numbers did not include all analysis or production activities other than multimodal texts. As the earlier discussions illustrate, analysis and

production encompass more activities, texts, and media. As a result, I referred to teachers' self reports to better understand the analysis activities.
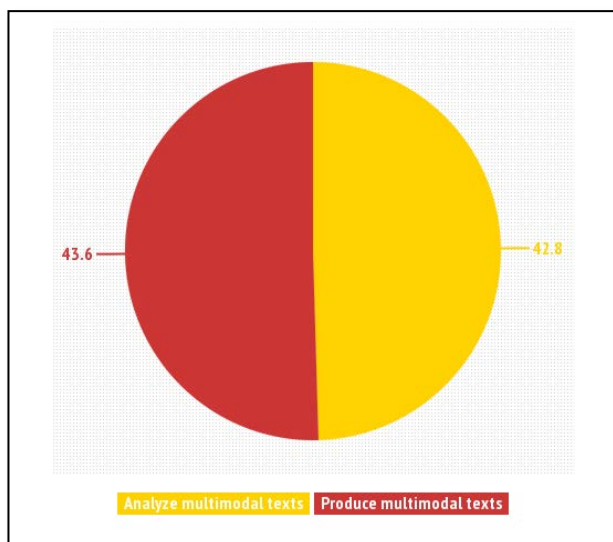
Figure 10. Analysis and production of multimodal texts.

As a recurring phenomenon in this study, the analysis activities that teachers said they utilized in their FYC classes included analysis of alphabetical and multimodal texts to accomplish the same goal of developing students' analytical and critical thinking skills. In addition to analysis of assigned readings, two teachers described two interesting analysis activities they utilized. The first activity was the analysis of writing in blogs. The teacher asked students to read blogs as a form of authentic writing and to analyze the writing conventions bloggers seemed to use in their blogs. I believe this activity is an example of "inspir[ing] an awakening of intellectual curiosity that engages passion" mentioned by Hobbs (2011, p. 30). When students read and analyze authentic texts, they are likely to become more engaged with them, which is likely to lead to a more profound understanding and deeper analysis of the text.

Another example of an authentic alphabetical text was used when a teacher asked students to read and analyze comments on a YouTube video. The teacher chose a video that

triggered myriad comments and asked students to read through the comments and categorize them thematically. I consider this as an interesting, authentic analysis of information on the web. This activity corresponds to Fedorov's (2010) recommendation that students become critically aware of the information delivered through media. In addition to developing analytical skills, this activity can be useful for developing students' research skills since categorizing findings around themes is essential to strong research.

Participants showed a preference for videos for different analysis activities. One teacher, for example, chose YouTube videos and asked students to analyze the arguments in the videos. Another teacher seemed to have extended this activity to include a production component. This teacher said that after their students analyzed YouTube videos, they were asked to use visual rhetoric as an alternate way of constructing arguments in videos that they produced. In their response to the third survey question, and under the "other" option in the question, this particular teacher stated that they start the semester by analyzing traditional, typographical texts before asking students to produce multimodal texts at the end of the semester. In a very recent publication, Ellis (2013) called on composition teachers to teach students the basics of visual analysis before teaching them to compose a multimodal text. Ellis' suggestion parallels the traditional approach to textual analysis in our classes in which teachers usually start by teaching students to analyze verbal texts before asking them to compose one. That teacher's reported activity is a good application of Ellis' approach and an extension of traditional analysis and production activities in the writing class into the new territories of multimodality. Multimodality also became the framework for many reflective thinking and critique activities.

Reflective thinking and critique. Unlike the teacher's use of analysis activities to produce texts in different media, the reflective thinking activities reported by participating

teachers centered around behaviors and practices relating to using new media technologies. In other words, the class activities teachers said they had created to facilitate and promote critical thinking focused more on students and their technology-related behavior, particularly on social media networking sites. These activities, which I discuss below, appear to utilize students' everyday practices and uses of new media technologies as a means of situating their media experience "within an academic context centering on rhetorical activities" (Journet, 2007, p. 116).

In the first activity, the teacher said they used Facebook writing practices as a springboard for students to see their social media behavior as writing, and to reflect on this type of writing rhetorically. The teacher's rationale for that activity was a desire to show students how writing is part and parcel of their lives even if students do not recognize social media as a platform for writing, or their activities on those platforms as writing. This activity seems to aim at developing critical literacy as Selber (2004) defined it. Selber argued that critical literacy starts with understanding one's current beliefs and practices before attempting to critique and challenge them. This is what that teacher seemed to have accomplished through the Facebook writing activity.

The second activity comes from another participant who utilized Twitter to teach students about networked learning. The teacher tried to situate students' writing on Twitter within a larger discourse of crowd sourcing. In discussing the activity, the teacher said that they wanted their students to see "how knowledge is crowd-sourced amongst open networks of individuals who are trying to share ideas." As Hudson (2007) contended, the main purpose of using technologies is to promote dialogic thinking. This teacher apparently wanted their students to engage in such thinking by expanding their scope beyond individual tweets to see a larger picture of dialogue

between individuals sharing ideas and engaging in a lively thinking process. These activities, the rationale behind them, and their perceived value of developing reflective and critical thinking counter Grigar's (2005) argument that emerging technologies fall short of the critical foundation of print because "five hundred years of printing can develop a medium that a mere twenty-five years of personal computing cannot" (p. 375). Grigar could not recognize that the slow pace of creating and disseminating knowledge through print, and the much more limited access to print materials in previous centuries, may have required centuries in order to achieve the goals that new media have achieved in an incredibly short time span. The widespread use and easy access of new media might make it so seamless that we no longer give it much thought.

In order to force students to actually think about their seamless use of ubiquitous new media technologies, one teacher designed an activity in which each student chose a digital technology that they used frequently, and was asked to reflect on and critique their use of that technology. The teacher said they aimed for their students "to be critical of how they use this technology." This activity hones in on students' critical thinking skills by assessing and evaluating not only the technology they use in class (Selfe, 2003), but also the ones they use in their daily lives. Selber (2004) considered such activities essential for developing students' rhetorical literacy as they become reflective users of technology.

Designing rich activities utilizing various new media technologies as a means to foster students' critical thinking skills refutes Burnett and Merchant's (2011) contention that media technologies cannot be used to teach critical thinking. They perceived new media sites as pop cultural places that have been wrongly celebrated in the academy. Burnett and Merchant critiqued the approach of using new media sites in teaching because they claimed that it validated students' interests and experiences. Analysis of the activities that participants reported

using to develop students' critical thinking skills show that Burnett and Merchant's argument is not quite valid and that new media technologies, including social media networks, can in fact be used in teaching critical thinking skills to undergraduate students as well as in building communities of interaction and communication. This is the topic which I discuss next.

Community Building

Building a community of teacher and students that extends beyond classroom walls was a common purpose given among participants in this study for using a variety of new media technologies. Teachers said they used blogs and wikis to initiate discussions and facilitate sharing ideas among students. What is more, teachers claimed that discussion boards, Twitter, and Facebook allowed for extending conversation and discussion beyond the classroom, while Google Docs were used to build a community of peer reviewers and group members working on collaborative projects. Google Docs will not be discussed here as they were extensively discussed earlier in the context of peer review and collaborative writing. According to participating teachers, the ultimate goal of using new media technologies in achieving the stated purposes was student engagement with class materials and activities.

To initiate discussions, teachers reported a variety of activities they employed in their FYC classes. The most important and commonly used activity was the discussion of assigned readings, as reported by 115 teachers or about 70% of participants in the study. Teachers claimed that the use of blogs for discussing readings prepared students for class discussions and gave teachers the opportunity to read those discussions and tailor their class presentations and notes accordingly. Xin and Feenberg (2006) argued that the benefits of online communication extend to teachers who may prefer this form of communication because it gives them more time to reflect on student texts and formulate better responses. These responses can be delivered in class

lectures. Other teachers talked about initiating discussions within blogs or wikis as a means of bringing together students who may be working on similar topics, allowing those students to share their ideas, questions, and resources openly. Yet these discussions need to be extended and maintained, which teachers claimed to do through other new media technologies.

As their name indicates, discussion boards are used primarily for discussion between teacher and students, and among students themselves. A number of participants said they used discussion boards to continue discussions initiated in class. One teacher explained that continuing class discussion on a discussion board can help both teacher and students elaborate on topics raised in class. Another teacher corroborated this argument by saying that discussion boards integrate in- and out-of-class discussions seamlessly, which sustains students' engagement and interest in class topics. Similarly, Bell (2009) argued that students stay connected and involved in class work outside class when they continue the conversation on a discussion board.

Social media networking sites potentially present themselves as platforms for extending class discussions. One teacher described a Facebook activity in which students extended the rhetorical concepts they discussed in class to everyday life situations on a Facebook group page. On the other hand, teachers reported Twitter was mainly used as an immediate and additional channel of communication between students. Yet, some teachers said they used Twitter to keep the conversation going between class sessions. One teacher elaborated and said they encouraged students "to Tweet during class to our class hashtag and outside of class to engage with the material outside of our meeting session." Even though Twitter was used or suggested to be used in similar ways in other disciplines (Grosseck & Holotescu, 2008; Hosterman, 2012; Lin et al., 2013; Miners, 2010; Stevens, 2008), these teachers' self reports about their use of Twitter for extending class discussions are the first empirical data coming from composition teachers.

As stated above, student engagement was the ultimate goal of building a community of students who communicate and interact in and out of class through different new media technologies. Before explaining how new media technologies secure student engagement, it is important to establish a definition of the meaning of engagement. I chose Yaros' (2012) definition of engagement as a "situational interest in a particular environment such as a social network" (p. 60). This definition corresponds to the context of this study, which uses new media technologies and the discourse used to keep students engaged through these technologies. Yaros explained his definition and said that students are actually engaged when they have sustained interest not only in the content presented, but also in the media used to present that content. As students display interest in new media technologies, and more precisely, in social media sites, they become engaged in the content presented on the media they like. Student engagement can be seen in their participation in discussions as a form of the ritual style of communication proposed by Zeng, Hall, and Pitts (2012). The ritual style of communication requires much interaction between the teacher and students, enhancing meaning making, and developing a better command of writing concepts. This style of communication takes place in new media technologies where much interaction and engagement occurs. Yaros argued that engagement facilitates knowledge and learning transfer, and thus he concluded that the appropriate use of social media in class can provide numerous opportunities for sharing beyond the walls of the classroom. Similarly, Zeng, Hall, and Pitts strongly recommended using social media for community building and sharing information.

Conclusions

The extensive discussions of new media technologies teachers reported using in their FYC classes, and the numerous purposes for using those technologies, illustrate a number of

significant points. The first conclusion to be garnered is that the long tradition within Composition of preferring verbal literacy and print texts over other options is facing a paradigm shift, and this shift is an outgrowth of new media technologies becoming more integrated, even ubiquitous, in FYC classes. However resistant or reluctant some teachers may be to integrating new media technologies into their classrooms, the winds of change are affecting our field, creating more interactive communities of practice in and out of our classes.

The second significant conclusion to note is the steady proliferation of newer and more engaging technologies. Here I am speaking specifically about Google Docs, Facebook, and Twitter because, obviously, they are gaining much more popularity in the academy than they had a few years ago. After being banned for fear of negative transfer of what teachers perceive as "communicative illiteracies" (Yaros, 2012, p. 58) to the academic discourse, social media are finding their way into composition classes. A viable explanation for this conversion is that teachers may have realized that they can and need to manipulate all sources available to create and foster interaction (Zeng et al., 2012) if they aspire to create an engaging learning environment. Teachers may have also recognized the fact that most of the communication occurring on new media technologies is written (Lee, 2010), which corresponds to composition's long-standing preference for the written form..

The third conclusion relates to the forms of texts and modes of expression teachers seem to currently adopt in their FYC classes. It is clear that among the participating teachers in this study, there seems to be a growing interest in multimodal texts. This interest does not mean that verbal, written texts will become extinct in our writing classes. Absolutely not! It only indicates that teachers are ready to acknowledge and offer other means of expression in their classes. By using new media technologies in the classroom, teachers may be building on their students' skills

sets and expertise that they have developed over years of using different media. Apparently teachers did not want their students' experiences in the writing class to be isolated from their everyday experiences. This may be a fitting explanation for why large numbers of teachers have incorporated multimodal texts side by side with print ones in their classes.

The final conclusion of these discussions is that teachers who consider themselves novices in the use of new media technologies can find a starting point for considering their use in the above discussions. These discussions were intended to help teachers choose the new media technology (or technologies) that matched their instructional goals. As the second purpose for using technologies centered around objectives and goals rather than the technologies, teachers can easily navigate these purposes and learn how participants in this study reported to use a variety of technologies to achieve their goals. The activities described provide a good starting point for teachers to design their own.

After these discussions of new media technologies and their reported uses, questions remain as to who uses these technologies in their FYC classes, their years of experience, their job rankings, how they learned about these technologies and their pedagogical integration, and their approaches to using new media technologies. Answers to these questions follow in the coming chapter.

CHAPTER FIVE

TEACHERS' APPROACHES TO USING NEW MEDIA TECHNOLOGIES IN FYC

CLASSES

The third purpose of this study was to understand teachers' approaches to using new media technologies in teaching first-year composition (FYC) classes in U.S. institutions of higher education. To fulfill that purpose and to answer the third research question posited in this study, I used the coding scheme I developed and validated earlier (please see Chapter Three for more details) to code participating teachers' responses to the second survey question (please refer to Appendix A for the complete survey).

Numerical analysis of codes showed that while 49 participants (about 33.6%) appeared to adopt only one approach to using new media, 97 participants (about 66.4%) seemed to adopt a hybrid of two or more approaches. Participants who appeared to adopt a hybrid of two or more approaches fell into two distinct groups: those who seemed to adopt two or three approaches equally, or what can be called a balanced approach, and those who seemed to adopt two or more approaches with one approach being dominant over the others, or what can be called an unbalanced approach. For example, and as Table 5 illustrates, 17 participants appeared to have a balance of instrumental (I) and critical (C) approaches to using new media, whereas 46 participants seemed to adopt an unbalanced approach with the instrumental approach being more dominant than the critical or substantive (S) approach.

Table 5

Participants' Approaches to Using New Media Technologies

Participants with One Approach			Participants with Hybrid Approaches						Total
I	S	C	Balanced			Unbalanced			
27	2	20	31			66			
			I & C	I & S	All	I > C or S	S > I or C	C > I or S	
			17	8	6	46	6	14	146

These findings revealed a number of phenomena pertaining to teachers' approaches to using new media technologies. The first phenomenon is that a total of 34 participants (about 23.3%) were critical users of new media technologies regardless of the fact that they were outnumbered by participants who used new media instrumentally. As discussed earlier, there have been two waves of calls for composition teachers to be critical users of technology (e.g. Arola, 2010; Clark, 2010; Hawisher & Selfe, 1989; Selfe, 1989; Takayoshi, 1995). For the first time in the field of computers and composition, this study provides empirical data that confirm that there are teachers who do use new media technologies critically. The fact that these teachers are a minority among participants in this study does not make the finding any less significant. Although I refrain from making any generalizations due to the small number of participants in this study, these findings substantiate the argument that a group of composition teachers adopts a critical approach to using new media technologies.

Meanwhile, these findings point to a second phenomenon, that the majority of composition teachers participating in this study appeared to adopt an instrumental or substantive approach more than the critical approach to using new media in teaching FYC classes. Aggregating the numbers in Table 5, I realized that 73 participants (50%) and eight participants (0.5%) appeared to adopt instrumental or substantive approaches to using new media,

respectively. These numbers reveal the dominance of the instrumental approach among participating composition teachers, which provides empirical evidence to support previously published scholarship about the instrumental approach to technology (Blyth, 2003; Hutchison & Reinking, 2011; Lewis, 2011). On the other hand, the very small number of participants who appeared to adopt a substantive approach to using new media shows that very few composition teachers still acknowledge new media as powerful, in the sense that, few hold the technology responsible for positive outcomes in the composition class as I discuss below.

Another important phenomenon is that, of the 81 participants who appeared to have an instrumental or substantive approach to using new media, 49 of them (about 33.6% of all participants) did not show any indication at all of adopting the critical approach. These participants appeared to hold a hybrid of the instrumental and substantive approaches to technology, with the instrumental being predominant. This finding is quite alarming because it represents about one third of participants in this study, outnumbering those with a critical approach to technology, and casting doubt on the availability, content and usefulness of professional development opportunities for these participants.

In addition to these phenomena about teachers' approaches to using new media technologies, findings of this study diverge from Feenberg's (1991, 2002) classification of approaches to technology. Findings reveal blurred boundaries between the three approaches that Feenberg listed as being independent and isolated from each other. The relatively large percentage of participants (66.4%) who appeared to hold a hybrid approach to using new media complicates Feenberg's classification because it shows that approaches to technology are better represented as a continuum rather than as independent categories. On that continuum, the instrumental approach belongs on one end, the substantive approach on the other end, and the

critical approach holds the middle place. The majority of participants can be plotted at varied points on that continuum, which complicates Feenberg's classification, casts doubt on its accuracy, and allows for mapping approaches to using new media in a wholly novel way. The fact that these findings identify the blurred and overlapping areas between the three approaches theorized by Feenberg opens the door to not only identifying teachers' approaches to using new media more accurately, but more importantly, to offering more tailored help for these teachers so that they can become more critical users of new media, which is the overall goal of this study.

Numerical analysis of codes representing teachers' approaches was complemented by thematic analysis of the same responses. As illustrated by the complete coding scheme in Chapter Three, teachers' approaches to using new media technologies in their FYC classes can be thematically categorized under four major themes: 1) teachers' reports of their general attitudes and beliefs about new media technologies; 2) teachers' reports about general uses of new media technologies; 3) teachers' reports of their pedagogical uses and integration of new media technologies; and 4) teachers' reports of pedagogical benefits of using those technologies. In the following sections, I present and discuss these themes under each of Feenberg's approaches before drawing conclusions about teachers' approaches to using new media technologies in FYC classes.

Instrumental Approach to Technology

According to Feenberg (1991), teachers who have an instrumental approach to technology see technology as neutral tools that they can use to achieve their previously set goals. As illustrated in Table 5 above, a total of 73 participants appeared to have an instrumental approach to using new media technologies. Among these participants, 27 showed a singular adoption of the instrumental approach without any tendency towards the substantive or critical

approaches, whereas the other 46 participants showed a hybrid approach with the instrumental approach being more dominant over the other two. This means that the majority of teachers participating in this study appear to adopt an instrumental approach to using new media technology.

The most striking characteristics of these teachers are their general beliefs about new media, general uses of new media, and the pedagogical uses and benefits of new media. These themes are the focus of discussion in the following section.

General beliefs about new media. Perceiving new media technologies as tools was the most wide-spread belief among participants in this study. New media technologies were reported as a tool for achieving a variety of goals, not necessarily pedagogical ones. For example, one teacher said they used blogs as "[a] way to see if students are reading." Another teacher justified their use of Google Docs by saying, "I wanted to see how much time they [students] spend on their writing," before adding that they "also wanted to monitor their [students] progress closely." This very functional use of new media technology for monitoring or tracking students' activities strips away the potential of new media technologies, such as blogs and Google Docs, to teach writing, and converts them into surveillance tools that have no real value for students.

The second most important belief among participants who appeared to have an instrumental view of new media technology is the use of technologies as a means of delivering content. This belief was the second most frequently held opinion among participants. Various new media technologies were used to make class materials more accessible or to collect students' work. For example, Facebook was reported by one participant as a means "[t]o make class notes accessible" and by another as a means to "post assignments, announcements, and general encouragements." Blogs were also reported as a means of collecting students' "in-class free

writing," while another participant said they used wikis "to host notes and documents." In these cases, new media technologies were used instrumentally to communicate with students, to deliver class materials, and to collect students' assignments. Such uses indicate that while new media technologies are replacing LMS and email in performing management tasks, teachers do not seem to consider these technologies as anything more than administrative tools that should be exploited to achieve minor goals. These uses explain the attitude towards new media technology as an add-on that was noticeable in a number of teachers' responses, accounting for 58 thought units.

General uses of new media. This apparent attitude toward new media technology as an add-on was confirmed when I examined teachers' statements about general uses of new media technologies; these teachers did not refer to precisely how each new media technology they mentioned was used in their own classes. Participants talked about how new media technologies were used to achieve their traditional goals more efficiently. A good example comes from one participant about using discussion boards. The participant said, "I use forums/discussion boards because I like to have students do a lot of informal writing, and this technology works well for that purpose." The reason the teacher gave for believing "this technology works well" for informal writing was that "it's all online, so no paper, no losing student work." The teacher's response here reveals a very instrumental approach that sees discussion boards as a tool, not because it encourages students to write informally, or because students can be more relaxed as they write to their colleagues; instead, the teacher considered discussion boards as a tool to help them more efficiently and easily achieve the same traditional goal of informal writing, without placing much value or benefit for students themselves. Another participant claimed they used a wiki in class for "archiving students' writing." As with the previous example, it is possible this

teacher used wikis as a way to ensure that they did not lose student work. Such views of technology undermine the pedagogical potential of new media technology for the writing class, limiting it to a more supplementary rather than integral role.

Pedagogical uses and benefits of new media. The pedagogical uses made by these teachers were an illustration of using new media technology primarily as a supplement or to support teaching. Participants talked about using YouTube videos "[t]o supplement course readings," and multimodal texts "[t]o supplement comp courses." The use of visual and multimodal texts as supplements indicates that teachers perceive them as valueless technologies that have no role in achieving fundamental instructional goals. This perception explains the finding that there were only 11 thought units of pedagogical benefits associated with the instrumental approach to technology. Participants who seem to adopt this approach do not seem to think highly of new media technologies or of their application towards any valuable pedagogical gains. Related to the view of new media as supplementary tools, some participants talked about using certain technologies to help students understand difficult course concepts, particularly argument. YouTube videos were the most commonly reported technology used in this regard. One participant employing YouTube videos in this way said that students "find it easier to take in complex ideas aurally and visually," which may be a good reason for using YouTube videos and other new media technologies in FYC classes.

This instrumental approach to using new media technologies in FYC classes discloses participants' tendency to maintain the status quo of their teaching practice despite the use of new technologies. New media technologies may have more impact on students using them than the teacher can actually imagine (Bloch, 2008; Feenberg, 2002), which requires teachers to think about using new media in a more transformative role in class instead of merely maintaining the

status quo (Meskill et al., 2002). However, participants who seemed to adopt an instrumental approach towards new media technologies did not seem to contextualize these technologies or consider their own relationship to them. It was striking that among all participants who demonstrated an instrumental approach, no mention was made of their role in selecting or using the technologies they reported to be using. These participants did not mention their goals or the assignments and tasks they designed for the purpose of integrating new media technologies into their classes. This approach conforms to the dominant tradition in Composition scholarship as discussed earlier (e.g. Blythe, 2012; Mullen, 2012; Swift, 2012).

Additionally, not a single teacher provided any details about the context in which they used those technologies. Some of them actually said they used the same technology in the same way in all of their classes across different semesters. This approach exposes teachers' attitudes that technology can function interchangeably in different circumstances, which Feenberg (2002) considered an instrumental and functional view of technology. This approach is described by Feenberg (1991) as one dimension of the neutrality of technology discussed in detail in Chapter Two. Other teachers said that the technologies they reported using were mandated by their departments. A decade ago, Eldred and Toner (2003) cautioned that when teachers are forced to adopt certain technologies, they may not always value or understand the technology at hand, which obviously results in a more instrumental approach to its use, as findings of this study confirm.

Substantive Approach to Technology

The substantive approach to technology means that the user ascribes values and goals to the technology that may override those of the user (Feenberg, 1991). Contrary to the instrumental approach to new media technology that appeared to be adopted most frequently by participants in

this study, the substantive approach appeared to have been adopted by only eight participants. Only two of these participants seemed to have no tendency towards other approaches to using new media, while six participants showed a stronger substantive approach than other approaches. According to Feenberg's (1991, 2002) classification, teachers who adopt the substantive approach believe technology is the magic wand that can transform their classes and student learning. Interestingly, participants who appeared to lean more towards substantive uses of new media technology in this study confirmed Feenberg's argument.

In teachers' self reports about how they used certain new media technologies in their FYC classes, these technologies appeared as the center of the teachers' attention; these teachers seemed to believe that technologies can make a difference in class and help students learn. Therefore, it was not surprising to find that in most instances in which teachers demonstrated a substantive approach to technology, their answers revolved around two themes: general attitudes about technology, and the assumed pedagogical benefits. Alternatively, the pedagogical uses came last with the least number of codes.

General beliefs about new media. Two phenomena were noticed pertaining to teachers' substantive approach to technology. The first was the use of the passive voice when talking about selecting or using a technology. Teachers said things like, "Websites were used to create e-portfolios" and "Forums have been used to host homework." Not only did such statements suppress the teacher's role in selecting the respective technologies, they also marginalized the teacher's job in designing the tasks (e.g. keeping e-portfolios) or deciding how to use the technology (e.g. hosting homework).

The second linguistic phenomenon involved the verbs used by the teachers to describe the 'abilities' of new media technologies. One teacher said, "I like the blogs as they *allow*

[emphasis added] informal writing," while another described discussion boards by saying, "Blogs and discussion boards both *provide* [emphasis added] opportunities for students to prepare for in-class discussions." These teachers' statements are examples of not only the centricity of technology, but also of holding it responsible for what happens in class. This attitude foregrounds the technology and relegates the teacher to the background. When a teacher justified their use of wikis saying that wikis "*allow* [emphasis added] students to work collaboratively" without describing their role in designing collaborative writing projects, their goals of developing students' collaboration skills, or their choice of wikis as particular platform for collaborative projects, the technology was ascribed a value while the teacher appeared as subject to the magic and power of the technology. In other words, technology seems to replace the teacher. A good example is a participant's statement that Google Docs are good "for helping students revise drafts."

Pedagogical benefits of new media. Along the same lines as valorizing new media technologies in class at the expense of the teacher, is the ascription of gains in student writing and learning to the presence of technology in class. From a discussion board that "enables a conversation to occur outside of the classroom," to blogs allowing for "reflection and new ideas," new media technologies become responsible for all positive impacts in class without acknowledging the teacher's role. Attributing events or outcomes to technology, as Martin (2008) argued, is a "moral statement" because it allows the teacher who uses the technology to "escape responsibility for actions which were the results of their own choices" of technology (p. 152). In other words, if technology can be responsible for generating learning and conversation, then technology can be blamed when these do not happen. The teacher is not held accountable for the consequences; technology is. Hence, Williams (2001) rightly warned against the assumption that

integrating technology in itself would make a difference because this assumption "ascribes agency to the technology" (p. 124). Williams added that computers do not perform rhetorical or critical activities that only humans are capable of doing. Similarly, new media technologies do not help students revise their drafts or come up with creative ideas. Teachers' instruction and students' engagement and willingness to learn make the difference because new media technologies were not invented or originally meant to be writing spaces (Bloch, 2008). Therefore, teachers need to approach these technologies more critically in order to achieve their instructional goals without compromising their own role or subjecting themselves to the power of technology.

Critical Approach to Technology

Participating teachers who held a critical approach towards using new media technology in their FYC classes were the second largest group, following participants who held an instrumental approach, and preceding those with a substantive one. The critical approach to technology views technology as a choice users make, and a framework within which goals are achieved (Feenberg, 1991, 2002). A total of 34 participants demonstrated a critical approach to using new media technologies. These teachers expressed their general beliefs and attitudes towards new media. They also described the pedagogical uses of new media in their FYC classes.

General beliefs about new media. Not only did participants talk about their choice of technology, they also described, in 36 thought units, how they used new media as a framework within which they tried to achieve certain instructional goals. Many teachers in this group made it clear that they chose certain new media technologies deliberately because they perceived them as being related to their goals. For example, one participant said, "I chose blogs because I wanted

them [students] to consider the elements that affect public writing," and another accounted for using discussion boards by saying, "I use discussion posts as a repository for their [students] short thesis-based essays." In addition to demonstrating their deliberate selection of certain new media technologies for the sake of achieving a particular goal, these participants and others emphasized their role as teachers in selecting the technology they thought would help them achieve these goals. This finding provides good empirical evidence for what Takayoshi and Huot (2003) called for about a decade ago, i.e., a critical use of technology that connects the use of technology to achieving the teacher's pedagogical objectives. Using Feenberg's (1991, 2002) terms, such a technology becomes a working framework within which the teacher achieves the goals they have for their students. This approach was apparent in some participants' responses.

Using new media technology as a framework denotes that the teacher chooses a certain technology (or technologies) because they believe that the potential of that technology can be utilized and manipulated to achieve a pedagogical and rhetorical goal. Not only did most participants who seemed to think of new media as a framework describe their goals, but they also describe the instructions they gave to their students to explain the rationale behind their selection of a certain technology. A clarifying example comes from one participant's account of using Diigo to teach students about online reading and annotating,

> We have to teach students how to research and read texts online, too, as a part of inquiry.
> Yet students seemed to have few strategies for critical reading online texts. With Diigo
> they can curate, annotate, and share in a common library so the reading and research
> process becomes visible.

Here, Diigo is the framework the teacher reported using to explain how reading and annotating online texts is part of the research process. Critical reading of online texts seems to be

a goal the teacher tried to achieve by teaching students new strategies of reading, annotating, and curating texts through a specific new media technology. Technology is not the means or the end; it is a framework within which the teacher uses the available means to reach desired instructional ends. Related to this general belief about new media is a perception of the pedagogical uses of new media technology.

Pedagogical uses of new media. The theme of pedagogical uses of new media technology peaked among participants who appeared to adopt the critical approach to technology. There were 191 codes for this theme among teachers associated with the critical approach, compared to 72 associated with the instrumental approach, and only six with the substantive. This finding showed that participants who seemed to adopt a critical approach to using new media were eager to depict the tasks and assignments that they asked students to complete using new media technologies. These participants paid more attention to how technology was used to achieve a certain goal, and these comments were accompanied by adequate, and sometimes extensive, descriptions of the teacher's role. In other words, teachers, students, and goals were prioritized, and technology was not the center of attention as in the substantive approach.

Most participating teachers in this group gave detailed accounts of their goals and the tasks students were required to complete using new media technology. One participant, for instance, described their pedagogical approach to teaching visual rhetoric by saying,

> I ask my second semester comp students to convert written arguments into a visual argument using either PowerPoint, Prezi, Windows Movie Maker (or other resources available to them). My goal is to encourage student to think about visual rhetoric in a more deliberate way and to understand that documentation and developing arguments

may be accomplished in ways other than alphabetic, print texts.

It is clear from this teacher's self report that they were careful to describe their goal, their approach to achieving that goal, and a certain activity that students were required to complete in order for the goal to be fulfilled. Technology, as seen in this statement, was not the focus, and the teacher gave students the freedom to select a technology to complete the task, which indicates more interest in the task and the goal rather than in the technology itself. Although this teacher did not mention, at least not explicitly, the role of instruction in achieving their goal, other instances of participants' self reports unveiled the role of instruction pertaining to using new media technology. The role of instruction emerged from inductive analysis of data as one parameter of pedagogical uses of new media under the critical approach.

When a teacher reported that they discussed the potential of the new media technology or provided instruction that prepared students to work with a particular media or mode of production, it indicates that the teacher did not assume that the technology was a tool of no value, as in the instrumental approach, or that it would take care of everything without their interference, as in the substantive approach. Rather, the teacher appeared to be engaging students in their decision and mindset of using a particular technology. Moreover, the teacher showed more interest in student engagement and interest. One participant reported their choice of blogs to foster students' awareness of audience and the subsequent discussion they had with their students, saying, "We discussed a lot how their writing changes when they put it out on the web and know that more people might read it besides just me." This participant showed much care for students' involvement and engagement in using blogs through discussion and intervention. Teacher intervention was highly stressed by Kim, Hong, Bonk, and Lim (2011) as a crucial component of using new technology in teaching. They strongly argued that this intervention is

likely to lead to better group performance and reflection. By intervening with instruction and discussion, this participant and others seem to have attended to students' needs and interests related to technology.

Mauriello and Pagnucci (2003) suggested that teachers should take their students' needs, concerns, and interests into account when designing technology-rich syllabi. In 21 thought units, participants said they attended to students' interests by choosing the technologies they assumed students used and favored. In describing the rationale for asking students to use certain technologies, some teachers used statements like, "they're both fairly accessible programs that most students have some experience with," "most students are familiar with the tools and can readily access and use them," and "I use the technologies that are part of the students' world."

These statements are quite problematic because they showed that teachers made their decisions about using certain new media technologies because they assumed that students had experience or at least were familiar with them. Strangely, not a single participant mentioned how they formed those assumptions about students' familiarity with technologies. Perceiving the current generation of students as technologically savvy as in Lewis' (2011) study, or wrongly assuming that these students are digital natives (Hosterman, 2012) is a serious problem addressed by many scholars. Hosterman boldly critiqued the assumption made by many teachers that college students can naturally and easily use any new technology. He counter-argued that assumption, saying that the ability to use technology is not genetic. Similarly, Yaros (2012) found teachers' assumptions about students' familiarity with certain technologies to be unrealistic. In an attempt to explain the consequences of that widely-held assumption, Ellis (2013) suggested that this assumption could explain why some teachers do not coach students on the use of a given technology or multimodal composing. Along the same lines, Dubisar and

Palmeri (2010) strongly recommended that teachers include instruction on technology in the composition class. They suggested the model of workshops in which teachers would introduce the basics about the technology before letting students try it for themselves and draw on each others' experience with that technology. I would also recommend that teachers systematically survey their students at the beginning of the semester about the range of technologies they are able to use, and the familiarity and experience level with each of these technologies. Results of such surveys can be used for better selection of technologies and for designing assignments and tasks without making assumptions.

The problem of attending to students' needs and interests related to technology was not the only problematic variable in evaluating pedagogical uses under the critical approach. The variable relating to the compatibility between the selected new media technology and the teacher's goal was also quite problematic in determining whether a given participant adopted a critical approach to new media technology. That item was originally suggested by Feenberg (2002), but when I examined thought units coded in this way, I realized that it is not a differentiating factor because it is not confined to teachers who appeared to adopt a critical approach to technology. We expect most teachers to choose the technologies they believe will be useful in achieving their goals. In this study, this code appeared in 92 thought units for which participants' use of new media was categorized as mostly instrumental or substantive. In these 92 thought units, goals were either not described precisely or they were not described at all. For example, participants who talked about using Google Docs for collaborative writing projects did not mention their goal despite the fact that collaborative writing can be associated with several instructional goals. Therefore, and because Google Docs are compatible with collaborative writing, such instances received that code.

Not only do such problems with Feenberg's (1991, 2002) classification demonstrate the inadequacy of the classification to analyze teachers' approaches to using new media, they also highlight the blurred boundaries between the three approaches. The fact that 97 participants in this study showed a hybrid of approaches to using new media confirms the shortcomings of Feenberg's classification, necessitating a novel understanding of teachers' approaches, and the creation of professional development programs that do not consider composition teachers as one-dimensional users of technology (i.e,. either instrumental, substantive, or critical), because apparently most teachers fall on different points on a continuum of approaches.

CHAPTER SIX

THE FUTURE OF TEACHERS AND NEW MEDIA TECHNOLOGIES

This dissertation research aimed at achieving the overarching goal of helping

composition teachers become more critical users of new media technologies. The study explored

the new media technologies composition teachers used in teaching first-year composition (FYC)

classes in U.S. higher education institutions. Furthermore, the study examined the various uses of

these technologies as reported by participating teachers in their responses to the online survey

used for data gathering. Moreover, the study examined teachers' approaches towards using new

media technologies.

Data analysis of teachers' responses to the online survey resulted in two major themes of

findings: new media technologies and their uses and benefits for FYC classes, and a portrait of

the participating teachers' approaches to new media technologies. The extensive discussions of

these findings in the previous two chapters stimulate a futuristic look at teaching composition

with new media technologies. In this chapter I discuss the implications of findings for both

students and teachers in the composition class pertaining to the place and role of new media

technologies. Afterwards, I discuss the implications of this study for training of university

composition teachers. In the last section of this chapter, I outline several possible future

considerations and directions for scholars in Composition Studies.

Implications for Teaching

Over the past decade, the flagship professional organizations for teachers of English and

composition at the college level issued a significant number of position statements, guidelines,

and frameworks on using digital technologies in this field. Findings of this study show the sad

situation that little has changed since these documents were issued and approved. In the

following sections I relate the findings of this study to the content of these organizational

statements and a very recent report on college student engagement. In doing so, I demonstrate

how national data support the findings of this study which can be used to enact the organizational

statements for the advancement of teaching composition in U.S. higher education institutions.

Multimodality and Teaching with New Media Technologies

As I was preparing to write this chapter, the National Survey of Student Engagement

(NSSE) annual report (2013) was released. The report stated that "Technology has become

interwoven into the college experience" (p. 23). Data collected from more than 18,000 first-year

university students nationwide showed that students used a variety of new media technologies in

completing course work. Technologies listed in the report included social networking,

multimedia software, collaborative editing software (e.g. wikis and Google Docs), and blogs.

These technologies were among those reported by participating teachers in this study. The report

concluded that student use of technology "was positively related to student engagement" (p. 23).

The use of technology included either learning with technology or improving the understanding

of technology. The report highlighted the positive impact of using technology on areas such as

higher-order learning and reflective learning. Surprisingly, the survey questions pertaining to

writing, not necessarily in composition classes, did not mention the use of technology.

Although the NSSE report (2013) is not limited to composition classes, it gives college

educators and administrators an insight into the direction of trends in higher education

institutions. Students are increasingly engaging with their course work through the use of new

media technologies. This significant finding of the NSSE report strongly supports findings of this

study about student engagement in and out of class when required to use different forms of new

media technologies. As discussed in Chapter Four, teachers pointed out that using wikis, Google

Docs, Twitter, and discussion boards kept students engaged with their readings and course work

in and between classes. Apparently the use of new media is proliferating across disciplines in

higher education, a situation that should alert both teachers of FYC classes and Writing Program

Administrators (WPAs) to the paradigm shift that higher education is experiencing. Applying the

results of the NSSE report to composition classes implies more than acknowledging the changes

affecting higher education classes. It means promoting the informed and critical use of new

media technologies in composition classes so that students do not experience a digital divide

between English and composition classes and classes in their respective disciplines on one hand,

and between the print literacy supremacy in composition classes and the set of varied literacies

they develop outside these classes.

According to the *CCCC's Position Statement on Teaching, Learning, and Assessing*

Writing in Digital Environments (2004), digital composing may take a variety of forms:

composing a text in a word processor to be printed; participation in online discussions; creating a

presentation; creating a webpage; and writing to a blog or a wiki. This broad understanding of

digital composing necessitates expanding writing teachers' understanding of literacy to include

what the CCCC statement named "literacy of the screen" (para. 2) side by side with the

traditional print literacy. Nevertheless, a decade after the publication of this statement, findings

of this study reveal that print literacy is still enjoying supremacy in Composition Studies, and

subsequently in composition classess.

Composition teachers who still valorize print literacy while minimizing digital literacy, or

literacy of the screen, may be fighting a lost battle. They cannot resist or ignore the new genres

of multimodal texts because these texts are growing prevalent (CWPA, NCTE, & NWP, 2011).

The different modes of expression used in producing these new genres should no longer be

considered aesthetic or decorative, as the *NCTE Position Statement on Multimodal Literacy* (2005) argued. These modes are integral components of modern texts, and therefore should be integral to teaching students about meaning-making methods. Restricting teaching writing to a single mode strips away the inventory of literacies that students develop outside class. This same position was emphasized in the Council of Writing Program Administrators (CWPA), National Council of Teachers of English (NCTE), and the National Writing Project's (NWP) Framework for Success. The three organizations argued that the fact that students now read and compose texts in different modes and media has its implications for teachers. Teachers cannot ignore these genres or shut them out of their classes. Instead, teachers are encouraged to integrate new technologies that would foster the use of different modes and media of composing.

The *NCTE Conference of English Educators (CEE) Position Statement* (2005) suggested that integrating new technologies will be successful when teachers choose the technologies that match their goals and pedagogical approaches while being open to adjusting these goals and approaches as they continue to use technologies. In other words, the teacher forms a reciprocal relationship with the technologies they choose. This reciprocity is part of the critical approach to technology (Feenberg, 1999); the teacher integrates suitable technologies for transforming and renovating their teaching and student learning. Meanwhile, the teacher welcomes new goals and possibilities that their use of technologies may stimulate. This dialogic relationship makes possible advancements in Composition theories and pedagogies. Such advancements create the paradigm shift to multimodality and multimodal composing as discussed in Chapter Four.

As teachers use new media technologies in teaching composition, they are expected and encouraged to share the goals of multimodal work with their students (NCTE, 2005). Goals should be communicated to students in order to secure their full engagement in multimodal

projects. Teachers connect students to these innovative projects through active instruction. In Chapter Five, I discussed the role of instruction in engaging students in multimodal projects. Teachers who appeared to adopt a critical approach to technology in this study gave explicit and implicit instruction to students on their goals for using certain new media technologies, which is likely to enhance students' engagement and understanding. This form of instruction is likely to contribute to not only learning with technology, but also to understanding more about technology, as the NSSE report (2013) concluded. On the other hand, as students continue to deal with multimodal texts outside class (CWPA, NCTE, & NWP, 2011), they need explicit instruction and guidance on how to use these new texts effectively and critically. Therefore, active instruction, which this study showed to be an important element of the critical approach to technology, can be a bridge that connects students' everyday literacy to their composition class.

Incorporating new media technologies in the current practice of teaching composition is thus a means of acknowledging the important influence multimodality can have on students' learning (CEE, 2005). Teachers should be aware, though, that incorporating these new media does not mean divorcing their long-embraced theories or practices. Teachers will be able to develop this awareness through nontraditional professional development opportunities.

Professional Development of Composition Teachers

The *NCTE/CEE Position Statement* (2005) extensively discussed preparing English educators to teach with new technologies. Before I discuss this further, it is worth mentioning that although this statement addressed the needs of K-12 English teachers, much of its content can apply to college teachers as well. The statement asserted that English teachers are required to critically consider the benefits and limitations of using new technologies in their classes. The statement adopted Feenberg's argument that technology should not be equated with progress, or

what Feenberg (1991, 2002) elsewhere called the substantive approach to technology. Teachers have to choose the technologies to use and those to reject. For teachers to make such an informed critical decision, they should be aware not only of the perils and perks of bringing new media technologies to class, but also of the intersections between using new media technologies and Composition theories and pedagogies. This high level of awareness requires carefully crafted professional development opportunities.

What professional development teachers need the most is one that goes beyond the functional use of new media technologies to discuss the pedagogical choices available through these new technologies. Teachers need to discuss the social and cultural outlook of using these technologies in their classes. This kind of professional development can happen through long-term training and constant mentoring. I hereby propose a non-traditional form of training for university composition faculty. The proposed form of training combines Meskill, Mossop, DiAngelo, and Pasquale's (2002) recommendation to establish mentoring relationships between teachers in professional development programs with Nagelhout's (2007) argument for release time for faculty to participate in training programs on using new media.

The proposed form of effective training brings together all teachers: those with long and solid experience in Composition theory and pedagogy, teachers with novel, innovative ideas on using new media technologies, and all teachers in between these two groups. These groups of teachers will complement each other's sets of expertise. The proposed training program can start with a needs assessment, using the complete coding scheme I developed in this study (please refer to Chapter Three for the complete scheme) to initially understand teachers' approaches to using new media technologies in teaching composition. I believe that using this scheme will help WPAs and teacher trainers tailor the professional development opportunities they offer to faculty

in their institutions.

Through long-term, multiple-stage training programs that follow up frequently with teachers on what they learn and discuss the real-life obstacles they may face in their classes, teachers can feel scaffolded and supported as they maneuver their way into the fast-developing world of new media technologies. Creating and sustaining mentoring relationships between faculty members with disparate experiences gives room for consultation and discussions that nurture faculty's pedagogical approaches to integrating new media technologies. This model is practical for implementing a smooth integration of technology with theory and pedagogy. Now more than before, this model of training and mentorship is required as technology keeps evolving, bringing fresh challenges to all composition teachers regardless of their expertise.

The CEE statement (2005) argued that most published research on the impact of using technology on students' learning is anecdotal rather than definitive. For this reason teachers need to experiment with the actual technologies to decide whether the gains reported in anecdotal research can be transferred to their contexts and students. English teachers, according to the statement, are better able to evaluate the potential of new technologies through "personal exploration" (para. 40). For teachers to explore and experiment with new technologies and make informed decisions about using them in teaching composition, it is imperative that teachers are given release time so that they can "critically and productively evaluate their potential" (para. 38). Writing Program Administrators (WPAs) should ensure this release time for all tenure-track and tenured faculty to actively participate in training programs on using new technologies. According to the *CCCC's Statement* (2004), WPAs should make sure professional development opportunities are available for teachers before and during teaching with technology. These opportunities should take a variety of forms: "workshops, courses, individual consultation, and

Web resources" (para. 9). The *NCTE's Position Statement on Multimodal Literacy* (2005) pointed out the lack of resources available to teachers for learning how to incorporate expanded notions of literacy in their curricula.

Similar to WPAs' responsibilities for initiating long-term training programs for faculty, directors of graduate programs in Rhetoric and Composition have responsibilities towards preparing their graduate students, particularly at the doctoral level, for their future careers as composition teachers. Program directors need to address the critical problem of training graduate students on the theories and pedagogies pertaining to using new media in teaching composition. Creating and designing graduate-level courses in which students study the theories underpinning the use of new media technologies, technology-rich curriculum design, and assessment of new digital composing processes and multimodal projects is a must. Additionally, and because such specialized courses may not appeal to all graduate students, program directors and professors should consider teaching about the "multimodal writing process" (Edwards-Groves, 2011, p. 62) in existing pedagogy courses. The benefit of teaching about multimodal composing as part of Composition pedagogy courses is the dismantling of the dichotomy of verbal vs. visual literacy and print vs. multimodal texts. Graduate students should be aware that digital composing doesn't mean diminishing the foundation of teaching composition or minimizing the value of the written text.

In addition to the academic preparation of graduate students, there is a pressing need for more professional development support for graduate students. Graduate students need financial support to have more access to high-profile conferences where they can learn and network with other students and experts in computers and composition. Attending these conferences is becoming increasingly financially burdensome. Graduate students may be asked to brief fellow

graduate students in their programs about new knowledge and trends pertaining to new media technologies that they gained during a conference. This practice can double the value of money invested in supporting graduate students' participation in conferences.

<p align="center">**Future Considerations and Directions**</p>

Now, as I am reaching the finish line of this dissertation research study, I find it extremely helpful for me and other teacher-scholars to look back and reflect on the whole process. Yet, reflection is not the ultimate goal of this retrospective look; it is curating future considerations and directions for scholarship. These considerations are not necessarily limited to scholarship on new media technologies. My reflections primarily focus on methodology and design issues and the choice of the theoretical framework.

Methodological and Design Concerns

Having the demographic information section at the end of the survey proved to be a good decision in this study, and it is recommended for future studies that collect this type of data. In addition to the earlier cited rationale that this section does not require recalling information or thinking about answers, I found that having this section at the end of the survey meant that I collected demographic data from participants who completed the survey in its entirety. The number of participants who started the survey was 254, but only 159 completed it. Collecting demographic data early in the survey from participants who later dropped out would have been unnecessary. It would have also required more time and effort to eliminate the data of those drop-outs.

Upon examining where most drop-outs happened, I realized that most of them happened at the second question on the survey, which was the only open-ended question that asked participants to write a short narrative of their use of two new media technologies in their classes.

Apparently those participants assumed that the survey would have more open-ended questions in later sections, which may have caused them to opt out of completing the survey. Open-ended questions are not favored in surveys because of the time and effort required that not all participants may be willing to invest. One way to increase participation and completion rates is to mention the total number of survey questions, including open-ended ones, in invitation emails sent to prospective participants. Adding this information is likely to inform the participants of the expected time and effort they are asked to put into taking the survey.

Choice of Theoretical Framework

When I read Feenberg's (1991) critical theory of technology for the first time, I realized its potential for this research. Feenberg's theory offered a broadly defined understanding of approaches to technology. Feenberg revisited his theory and updated it to cope with the rapid developments in technology in his later book *Transforming Technology* (2002). Feenberg's two versions of the theory and the detailed descriptions he gave of the other theories and approaches to technology (1999) were a good match for this study in which I used his work to understand composition teachers' approaches to using new media technologies in their FYC classes. However, Feenberg's theory was not perfectly adequate for this study as I elaborate below.

As I discussed at length in Chapter Three, the shortcomings of Feenberg's (1991, 1999, 2002) theory as an analytical framework came to the surface as I was developing the analytical coding scheme for the study. His operational definitions of the different approaches to technology fell short of capturing all teachers' possible beliefs about and uses of new media technologies in the composition class. The discussion in Chapter Three illustrates the necessity of complementing Feenberg's operational definitions from prior scholarship in computers and composition, which yielded a more comprehensive coding system.

Another problem with Feenberg's (1999, 2002) framework arose during data coding. Although Feenberg's classification was fairly accurate in portraying teachers with instrumental and substantive approaches to technology, it fell short of fully describing teachers who held a critical approach or a hybrid of two or more approaches. Two particular cases illuminate this gap in Feenberg's classification. The first case about selecting technologies that match the teacher's instructional goal as an indicator of the critical approach was discussed in the previous chapter. The second case pertains to the lines between the variables of the critical approach and those of the instrumental and substantive approaches, which were blurry in some areas. While teachers with a predominately instrumental or substantive approach to technology hardly displayed any sign of the critical approach, the case was reversed with teachers who held a critical approach. For example, the variable which described technology as a tool or instrument was cited many times by teachers who showed a critical approach to technology. This means that even when classified as mainly critical users of technology, teachers may still describe technologies as tools, which casts doubt on the generalizability of this item as an indicator of the instrumental approach. In other words describing technologies as tools cannot be adequate in and of itself to capture a teacher's approach to using new media technologies. Other variables have to be used to substantially understand teachers' approaches.

One reason that may explain the shortcomings in Feenberg's work when used in relation to Composition could be the fact that Feenberg's theory was not originally created to depict composition teachers' approaches to new media technologies. Another reason could be the complexity of being a critical user of technology in teaching composition that mandated incorporating operational definitions from previous scholarship with Feenberg's limited definitions. Accordingly, scholars should be highly alert to using theories that did not originate in

Composition Studies; scholars should be ready to mix and match those theories with theories and scholarship from Composition for better results.

Despite the shortcomings of Feenberg's (1991, 1999, 2002) critical theory of technology in providing a comprehensive analytical framework for teachers' approaches to technology, I still strongly advocate for outsourcing theories from other fields and disciplines to enrich and challenge Composition Studies. Complementing these theories with scholarship in Composition can lead the field to more and deeper understandings of phenomena that cannot be examined with our inventory of theories alone. In a world where the boundaries between disciplines are constantly blurred, inter-disciplinary use of theories can revive our field and offer scholars new horizons of scholarship to explore, as well as new approaches for scrutinizing our practices. Without Feenberg's theory, teachers' approaches to using new media technologies may have been addressed differently using one or multiple theories of Composition. Thus, it provided a unique and novel methodological approach to this subject.

<div align="center">**Mission Complete**</div>

While I am getting ready to reach the finish line of this dissertation research journey, it is time I looked back at the starting point, at the purposes I aimed to achieve by conducting this study. I wanted to explore and document new media technologies used by composition teachers in teaching first-year composition classes, a purpose that was achieved as discussed in Chapter Four. Moreover, I aimed to investigate the pedagogical uses of new media technologies in first-year composition classes, a goal that I was able to meet and complete as demonstrated in Chapter Four. Uses of new media technologies were meant to be a platform to analyze teachers' approaches to technology. Using Feenberg's analytical framework and prior research, I was able to fulfill that purpose as seen in Chapter Five.   Achieving the purposes of this study will

help composition teachers who use new media technologies in teaching FYC classes to make more informed and critical decisions about their integration of new technologies. I hope that the findings of this study will open the door to teacher-scholars in computers and composition at different levels of expertise with new media technologies so as to benefit from the findings and recommendations and to advance this blossoming field. As discussed earlier, the pace at which new media technologies emerge and evolve leaves little to no room for writing teachers to resist incorporating new media in teaching composition. There is no way back in a world that leaps forward. My hope is that composition teachers will keep pace with these leaps by making informed and critical decisions about using new media technologies in the composition class.

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Appendix A

Online Survey

First-Year Composition Teachers' Uses of New Media Technologies in the Composition

Class

Section I: New Media Technologies (technologies that incorporate two elements or more of

text, still pictures, animated pictures, sound)

1. Which of the following technologies have you asked your first-year composition (101) students to use to complete coursework. Please check all that apply:
   a. Blogs
   b. Wikis
   c. Forums/Discussion Boards
   d. Facebook
   e. Twitter
   f. MySpace
   g. YouTube Videos
   h. Podcast Videos
   i. Google Docs
   j. Social Bookmarking (e.g. del.icio.us, Chime-in)
   k. Presentation Software (e.g. PowerPoint, Prezi)
   l. Web page authoring/design programs (e.g. Dream Weaver)
   m. Other (please list in the space below)
2. Please select a maximum of TWO of these technologies and explain briefly why you chose them for your Composition 101 class.
3. Which of the following did you typically ask students to do with these technologies? Please check all that apply:
   a. Analyze multimodal texts (texts that combine more than one element of print, pictures, video, audio) available
   b. Produce multimodal texts using these technologies
   c. Other (please explain in the space below)
4. What are the activities your students engaged in using new media technologies? Please check all that apply:
   a. Creating a multimodal presentation
   b. Collaborating to build an annotated bibliography
   c. Brainstorming for an essay
   d. Researching a topic for an essay
   e. Synthesizing information from readings

f. Publishing their writing/multimodal composition
g. Peer reviewing of essays
h. Writing a research/expository essay
i. Discussing class readings
j. Summarizing class readings
k. Playing educational games
l. Analyzing web pages
m. Other (please explain in the space below)

Section II: Teaching Context

5. Where did you teach your first-year composition class you referred to earlier? Please check only one
    a. We always meet in a traditional class (students do not have access to technologies)
    b. We always meet in a computer lab (each student has access to a networked computer)
    c. We usually meet in a traditional class with occasional meetings in a computer lab
    d. We meet in a traditional class, but students bring their own technologies to class
    e. Other (please explain in the space below)
6. What/who is the source of technical support for you and your students with new media technologies? Please check all that apply
    a. Help files of software packages
    b. YouTube tutorials
    c. Online user forums
    d. A media specialist in my institution
    e. A lab assistant
    f. IT support center in my institution
    g. Another faculty
    h. Students themselves
    i. Other (please explain in the space below)

Section III: Experience with technology

7. What technologies do you use in your own life outside classroom? Please check all that apply
    a. MS Word
    b. MS PowerPoint
    c. E-mail
    d. Text messaging
    e. Facebook
    f. Twitter

      g. Blogging software or website

      h. Wikis

      i. Dropbox

      j. Mobile technology applications on a smart phone/tablet

      k. YouTube videos

      l. Other (please explain in the space below)

8. How do you find out about new media technologies to use in your composition class? Please check all that apply

      a. Announcements in my institution

      b. Training workshops in my department/program

      c. Conference presentations and workshops

      d. Academic articles and books

      e. Listserv emails

      f. Colleagues and friends

      g. Other (please explain in the space below)

9. How do you learn about using and pedagogically integrating different new media technologies in your composition classes? Please check all that applies

      a. self-training and experimenting

      b. departmental/institutional workshops

      c. conference workshops

      d. professional development workshops at other institutions

      e. help from colleagues at other institutions and/or listservs

      f. help from friends and/or family outside of the institution

      g. Other (please explain in the space below)

Section IV: Demographic information

10. What is your job/rank?

      a. Graduate teaching assistant

      b. Newly hired tenure-track assistant professor

      c. Tenured assistant professor

      d. Tenured associate professor

      e. Full professor

      f. Part-time instructor

      g. Other (please specify in the space below)

11. Where do you teach the first-year composition you referred to in this survey?

      a. A four-year college or university that grants Doctoral degrees

      b. A four-year college or university that grants Master degrees

      c. A four-year college or university with no graduate programs

      d. A two-year or community college

      e. A Technical college

      f. Other (please specify in the space below)

12. What is the type of institution where you teach/taught the first-year composition you referred to in this survey?
    a. Public
    b. Private
    c. Other (please specify in the space below)
13. I have taught in a higher education institution for:
    a. Less than five years
    b. Five to ten years
    c. Eleven to twenty years
    d. More than twenty years
14. Will you be interested in having an interview to talk in more detail about new media technologies?
    a. Yes
    b. No
15. If you have answered yes, please provide the following information
    Name:
    Institution:
    Email address:
16. The researcher would really appreciate your help distributing the link to this survey among your colleagues who use new media technologies in their first-year composition classes. Thank you

Appendix B

Coding Scheme

Table 6

Operational Definitions from Feenberg's Theories

Approach	Feenberg's Operational Definition
Instrumentalism	• Technology is a tool (Feenberg, 1991) • Technology is used to achieve previously-set goals (Feenberg, 1991) • Technology is neutral and has no value in itself (Feenberg, 1991) • Technology should be controlled (Feenberg, 2003) • Technology can be easily transferred from one context to the other (Feenberg, 1991) • People expect positive effects from using technology (Feenberg, 1991) • Technology is a medium of delivering content (Feenberg, 2002)
Substantivism	• Technology has its own goals and values (Feenberg, 1991) • Technology can change the context where it is used (Feenberg, 1991) • Technology can create new goals for the user (Feenberg, 2002)
Critical	• Technology is a choice we make (Feenberg, 1991) • Past choices of technology affect present and future ones (Feenberg, 1991) • Taking into account the different conditions in which technology is used (Feenberg, 1991, 2002) • The same technology can be used in different ways (Feenberg, 1991, 2002) • The main problems with using technology are not with technology itself but with the user's inability to control and manipulate it (Feenberg, 2003) • Technology is a framework within which the user works (Feenberg, 1991, 2002) • Technology should be compatible with the environment where it is used (Feenberg, 2002) • Teachers should choose the technology that is compatible with their beliefs and goals (Feenberg, 2002) • The teacher's role is to link students to the technology by setting goals and promoting practices and attitudes (Feenberg, 2002)

Table 7

Operational Definitions from Previous Scholarship

Approach	Operational Definitions from Scholarship
Instrumentalism	• Technology does not affect the user or his/her goals (Thomson, 1999) • Technology is a means to elevate student writing skills (e.g. Godwin-Jones, 2008) • Technology can enhance teaching environments (e.g. Hudson, 2007) • The main purpose of using technology is efficacy: better communication (e.g. Cardon & Okoro, 2010; Maloney, 2007), better student writing skills (e.g. Fulwiler & Middleton, 2012) • Technology is an effective means for communication (Blythe, 2003; Boyd, 2008; Hirvela, 2007; Kress, 1999; Lewis, 2011) • Teachers use technology as a supplement to their old traditional methods (Ertmer & Ottenbreit-Leftwich, 2010; Hutchison & Reinking, 2011) • Technology can help students consolidate concepts (Subramaniam, 2007) • Technology is used as a means of support (Eldred & Toner, 2003) • Technology is used to achieve the old goals (Hutchison & Reinking, 2011; Subramaniam, 2007)
Substantivism	• Technology becomes the center of attention (Papert, 1987) • Technology has a positive impact on its user Papert, 1987) • Computers need minimal guidance (Papert, 1987) • Technology is expected to advance learning (Papert, 1987) • Technology can assist or make a difference (Papert, 1987) • Technology changes from being a teacher's choice to playing teacher's role (Takayoshi, 1995) • Improvement in composition instruction (Takayoshi, 1995) • Improvement in student learning (Takayoshi, 1995) • Improvement in classroom dynamics (Takayoshi, 1995) • better English literacy skills (Zhang, 2010) • a strong voice in writing (Tougaw, 2009) • enhanced student attention to audience (Rosinski & Squire, 2009) • effective collaborative writing (Carr, Morrison, Cox, & Deacon, 2007; Lundin, 2008) • better communication (Cardon & Okoro, 2010) • active participation and engagement (Beeland, 2002; Maloney, 2007) • critical thinking and creativity (Lundin, 2008) • improved writing performance (Arslan & Şahin-Kizil, 2010), writing fluency (Turner & Katic, 2009).
Critical	• Technology can have different effects in different settings(Selwyn, 2010)

- Teachers are aware of the effect of using technology(Takayoshi & Huot, 2003)
- Teachers make decisions about which technology to use, how to use it, and with which group of students (Bloch, 2008)
- Using technology entails critical analysis of technology (Bloch, 2008)
- Teachers want to introduce their students to new lietracies (Nahachewsky & Begoray, 2010)
- Teachers take students' needs and preferences into consideration ((Nahachewsky & Begoray, 2010)
- Teachers aim at developing students' critical analysis skills (Lewis, 2011)
- Building on students' technological skills (Lewis, 2011)

Appendix C

Consent Form for the Online Survey

First-Year Composition Teachers' Uses of New Media Technologies in the Composition

Class

Overview

You are invited to participate in this research study that aims at exploring composition teachers'

uses of new media technologies in their first-year classes. The following information is provided

in order to help you make an informed decision whether or not to participate. You are eligible to

participate because you are a composition teacher in a U.S. higher education institution, and have

received an email invitation to participate in this study.

Purpose of the study

The purpose of this proposed study is two-fold.

- The first purpose is to explore and document the new media technologies first-year
  composition teachers use in their classes.
- The second purpose is to explore the different uses of these new media technologies in
  first-year composition classes.

Towards this end, you are invited to participate in one or more of the data collection stages.

- **First stage:** completing this online survey
- **Second stage:** having a short, distant interview

Time

This survey consists of four sections, with 15 questions that will take you between 15 and 20

minutes to finish.

Confidentiality

Your participation in this survey is anonymous unless you choose to share your name and

contact information with the researcher at the end of the survey to participate in the following

stage of the study. Your name and contact information will not be revealed to anybody during or

after this study. Any demographic information is intended for cross-tabulation of data, NOT for publishing.

If you choose to participate, all information will be held in strict confidence. Your responses will be kept completely anonymous. The information obtained in the study may be published in scholarly journals or presented at academic meetings but your identity will be kept strictly confidential. If any information specifically refers to you, a pseudonym will be used. All collected information will be stored in a password protected database.

Voluntary Participation

Your participation in this study is completely **voluntary**, and you have the right to withdraw at any time. You may choose to opt out of completing the survey at any time by closing the survey browsing window. Upon your request to withdraw, all information pertaining to you will be destroyed.

If you agree to participate in this study, please click 'I agree to participate in this study' button below to start taking the survey. By clicking this button, **you certify that you have read and understood the information on the form and you consent to volunteer to be a participant in this study. You understand that your responses are completely confidential and that you have the right to withdraw at any time.**

Researcher: Lilian Mina   Affiliation: Indiana University of Pennsylvania (IUP)

Phone: 724-357-2262   e-mail address: l.w.mina@iup.edu

Address: 110 Leonard Hall, 421 North Walk, English Department

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Project Director: Dr. Michael M. Williamson   Office Phone (724) 357-2671

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Address: Sutton Hall 351, 1011 South Drive, Indiana, PA 15705

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724/357-7730).

Appendix D

Cover Letter for the Online Survey

Cover Letter to Listservs

Apologies for cross-posting

I'm a doctorate candidate at Indiana University of Pennsylvania (IUP) and I'm conducting my

dissertation study to explore first-year composition teachers' uses of new media technologies

with their students. The study comes in two stages of data collection and analyses, and

participants may choose to participate in either one stage or both stages.

Purpose of the study

The purpose of this proposed study is two-fold.

- The first purpose is to explore and document the new media technologies first-year composition teachers use in their classes.
- The second purpose is to explore the different uses of these new media technologies in first-year composition classes.

Towards that end, I have created an online survey and I'm kindly asking first-year composition

teachers on this list to take that survey. If you are using any form of new media technology in

your class this semester, or used it last year, you are the right person to participate in this study.

Kindly share this email with colleagues in your respective institutions. An IRB protocol for this

study has been approved by IUP's Review Board. An electronic copy of the consent form has

been added as the first page of the online survey.

The survey consists of Four sections, with a total of 15 questions, and it is estimated to take

between 15 to 20 minutes to complete. Participation is anonymous unless the participant chooses

to disclose contact information with the researcher for possible participation in the next stage of

the study.

The survey is available on the following URL:

https://iup.qualtrics.com/SE/?SID=SV_73AUvXmu3plm7zL and will be accessible to

participants for six weeks between Nov 30, 2012 and January 11, 2013.

If your browser does not support HTML, you can simply copy and paste the address to your

browser's address bar.

Thank you so much for your help and cooperation.