"IT'S LIKE HAVING A LIBRARY, AND YOU DON'T GET TO GO":
EDUCATORS NEGOTIATING BOUNDARIES WHEN WORKING
WITH NEW LITERACIES

by

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B.A., Kansas State University, 1995
B. S., Kansas State University, 1998
M.S., University of Kansas, 2004

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Curriculum and Instruction
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Abstract

Historically, advances in technology have impacted education, particularly in the field of literacy. Often, educators initially resist these changes. Today, this is the case with the new literacies. Although students increasingly turn to technology to communicate, school practices still largely ignore this cultural phenomenon. This qualitative study explores the roots of this resistance by examining how teachers negotiate the use of digital literacies in the classroom, particularly in respect to the rhetorical boundaries imposed upon schools by their local culture.

Data were collected through 34 interviews with individuals in three demographically different schools districts. Of particular interest were the key literacy decision makers. At the district level, assistant superintendents who also served as secondary curriculum directors, technology directors and literacy coaches were interviewed. The school level focused on middle and high schools, and, in two districts, on alternative education centers. Principals, librarian, lead English teachers and new English teachers, defined as teaching for three years or less, provided information for the study at these schools.

During the data analysis, grounded theory, as well as the gap and continuum theories described by Deanna Bogdan (1992a & b), guided the study. When examining what factors create the boundaries educators work within, nine initial themes emerged: infractions, distractions, dependency, immediacy, misinformation, safety, inappropriateness, funding and change. Further examination of the data revealed the central phenomenon: "The technological evolution that occurs outside the classroom must be adapted before it makes its way into pedagogical practice." This phenomenon provides the first layer for the model. To better understand the adaptation process, the gap and continuum theories were employed, leading to a spectrum between gatekeepers and facilitators. Each of the three districts fit in distinctively different places on this spectrum. Axial coding was then used to further explore the relationship of the themes to the adaptation process. The nine themes could then be collapsed into three categories:

perceptions of student behaviors, perceptions of technology, and perception of school's role in society. This study provides educators insight into the factors that guide their decision-making processes when considering the incorporation of technology into the classroom.

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Dedication

To Juston. I adore you.

CHAPTER 1 - Introduction

Contemporary adolescents, sometimes called Millennials (Carlson, 2005; Gee, 2002; Hagood, Stevens & Reinking, 2002; & Young, Dillon & Moje, 2002), belong to a generation that is so comfortable with technology that technology goes beyond acting simply as a tool to defining their way of life. Students encounter and participate in messages through the songs they sing, the advertisements they encounter and the web sites they regularly visit (Alvermann, Moon & Hagood, 1999). In fact, this familiarity leads Carlson (2005) to claim "students these days are more apt to take control of their learning and choose unconventional, technological methods to learn better" (Control over Learning section, para. 4). If this is true, then teachers need to look to these unconventional methods for ways to accommodate their students' learning needs. But why does the inclusion of these technologies and the literacies that accompany them seem to be exception rather than the rule? Perhaps it is because of the perceived value of the skills involved in using these technologies. To students, technology is a critical component in communication. Yet, the traditional literacy definitions that most schools and teachers adopt do not recognize the skills needed to use these technologies as having a place in the literacy spectrum. These contrasting viewpoints suggest that schools may need to reexamine exactly how they define literacy.

Overview of the Issues

A single definition of literacy does not exist. As Bronwyn Williams (2004) points out, this fluidity of the concept of literacy affects the questions teachers should ask themselves when approaching students as readers. He questions the assumptions that teachers make about the characteristics teachers believe good readers have and whether or not this affects how teachers approach students. Many of these assumptions are grounded in the idea that literacy must have something to do with words printed on paper. As de Castell and Luke (1988) state, "being 'literate' has always referred to having mastery over the processes by means of which culturally significant information is coded" (p. 159). History suggests that written texts are the medium used to code this

information. It is this view that schools have embraced. The privileging of books in middle and high school classrooms "elevates the importance and value of academic reading" (Alvermann, 2001, p. 5). For many students, this traditional view of literacy creates more problems than answers, precisely because there are so many different types of texts available today:

> If we count only print texts as texts, and if we view learning only as extracting important information or as individual responses or interpretations of text, then we miss possibilities for engaging all students in learning in multiple ways from multiple texts. We also risk disenfranchising large groups of students for whom print texts are not paramount because of particular social or cultural values. Operating from one perspective means that pedagogical recommendations will remain rooted in finding ways to help students become successful according to certain predefined conceptions of success. This view privileges the learning and textual practices of some students and devalues the practices of others, thereby relegating some students to the status of "unsuccessful," "problem," or "at risk of failure." (Wade and Moje, 2001, para. 36)

As Leu, Kinzer, Coiro and Cammack (2004) reveal, there are various social and historical contexts that have shaped this privileging. Past technologies like the printing press allowed societies to use texts to transmit messages that helped shape religions, democracies, economies and even forces of oppression (Leu, Kinzer, Coiro and Cammack, 2004). Yet, the idea that literacy was the ideal, the ultimate goal of education, and not just a path toward learning information did not emerge in education until the 1970s (Lankshear & Knobel, 2003). Before this time, reading and writing were simply skills used within the classroom. Lankshear and Knobel identify three reasons that reading and writing merged into the idea of literacy and became the focus of educational concern. First is the work of Paulo Freire who coined the phrase "reading the word and the world," emphasizing that reading entails much more than simply decoding (Freire & Macedo, 1987, p. 28). Second, in the early 1970s, many perceived that the U.S. had an alleged increase in illiterate adults who were ill-prepared for the work force. And finally, there was an increased interest in the idea that language operated within a socio-cultural framework (Lankshear & Knobel, 2003).

These factors created a new emphasis on all the skills required to communicate in society. But despite the fact that most contemporary theorists see reading as just one of the elements that make up literacy, educators and policy makers frequently view reading and literacy as the same concept. Part of this is because the digital texts that make up the newer literacies can be threatening to teachers who are unfamiliar with the new technology (King & O'Brien, 2002). At times, this fear leads to the pointing of fingers as the use of digital texts is charged with the decline of print literacies. "The blaming of technology for traditional print "deficits" intends to neutralize the lure of the mediasphere and reinstate print literacy and its accompanying control" (King & O'Brien, 2002, p. 42). These viewpoints, James Gee (2002) argues, lead to practices and policies like those outlined in *A Nation at Risk* (National Commission on Excellence in Education, 1983) and the No Child Left Behind Act (2002). What creators of laws like NCLB do not understand, however, is that literacy is a much larger concept than just the ability to read and write (Gee, 2002). "The current 'accountability' movement is meant to guarantee that all children –not least, poor children–will get the basics in school, no more, no less" (Gee, 2002, p.66). Arguably, this approach does a disservice to students, because students need a much broader literacy base to succeed in the real world.

> Literacy and reading, though related, are neither synonymous nor unambiguous terms. Typically reading is subsumed by literacy, with the latter term used to refer to reading, writing, and other modes of symbolic communication that are often valued differently by people living in different social and economic structures and holding different political views. (Alvermann, 2001, p. 4)

It is these different values, combined by the social nature of literacy that makes the traditional definition of literacy problematic in today's society. According to Scribner (1988), many of the problems with literacy concepts is the tendency to view it as an attribute of an individual, when in reality, literacy only exists because of cultural transmission. She argues that the simple existence of the text and an individual does not create literacy. Instead, it is the learning that occurs as a result of social interactions. Yet, assessments designed to gauge today's students' literacy revolve around paper and pencil reading and writing tests that stress individual participation. This viewpoint does not take

into account the collaborative nature of much of the reading and writing that takes place in the world today. With this in mind, in addition to Scribner's (1988) assertion that literacy is a result of social interaction, educators may be required to reexamine what it actually means to be literate.

Alan Luke (1998) calls for literacy for new times, pointing out that successful literacy practices of the future must look very different than the print-bound literacies of the past. His observation is not unique among literacy scholars. Researchers and educators recognize that technology is changing at an increasingly fast pace, which means that the skills it takes to decode and compose the messages change daily.

> As we move from an industrial to a post-industrial information economy, one in which print literacy is not obsolete but certainly substantially transformed, then surely we need broader definitions of knowledge, literacy and pedagogy which will include study of the intertextuality of imageries, texts, icons and artifacts of new information economies, of media and of popular culture. (C. Luke, 1998, p. 27)

And for many, the most frustrating part of this challenge is that these messages morph from text to images to sound clips to a mixture of all of these sign systems on a minute-by-minute basis. It is this reality that shapes the idea of new literacies, literacies that when looked at critically can free readers to be active constructors of knowledge using all the tools available to them. But while it may be easy to say that literacy looks very different than it did in the past, as Leu, Kinzer, Coiro and Cammack (2004) point out, creating a precise definition of what new literacies encompasses is not an easy task because technology changes every day. This rapid pace has become even more pronounced as the advent of Web 2.0 has transformed the Internet from a place to simply gather information to a collaborative forum where users actively work together to compose new ideas. It is this murkiness of definition that causes confusion among those who are interested in studying the new literacies.

Although researchers had been interested in this changing face of literacy for several years, the New London Group pushed the concept to the forefront in 1996 when they published their vision of the future of the concept of literacy. Composed of a group of highly-esteemed literacy researchers, the group asserted that literacy teaching and

learning must extend its scope to addresses the needs of a culturally and linguistically diverse society that has become more and more global, and it must take into account the ever-growing variety of text forms, including multimedia. They point out that the changing world has resulted in more fragmentation of diverse subgroups. Relying on the traditional, more authoritarian, definition of literacy, they argue, could lead to students who are at a disadvantage in today's society. To counteract this, educators must integrate all the modes of meaning-making, including the relationship of textual with visual, audio, spatial, behavioral, and so on. According to the New London Group (1996), when learners begin to juxtapose different languages, discourse, styles and approaches they begin to grow in their meta-cognitive skills, allowing them to reflect more critically on all systems of communication.

It has become clear that reading, while it has always been a complicated process, has gone beyond turning pages of written texts and comprehending what is on them (Mackey, 2007). The reality of technology has made today's readers very different from readers of the past. Today's reading is not always a linear, left-to-right process. As a result, today's readers must be able not only to read what is in front of them, but also to operate within the jumps to wherever a hyperlink might lead. This new definition of text, which impacts how we view literacy, also changes what it means to be illiterate, because "a one-medium user is the new illiterate" (Zingrone, 2001, p. 237).

A Teacher's Perspective

When I entered the classroom ten years ago, I believed that teaching English would be a snap. All I needed to do was find the right book for the right student, and I would be on my way to changing lives. That's not to say there was no truth in this belief and that I have not done some of this, but what has become increasingly more apparent is that today's readers are changing. The fluent reader is sophisticated in that she can jump from text to text, seamlessly making transitions from the printed page to the screen. He can make connections between visual images and the world around him. She can compose complex messages that incorporate written words, visual symbols, sounds and even, at times, tastes, to get her ideas across. But what about the striving reader? In my experience, I have seen high school and middle school readers turn up their noses when

the word reading is mentioned. I have received countless reading surveys that tell me without mincing words that they hate reading. For many students, raised in an environment where reading tests have guided their reading curriculum, their history with reading has been steeped in failure. Yet, when they go home, their lives are rich with textual experiences. This is also true for the reluctant reader, the reader who can read but fails to see its relevance. What these two groups have in common, however, is that many do enjoy composing and reading texts that make-up those encompassed by the new literacies, texts that are not valued in the classroom.

Today, after reading articles, books, and dissertations on the subject of new literacies, I understand the value of using these in the classroom, bridging the disconnect between home and school literacies. But looking back, I see that I intuitively understood the relevance of these literacies years before I consciously began studying them. For Dave, it was bringing in lyrics to his favorite song and asking him to make connections between the song and the novel we were reading that turned him on to my class. For Jake, it was tapping into his talent for making movies that prompted him to read an entire novel so he could showcase his talent. For Shelby, it was the opportunity to create her own page where she could blog about her reading that got her excited about reading. In my experiences, I found that I could encourage more students into the world of reading if I tapped into their personal interests, and for many, those included textual representations researchers associate with the new literacies. This is not to say that I am the only one who has made this discovery, nor that I am the only one who uses these approaches. But I would say that I am definitely in the minority. I would argue, however, that this is largely due to the restrictive environment that many of us operate in. As previously mentioned, these literacies are not highly valued in schools. But the question arises, is it because of the school itself or the larger community within which schools exist and serve?

No Easy Answers

Attempting to answer why schools have not embraced the new literacies approach is difficult because the issue is multilayered. To begin, very few teachers have a clear understanding of what the new literacies entail. Schools look for very specific tasks to do with technology (e.g. "students will do research on the Internet"). Technology is seen as a

convenience that makes traditional learning easier. Papers can be typed instead of handwritten; research can be done quickly on the Internet; and messages can be sent quickly via email. The reality of this view is that technology has had little impact on the way students learn or what they need to know. But the new literacies are about changing our approach to literacy on a fundamental level. To compound this problem, publishers do not provide any materials that guide teachers toward the new literacies path. Textbooks remain grounded in traditional literacies, making it very difficult on the teacher who knows there needs to be a move to at least acknowledge the new literacies that students use outside of school. On the other end of the spectrum rests the districts that cannot push for technology because they lack the resources that allow them to provide equal access to all students. There are simply not enough funds to purchase the computers needed to effectively teach the new literacies.

Even more complicated than the lack of resources is expectations placed upon schools by people outside the learning environment. Parents who send their children to school expect to see assignments similar to those they had when they were in school. While many of the assignments from years past were appropriate for the literacies available then, very few parents really understand the different skills needed to thrive in such a technology-driven world. Much of this mindset is derived from the fact that many parents, as well as other adult decision-makers, do not completely understand the complexity of the new technologies (Lankshear & Knobel, 2003). As a result, parents and politicians clamor for back-to-basics. Traditional approaches to reading instruction, such as phonics, are pushed on the schools. Textbooks and packaged reading programs, with their carefully diagrammed instructions, become the answer to ensuring that all students learn the same skills in the same manner. To some districts, curriculum mapping becomes a way to guarantee that all teachers are teaching the same lessons in the same ways on the same days. And assessments are designed to assure that the traditional literacies are the skills being taught and tested. All of these issues work together to keep the new literacies out of the schools. Technology is not being used in a way that is most useful to students. Yet, few consider the role that censorship actually plays in this reality.

Censorship and the New Literacies

Censorship has primarily been considered a print-based problem as parents clamor to keep books out of schools. But with the changing definition of literacy also comes the changing definition of text, complicating censorship. For some, this assertion may be a difficult one to grasp. Much of this derives from the traditional view of censorship, a view that is very similar to the traditional definition of literacy. In this light, censorship would be defined as the removal, suppression, or restricted circulation of literary, artistic, or educational materials—of images, ideas, and information on the grounds that these are morally or otherwise objectionable in light of standards applied by the censor. While this definition does include information and educational materials, which can be encompassed by the new literacies, it implies that it is done on an individual basis, such as a particular book or piece of art, by an individual or particular group that objects to its content. How then, can the restriction of an entire body of information such as blogs or social networking sites be censorship? One never hears that all books have been removed from schools, which must mean that censorship cannot be applied to the new literacies.

This type of logic makes sense if this is how censorship is defined. If one looks at censorship in terms of the rhetorical situation, however, it becomes clear that all instances of censorship hinge upon the relationship of the people, events, and objects involved in the situation (Bitzer, 1968). In other words, all instances where communication occurs have boundaries the audience expects the communicator to operate within. For example, members of a church attend service with the expectation of hearing about the lessons of their God. It is understood that those in attendance, whether it is the minister or the congregation themselves, will not speak in the language one might hear at a comedy club. Likewise, those audience members who have ventured to watch their favorite comedian perform would find themselves bewildered and, perhaps, outraged if the comedian began preaching while onstage. In both situations, certain information would be avoided based upon the audience's expectations. It is within these boundaries that schools, conveyors of vast amounts of information, find themselves. Their audience, parents, policy makers, tax payers, etc., have certain assumptions they expect schools to operate within. If schools attempt to step outside those boundaries, parents and policy makers react to discourse

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outside the accepted bounds. And because the new literacies do operate in ways that are foreign to much of the school's audience, this is the information that is frequently censored in schools. To alleviate this fear, school communities, including parents and policy makers, must examine the nature of the new literacies, including their use in today's global world, and the roots of their fears. It is through this examination that the problem can be fully understood.

The Problem

Although new literacy researchers recognize the value and even the necessity of expanding the definition of literacy, the focus on standardized testing has led practitioners in the field to frequently be discouraged and sometimes forbidden to incorporate the new literacies, which have become even more accessible with the advent of Web 2.0, into the classroom (A. Luke, 2002). While a portion of this discouragement is due to the belief that all classroom activity be focused on assessment preparation, the vast amount of information made available by these new texts and the inability to closely monitor this information also contributes to the problem because these issues make the public nervous. Because of public perception, there are limitations to incorporating some of these tools within the classroom. And because parents and the media appear to be rather afraid of the fuzzy boundaries that many of the new technologies possess, schools, a microcosm of the society they exist within, reflect that fear through the use of firewalls and other imposed boundaries that seek to separate in and out of school literacies. This is not, however, the first time educators, parents and policy makers have ever faced this fear. Censorship began to rear its head as far back as the 15th century when, in response to the newly invented printing press, the Archbishop of Mainz began forming censorship bureaus and creating lists of banned books (Hudson, 2000). And it is also not the first time that non-traditional texts have faced the wrath of the censors. In 1915, the Supreme Court refused to give film the protection of the First Amendment because it feared that film could negatively influence youth, an argument that sounds very similar to the arguments that censors make today when pointing to the Internet (Hudson, 2000).

While fear has always been the driving factor behind restricting access to texts, today's society operates under a fear that they believe to be embedded in the physical

safety of America's children. With the rash of school shootings that have marred numerous public schools, parents and legislators are scrambling to identify potential threats to children's safety. The Internet and the information it makes available to youth has become an easy target. After the tragedy of Columbine, speaker after speaker, testifying in front of the Senate Commerce Committee, pointed to the Internet as a cause of the shooting. These speakers included representatives from the Southern Poverty Law Center who stated that the shooters may have been inspired by Neo-Nazi propaganda they discovered on the Net and the chair of the Anti-Defamation League who claimed that the Internet provides "how-to manuals" for individuals who are looking for ways to act out violent fantasies (Hudson, 2000).

While these fears are certainly understandable, one must question their rationality as violence has occurred throughout history, well before the onset of today's Information Age. One possible explanation for these reactions could be the inability of the majority of parents, educators and policy makers to fully understand the technology of today's world. Several new literacy scholars including Lankshear and Bigum (1999), Rowan, Knobel, Lankshear, Bigum, and Doneman (2000), and Goodson, Knobel, Lankshear, and Mangan (2002) have adopted the distinction put forth by John Perry Barlow, a distinction between digital immigrants and digital natives. In an interview with Nat Tunbridge (1995), Barlow explains the differences between the two groups. Today's students are natives in that they have grown up in a world that is largely defined by the Internet. Because of this, students understand the Net and its capabilities in a way that most of their parents do not. Lankshear and Bigum (1999) point out that the two groups see the world very differently. The immigrants, or outsiders as Lankshear and Bigum call them, view the world the same as it has always been with just the added benefit of technology. The natives, or insiders believe the world has been fundamentally altered because of these technologies. To Barlow (in Tunbridge, 1995), these completely different viewpoints create many of the problems the world is seeing today. Barlow and Lankshear and Knobel (2003) assert that immigrants or outsiders who do not fully understand the true state of today's digital world will act inappropriately toward the technologies, which one might consider to be happening today as communities continue to try to tighten the limits of using these technologies in schools.

This split in mindsets between the natives and the immigrants illustrates a shift in power, just as the printing press created a shift in power when citizens were faced with questions about who should be most impacted by the texts and their messages that could now be easily disseminated (C. Luke, 1998). Print texts, combined with social needs, led to the creation of schools that met the needs of certain classes of people, neglecting the needs and experiences of groups of entirely different people. With the development of these school literacies came the definition of "literacy in terms of criteria, genres, tastes, standards and so on, which systematically privilege a minority of class/language/ethnicity…-specific groups, and disadvantage others" (Lankshear & Knobel, 2003, p. 70). The advent of new literacies upsets this notion of literacy, and thus power. Today's youth, as Donna Alvermann and A. Jonathan Eakle (2007) point out, are finding ways to step outside the traditional boundaries created by schools, denying schools the very power they are trying to maintain. And because students have a better understanding of the digital world, they are finding success after success in their attempts to circumvent these boundaries, a reality that scares many adults. Alvermann and Eakle suggest that one answer to today's literacy struggles is for teachers to begin exploring the traditional boundaries of school literacy, finding potential escape routes that will allow them to access some of the more complicated literacies that students engage in.

A teacher's willingness to begin scouting out these avenues is not always enough, however. As immigrants continue to fear the rapidly advancing technology, parents, administrators, and legislators continue to throw up roadblocks in an attempt to impede student access. Schools have restricted or denied email access, created filters that are designed to block out questionable web sites, and punished students for anything that they perceived to be a threat (Hudson, 2000). And these actions do not always apply only to student access occurring during school time. In communities within the United States, students are being punished for posts to their blogs made outside the school day (Vara, 2005). Perhaps even more alarming was the move by the Roman Catholic Diocese of Paterson, New Jersey to ban all of its students from maintaining any personal blogs or social networking sites. The communications director stated that, "An unsupervised blog is an inappropriate use of their time." (Vara, 2005). This attitude is not unique, either. In 2006, Pennsylvanian Republic Representative Michael Fitzpatrick proposed legislation

that would take the issue out of the hands of schools. His bill, the Deleting Online Predators Act, which would expand the Children's Internet Protection Act, called for the removal of funding to any school that fails to restrict access to any web site that offers discussion boards, chat rooms or email services (McCullagh, 2006). While the bill did not make it past the Senate, efforts are still being made to re-write the bill so that it is acceptable to all parties. All of these actions seem to operate under the notion that technology is subversive, that society is threatened by this new form of communication, and that it is the adults' responsibility to protect children from these dangers.

Again, most of these attempts to tighten the boundaries designed to keep traditional literacies in and new literacies out come as a result of a population that does not completely understand today's literacy needs and fears the switch of power. As Steven Johnson (2006) explains, "Any time a new technology comes along, an implicit cost-benefit analysis gets made. The trouble with the current debate about Generation M is that we have a phalanx of experts lined up to measure costs but only a vague, intuitive sense of the benefits." For teachers who have adopted a new literacy stance and seen the positive effects, the benefits of classroom implementation are more tangible. But to a public that insists on testing as a measurement of school success, it is difficult to see how valuable these skills are to today's students. And here lies the crux of the problem facing today's schools in regards to literacy instruction. The boundaries within which teachers must operate are not always compatible to the needs of the student. "To plan a balanced diet, you need to know something about the nutrients in all the food groups, not just the ones that have tradition on their side" (Johnson, 2006).

Research Questions

Primary Research Question:

How do secondary schools negotiate the tensions created at the rhetorical boundaries of their local cultures by the content and emerging genres of new literacies pedagogy?

1. How do secondary schools identify the rhetorical boundaries they must operate within?

2. What attributes of the emerging genres do secondary schools see as beneficial in terms of classroom instruction?

3. How are the rhetorical boundaries influenced by geographic location (i.e. rural, suburban and urban)?

Definition of Terms

Rhetorical Boundaries: Constraints of a situation that, due to the complexity of events and people involved in an instance of communication, dictates the decisions the participants make about what can and cannot be communicated (Bitzer, 1968).

Emerging Genres: The addition of new genres created by the combinations of previous forms (genres) of language (Bakhtin, 1986).

New Literacies Pedagogy: Instructional attempts to expand the concept of "text" beyond the printed word.

Local Culture: The school community treated as a rhetorical situation.

Description of Study

This study explored the challenges faced by school communities due to the new literacies that are largely influenced by Web 2.0. The study encompassed interviews with educators in three demographically different school districts in two midwestern states. From these three districts, I focused on six different schools: a middle and high school in each district. Selection was based upon accessibility, as well as my interest in the amount of variance that the three districts provided. Interviews were conducted with figures central to the literacy decision-making process: technology directors, curriculum directors, literacy coaches, principals, lead English teachers, new English teachers, and librarians. Interview questions were comprised of questions designed to elicit perceptions of new literacies, including their possible uses in schools and their possible threats to schools. The data collected helped me determine how schools identify the boundaries they must operate within in regards to the new literacies, as well as the attributes schools see as beneficial to the students they serve. Through these conversations, I was able to

obtain a better understanding of how schools negotiate the boundaries imposed upon the new literacies.

To ensure the accuracy of the data collection, interviews were audiotaped and transcribed. During the course of the interviews, I also took notes to capture keys phrases and ideas, as well as observations about body language. The information collected from the interviews was entered into HyperRESEARCH, a program that better enabled me to identify the common themes that are central to grounded theory. In order to establish boundaries, the identification of categories and themes within the data allowed me to determine the limitations schools are expected to operate within. Data analysis then incorporated the gap/continuum theories, which helped describe how educators work with the new literacies. The gap/continuum theories, used previously with print texts, look at the reader's relationship with a text. According to continuum theorists, readers of a text are powerless in resisting the author's intent, which is transferred to the reader through the text. Gap theorists, on the other hand, argue that readers possess the skills to step back from a text and make judgments based upon readers' own values (Bogdan, 1992a & b). Using these theories allowed me to analyze how secondary schools perceive the emerging genre of the new literacies, and whether or not schools, as well as their local cultures, assess readers of new literacies in terms of the gap or the continuum. Through this understanding, I obtained a better picture of just how secondary schools negotiate rhetorical boundaries, providing another layer to grounded theory used in the study.

Significance of Study

While there have been studies and debate on the censorship of traditional print texts, little has been done with the censorship of the other texts that encompass the new literacies. A review of literature finds that most of the texts available on the censorship of new literacies fall into either news stories reporting on legislation and specific cases of problems arising from the use of new literacies by students or social commentaries about why the public should or should not be afraid of the new literacies (Hudson, 2000; Johnson, 2006; McCullagh, 2006; Vara, 2005; & Watts, 2005). This study explored why, despite the research that points to the value of expanding the definition of literacy, many schools are hesitant to use these literacies. The study also examined whether or not the

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boundaries are consistent across demographics and even across staff. And finally, I considered the following dilemma: If the limits or boundaries cannot be concretely defined, which the variability of censorship cases suggest cannot happen, how do individuals know where their limits are? It is only through the understanding of the system individuals operate within that changes can be made. This study will help broaden this understanding.

While broadening this understanding is critical for theorists who study the new literacies, even more important are the implications the study can have on educators themselves. Insight into how educators respond to community expectations will provide guidelines for the creation of materials to help in-service teachers learn how to incorporate the new literacies in the classroom in a manner that is considered acceptable to school communities. This is vital if schools truly want to equip their students with the skills the new literacies demand because, as previously discussed, teachers often do not feel equipped with the knowledge needed to successfully use these technologies in the classroom. For professional groups such as the National Council of Teachers of English or the International Reading Association, this information can guide professional development opportunities, including in-service training, which can educate teachers how the tools of Web 2.0 that may not have existed when an educator entered the field can be used effectively in the classroom.

The study will also aid educators of pre-service teachers, future teachers who have grown up using the tools of the new literacies. Some may argue that because these individuals are so familiar with these literacies this information is less necessary for pre-service educators. Yet, it is this group that is most likely to create tension within local cultures because their lives are so saturated with this technology that they may not stop to consider how communities will react to the inclusion of the new literacies in the classroom. Pre-service teachers need to be educated about what types of themes operate to create the boundaries they must work within when they enter the classroom and about how to successfully negotiate these boundaries.

All of these issues and how they affect different groups of people, including educators, both pre- and in-service, and local communities, make this study an important addition to literacy research. Ultimately, it provides a deeper understanding of the issues

that make up the current debate about what it means to be literate in a global society. Through this knowledge, educators will be better equipped to educate the public about the changing face of literacy, a literacy that melds the traditional modes of reading and writing with technology, creating new opportunities and issues to be addressed in America's public schools.

Limitations of Study

Like all qualitative studies, this study is limited by the fact that the findings cannot be generalized across all school districts. While the findings can only be descriptive of the three districts and eight schools studied, the study will give insight into a fairly new problem encountered by today's schools. Qualitative research makes sense when studying censorship, however, because there are no clearly defined boundaries that all individuals subscribe to. Therefore, the individual nature of qualitative research better explains such a fluid subject matter. The size and scope of this study are also limitations. However, the purpose of this study is not to quantify censorship. Rather, it is to gain a clearer understanding as to why it occurs within schools.

Overview of Study

Chapter One introduces the concept of new literacies, providing a general overview of the benefits of incorporating this stance into the language arts classrooms. It also presents the problem of censorship of the texts included in this stance. Upon explaining the issue and its problem, this chapter poses the research questions, defines key terms, and identifies the significance and limitations of the study.

Chapter Two presents a more complete picture of the research conducted on new literacies, including the traditional literacy theories that new literacy can be tied to. It also delves into the history of censorship, examining how much of the public's current response to these new texts mirrors the reactions that the introduction of new texts and technology have prompted over hundreds of previous years.

Chapter Three describes the methodology of the study, focusing on the questions I posed to each of the participants. It explains how participants were selected and the process through which each interview was conducted.

Chapter Four details my findings based upon interview notes and transcriptions. It explores in great detail what participants had to say about the concerns they have when working with technology. It also prioritizes the concerns each district had by listing them from the least mentioned to the more frequently mentioned, allowing the reader to compare levels of concern across districts.

Chapter Five summarizes the findings in terms of the grounded and gap/continuum theories. It explains each layer of the model created from grounded theory, as well as situating how the gap and continuum theories fit within the model.

Chapter Six seeks to interpret and understand the thematic strands found within the study. It also outlines the implications this study has on future studies.

CHAPTER 2 - Review of the Literature

There are multiple topics that need to be addressed when examining the importance of this study. The understanding of new literacies themselves, including their role in preparing students for future demands on coding and decoding messages and in motivating students in regard to traditional literacies, is vital if one is to grasp why limiting them in the classroom is problematic to some educators. This means that one must also look at how the new literacies fit within traditional literacy theories. Additionally, further historical grounding of technological development and issues of censorship must also occur. And of ultimate concern is how the public and educators respond to these new literacies today. To help address these areas, this section has been divided into seven sections: 1) The Merging of Technology and Literacy to Create New Literacies, 2) The Implications of New Literacies, 3) The Theoretical Foundation of New Literacies, 4) The Hidden Curriculum, 5) The Changing Face of Technology and the Roots of Censorship, 6) Limiting the New Literacies in Schools, and 7) A Summary of the Issues.

The Merging of Technology and Literacy to Create New Literacies

Just as fashions and trends look very different today than they did, say 10 years ago, so does the face of literacy. With technology changing at an increasingly fast pace, so must the skills that it takes to decode and compose the messages that change daily. As explained in chapter one, this recognition of technology's impact on literacy became prominent after the meeting of the New London Group in 1996, where noted literacy scholars emphasized the idea that students will be at a disadvantage globally if educators continue to rely on the traditional definitions of literacy. Much of this disadvantage evolves from the emphasis on content knowledge that traditional classrooms embrace, rather than the procedural knowledge that the digital world demands (Lankshear & Knobel, 2003).

Social practices that are evolving beyond the school within digitally saturated milieux seem to be privileging modes of knowing that are more performance- and

procedure-oriented than propositional, more collaborative than individualistic, and more concerned with making an impact on attention, imagination, curiosity, innovation, and so on, than with fostering truth, engendering rational belief, or demonstrating their justifiability. To that extent, the subject-based curriculum founded on texts and academic teachers as authority is in trouble. (Lankshear & Knobel, 2003, pp.175-76)

James Gee and Allan Luke, two of the co-authors in the New London Group have continued to explore the idea of new literacies and have greatly impacted the field. In his work, Luke (1998) points out that this is not a completely new phenomenon. Like the advent of current technology, particularly the Internet, past technologies, like the printing press, have had similar impact on literacy. He argues that to be literate in the 21st century will not be the mastery of one particular method, but rather the ability to visualize the future literacies to come and anticipate the skills that will be needed. Gee (2002), likewise, contends that we need to broaden our perspectives on literacy. He proposes that language exists for more than simply conveying information. Instead, language serves to scaffold social actions and interactions and to invite others to take on perspectives of experiences that deal with cultures and social groups. Gee asserts that our way with words connects directly the way we understand and act in the world.

Like Gee (2002) and Luke (1998), Alvermann, Moon, and Hagood (1999) have also worked within the framework of new literacies. They maintain that today's readers interpret a variety of symbols and signs to communicate, arguing that using this semiotic approach makes it possible to treat all forms of popular culture and texts as signs that allow people to communicate using words, images and objects. They subscribes to the ideas put forth by Bertram Bruce (1997) that students need to be adept in the technology literacies of today if they are to function in society and be equipped for the technologies to come.

According to Bruce (1997) there are many stances researchers and educators take when it comes to technology. For many, technology is simply viewed as a tool, which leads to the idea of technology literacy, of being skillful in the use of technology. Bruce argues that this view cannot be maintained because technologies are not separate from traditional texts. Rather they are now part of how texts are created and meaning is made.

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He also argues that because technology is such an integral part of society that its absence has an impact on how we make meaning. Therefore, technology alone does not lead to new forms of literacy practices. Carmen Luke (2000) supports this view, asserting, "specific cultural practices, literate traditions, and the interests and desires of those groups who design and name them" create hybrid textualities that "blend print text, sound a graphic imagery" (p. 83). This view supports the idea of new literacies: how we create knowledge is fundamentally changing; the idea of text cannot exist without technology coming to mind.

According to Leu, Kinzer, Coiro and Cammack (2004), in order to develop a theoretical framework around technology and new literacies, we must first understand the social contexts they exist within. There are three forces that need to be recognized: competition among global economies is relying more and more on the effective use of information and communication; the Internet is rapidly emerging as a powerful new force in communication; and governments around the world are pushing for policies the ensure higher levels of literacy including the use of the Internet. Leu, Kinzer, Coiro and Cammack (2004) assert that these changes in society make it impossible to function in literacy research, theory and practice if we continue to define literacy in the traditional text-only format. Although literacy definitions have changed historically, they have never changed at the fast pace that the world is seeing today with the rapid emergence of new technologies. Decoding has always involved the skills of decoding prints as well as pictures and other images. However, the complex nature of the digital world requires that these decoding skills adapt so that the print text is no longer the focal text. Gee (2000) and the New London Group (1996) argue that literacy is embedded within and develops from social practices of cultures. With the Internet and other digital technologies so pervasive in society, this indicates that there is a need to include technology within literacy instruction.

Leu, Kinzer, Coiro and Cammack (2004) identified ten central principles that need to be addressed from the new literacy perspective:

1) The Internet is essential in working within global communities: The social nature of the Internet allows people to collaborate across distances once never imagined.

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2) The Internet requires the instruction of new literacies if it is going to reach its full potential: The Internet has become what it is because of the imagination of the people using it, making it essential for people to be critical users if we want to be able to use all the tools that can be made available to us.

3) New literacies are always changing: Again, because of the social nature of the Internet, particularly with the advent of Web 2.0, the Internet never looks the same from moment to moment; once users find limitations to their needs, they simply create new solutions that are then made available to other users.

4) Literacy and technology have a transactional relationship: Just as literacy now owes much of how it is defined to technology, so does the technology itself rely on traditional literacy skills, and as one changes, so does the other.

5) New literacies are multiple in nature: This goes back to the skills previously mentioned. New literacies rely on the audio, the visual, the spatial, the media, and all need to be incorporated into the definition of literacy.

6) Critical literacies are important to the new literacies: Because of the collaborative nature of the Internet, anyone can add to the growing bank of information, whether it's true or false, making it essential that users understand how to be able to accurately interpret the information and learn to detect misleading information.

7) New forms of strategic knowledge need to be developed to work with new literacies: Because traditional print strategies do not always work when reading new literacy texts, students need to be equipped with strategies that will help them work within the framework of all texts not just print texts.

8) Speed is very important: The Internet changes moment to moment, making it essential that learners are adept at keeping up with the changes; struggling readers, if not equipped with skills that increase speed, may fall behind faster than ever before.

9) Learning is much more frequently socially constructed. Again, this goes back to Web 2.0 and its collaborative nature; students must learn how to work together to construct and share knowledge.

10) Teachers are more important, although they have a different role, when working with new literacies: Because many teachers are digital immigrants, meaning that many of the technologies that exist today did not exist when they were students, and our students are digital natives, the role of teacher and learner will change. In many cases, the students themselves may take on the teaching roles, however, this does not diminish the teacher; rather, teachers will need to act more as facilitators and meaning makers rather than simply transmitters of information. These principles, particularly the deictic nature of new literacies, can serve as a guide to the direction that literacy research needs to take.

Principles such as these are part of why Cope and Kalantzis (2000) suggest that literacy may be the most pivotal element in current educational practice (p. 234). Like Luke, Gee, Alvermann, Leu and many other literacy researchers, Cope and Kalantzis view the traditional definition of literacy as too narrow to best prepare students for the future. Cope and Kalantzis (2000) pose three arguments as to why the definition should be changed: 1) Literacy is transformative in that it cannot be simply transmitted. Instead, through personal experiences, individuals design their own meaning. 2) Literacy cannot be confined to one mode. The increase in technology, globalization, and diversity means that messages are transmitted via text, sound, images and even gestures. 3) Unlike traditional grammar instruction, literacy no longer has rules of correct usage. Individuals of various ages, gender, class, etc, use language differently, leading to a very diversified view of what is acceptable in terms of composing messages. These arguments, similar in nature to many that have been previously discussed, support the idea that schools need to look to new literacies when designing learning experiences.

The Implications of New Literacies

Amid all this theory, comes the very real question of how these issues should impact the classroom. Expanding the scope of literacies does not mean that schools should completely abandon the traditional skills of reading and writing print texts. As Carmen Luke (2002) points out, "reading and writing in both traditional print literacy and new linguistic-semiotic (iconic) symbol systems have increased exponentially in tandem with the mass diffusion of ICTs" [information and communication technologies] (p. 135).

In fact, the use of ICTs has produced the largest increase in letter writing since the 18th century (C. Luke, 2002). Despite this explosion, though, the insistence on returning to the Three-Rs and standardized testing has frequently led to the elimination of practices like media literacy, just when literacy educators had begun to make inroads (C. Luke, 2002). This can be detrimental in a post-industrial world that is increasingly becoming more polarized (Knobel and Lankshear, 2002). "As (literacy) educators, we must aim to teach higher-order skills to as many as can handle them, and make absolutely sure no learners fall through the basic literacy 'net'" (Knobel and Lankshear, 2002, p. 169). For today's world, and the world of the future, these higher-order skills involve being adept in the new literacies, as well as the traditional literacy canon.

Because today's world is very different than the world most educators grew up in, today's learners, the Millennials, learn and interact very differently than most educators can relate to (Moorman & Horton, 2007). For instance, as a result of the cooperative learning trend, paired with the interactive nature of today's communication technology, including email, text messaging, instant messaging and cell phones, most Millennials are very team-oriented. Having grown up with computers, most Millennials prefer the Internet to television and typing to handwriting. And perhaps even more importantly, Millennials value doing over knowing and trial and error over sequential problem-solving (Moorman & Horton, 2007). It is this difference between the teacher and the student that can create the disconnect in the classroom. Because teachers are digital immigrants, they frequently treat technology as simple add-ons in the classroom, working under the old mindsets rather than seeing the new possibilities that the technologies possess (Lankshear & Knobel, 2003). Many fail to see that ICTs are not tools, but processes that need to be developed (Lankshear & Knobel, 2003). Once ICTS can be seen in this sense, it becomes easier to see how ICTs fit alongside the processes of reading and writing.

While teaching students how to develop these skills is important, the new literacies provide other valuable insights into educating today's students. One key the new literacies possess is their ability to unlock the mystery of how students learn. In his study of video games, James Gee (2003) discovered 36 learning principles that quality games used, principles that Millennials understand early in their development. Catherine Compton-Lilly (2007) used Gee's work as well as the work of other reading researchers

to examine how these principles of video games connected to reading instruction. Through this investigation, Gee and Compton-Lilly gained a clearer picture of how kids learn and strategies educators can transfer to the classroom.

Video games allow learners to take risks without real-world consequences. Compton-Lilly (2007) argues that teacher need to capitalize on this idea of creating learning situations that teach children to take risks without worrying about major consequences. Another area where the two worlds seem to merge is through the idea of identity. Video games engage students in a way that allows them to create alternate identities. Good readers are also able to do this. Struggling readers, however, often cannot make this connection with the identities within school texts. Gee and Compton-Lilly argue that steps need to be taken to help the struggling reader make this connection. Engagement is also another important element to video games. Once children are engaged, they are willing to spend hours practicing the skills needed to master the game. Again, this is similar to what good readers do: they engage with texts, reading over and over, not because they want to improve their reading skills, but because they find it engaging rather than boring. Through engagement, students learn to discover and test the patterns that are necessary to succeed in the games. This, Gee explains, is precisely why scripted reading programs frequently do not work because students are simply learning discrete facts rather than how to find deeper patterns.

Despite Gee's (2003) argument about scripted programs, these are exactly what many struggling readers are receiving right now because reading development is a hot topic. The perception of today's youth is that they are a part of a reading crisis. While many experts would agree that there is a disconnect between reading and school reading, they would also argue that students ARE reading, just not in the manner schools are accustomed to. This is where the idea of new literacies comes into play. Today's students are accustomed to reading various texts, including, but definitely not limited to, the Internet, which can encompass blogs, instant messaging and e-mails; visual images; and even video games. Using the literacies that accompany these technologies, as well as the engagement Gee pointed out, may be a way to bridge the gap between old and new literacies, giving new literacies even more value in the eyes of traditional educators than simply teaching students how to code and decode the new literacies does.

Engagement and reading is not a new concept unique to Gee. Research by Guthrie and Wigfield (2000) found that instructional practices, although they are important, do not directly impact student outcomes in reading. They found that student engagement is the actual factor that will determine how students perform. From their studies, they concluded that the engagement model of reading should feature instruction that encourages 1) student motivation, which encompasses self-efficacy and goal setting, 2) strategy use, including activating prior knowledge and building vocabulary, 3) growth in conceptual knowledge, and 4) social interaction. When examining the attributes of new literacies, one finds that they can build upon many of these areas of engagement, which suggests that they may be able to prime students for the more traditional literacies.

As one of the key factors in engagement, motivation seems to be an integral part of where reading instruction fails in classrooms, particularly as students reach adolescence. As Bronwyn Williams (2005) points out, students who are adept at reading and writing in out-of-school literacies, frequently feel more than a mere disconnect when faced with school reading requirements. The emphasis on traditional reading and writing skills moves some students from feeling competent and confident as readers and writers, feelings well-founded when examining their reading and writing habits outside of school, to struggling readers who don't understand how school texts relate to their lives. Guthrie and Wigfield (2000) defined motivation in terms of how relevant people perceive tasks in regards to their own personal needs, goals, beliefs and values. For students who do not see this relevance, the motivation to read does not exist. In fact, aside from lack of motivation, it frequently leads to how students perceived themselves as readers. During a study designed to look at motivation, Pitcher, Albright, DeLaney, Walker, Seunarinesingh, Mogge, Headley, Ridgeway, Peck, Hunt, and Dunston (2007) revised the Motivation to Read Profile to make it more applicable to adolescent readers. As part of their interview process, they discovered that several students who classified themselves as non-readers finding reading boring, actually spent a great deal of time reading outside of school. One student spent as much as 20 hours per week reading magazines, emails, articles, games and other non-school texts. But because these were not texts that they perceived valued by teachers and schools, the students viewed reading in a distasteful manner.

Other factors that lead to poor motivation in students is the lack of self-efficacy. O'Brien (2003) asserts that the instructional programs designed to identify and label students who are lacking in the reading areas of decoding, fluency and comprehension have led to intensely negative perceptions about students' abilities even as the programs strive to correct their reading deficiencies. Because students develop these feelings early in the education process, O'Brien further argues that these students begin to see failure as something beyond their control and to develop a learned helplessness. Others like Alvermann, Moon and Hagood (1999) argue that the school curriculum can lead to low motivation by stifling children's choice in reading and continually setting limits on reading, which can permanently affect how students see themselves as readers. Alvermann, Moon and Hagood (1999) also found in their research that the use of a variety of media including song lyrics and other texts encompassed by the new literacies in school-related reading can increase the interest of alliterate adolescents and can help students begin to see themselves as capable and engaged readers. O'Brien (2003) agrees with their findings. Using multiple texts, including media, increases student interest and success. Understanding students' use of popular media and incorporating it into the curriculum can alter the way students position themselves as incompetent to competent. O'Brien asserts that this change in self-efficacy increases the likelihood that students will view challenging tasks more positively and will persevere through future tasks.

To explore this idea, O'Brien (2003) conducted several case studies through a literacy lab that incorporated the use of various media and new literacy tools into reading and writing instruction. Greg, a tenth-grade student who entered the Literacy Lab feeling very negative about school and reading at a grade equivalent of 1.8, became excited about the media projects offered in the lab and began reading and writing more in his efforts to complete his projects. By the time he exited the program three years later, his reading level had gone up a modest two grade equivalent, but his self-perception of his abilities indicated that he believed he had increased about four grade equivalents. Another student, Andy, who was also reading at about the 2nd grade level, became so excited about webpage construction that his reading achievement increased about two grade levels in just four weeks. After studying these two students, plus many more like them, O'Brien found that their engagement in digital literacy allowed them to increase their fluency, to

develop strategies, and to make gains in self-efficacy, confidence, and self-regulation that they had not cultivated after years of struggling with traditional school texts. Motivational research has shown that students' perceptions about their abilities are among the most powerful aspects of motivation.

O'Brien (2003) examined his students' experiences according to the four key elements of attribution (a person's belief about causes of outcomes): ability, effort, task difficulty and strategies. Readers who struggle see ability as something beyond their control, and, as a result, they typically give up. In the media lab, they saw the technology as something they could control and improve their abilities with practice, so they continually tackled their challenges. Because the students were interested in their tasks, they exerted more effort, leading to a greater sense of competence. The more they tried, the greater their successes, leading to a repetition of the cycle. For students who see reading as too difficult a task, they will blame their lack of ability as the reason they cannot accomplish the task and will, therefore, put out less effort. Because the various forms of media and topics provided these students choice, they were more likely to see the task as something they could accomplish. Struggling readers are less likely to develop strategies than competent readers when they are working with texts. When working with media, the students did not have the same history with ability and task difficulty as they did with print texts. Therefore, they were less likely to attribute failure to these categories. Rather, they believed that they must develop strategies to help them work with the media. Because these students experienced success through the use of popular media, their perceptions about their abilities increased, which also increased their motivation.

Pitcher et al's study (2007) supported many of O'Brien's (2003) findings. Through her interviews she found that students are reading many hours on a daily basis through multiple texts and formats. She also found that students are excited and talk about what they read with peers. Her findings prompted her to include the use of multiple literacies within the classroom in her list of suggestions for reading instruction.

Guthrie, Alao and Rinehart (1997) continue to support motivation in terms of reading engagement. They argue that many middle school classes encourage competition, which lowers intrinsic motivation and literacy engagement. They posit that teachers need

to include real-world interactions within the classroom in order to set the stage for further learning. Real-world interactions increase motivation as students begin to form their own questions, questions they are more eager to read and find answers to. In today's world, new literacies encompass these real-world situations as they address the skills that students encounter daily.

According to Guthrie and Wigfield (2000), a second area of emphasis in the engagement model of reading is strategy use. O'Brien (2003) asserts that incorporating media into the classroom uses, and in many cases, enhances the same reading practices that are valued in print texts. When creating meaning from texts, Gee (2000) notes that it is important to remember that the human mind is social. While processing information, including reading, the mind seeks out patterns in order to create meaning. If the social culture teens are immersed in revolves around the media, their minds recognize the patterns created by these media, which creates a persuasive argument for incorporating these patterns within the classroom. O'Brien (2003) discovered several areas where such a transition between media and print literacies occurred. Students who used his lab engaged in critical reading, frequently assessing the source of the information and the credibility of the authors' motivation. They learned to draw inferences from texts, identifying the literal meaning as well as the subtext. As readers, they evaluated what the writers believed their audience to be. And they learned to be critical of the messages they were reading. All of these skills are as valuable in reading print as they are in responding to media, and for these students, they are skills they may not have otherwise practiced if left to print media alone.

The new literacies also address a critical area of the engagement model by supplying multiple avenues to assist struggling readers to grow in conceptual knowledge. For readers to have sufficient understanding of the texts they are reading, they must have knowledge of the ideas to connect the new information to. While this is essential to all readers, some research seems to indicate that some groups struggle more with this conceptual knowledge than others. Theresa Ann McGinnis (2007) used the concept of new literacies, which embraces the idea that students' literacies are connected to broader social, cultural and global contexts than just school, and inquiry-based projects to work with a very culturally diverse group of students. She found that the projects allowed her

students to use the various languages, writing systems and modes of meaning making that they used in their every day lives, allowing them to engage in projects that addressed their own interests and bridge the cultural differences. Because of limited resources, her students were forced to look beyond textbooks and find other sources of information. The multiple genres and modes they used, help them build their conceptual knowledge on the topics they were working with. Through this experience, McGinnis found multiple benefits. One student who had traditionally not engaged in school in previous years produced multiple in-depth projects about the information he read. McGinnis also discovered she could assess how well students learned new vocabulary and concepts, and that her students could discuss story structure and development as they were conducting their research. McGinnis's experiences with the new literacies enabled her to engage and motivate students of very diverse cultural backgrounds, many who were not fluent in English, when others who had relied on print text had not been able to.

William Brozo (2007) has seen similar results when studying boy readers. Brozo stresses the importance of finding boys' entry points to encourage them to develop into life-long readers. He points out that for many boys, their out-of-school literacies can do just this. In one of his case studies, Brozo talks about how a teacher built students conceptual knowledge of vocabulary by teaching them how to analyze related vocabulary in song lyrics. The teacher found that these students were then able to recognize many of the same words in other texts, and many obtained higher end-of-the-year test scores in vocabulary and comprehension. This combination with out-of-school literacies allowed striving boy readers to become more engaged in the classroom and traditional reading skills.

The final area of the engagement model revolves around social interaction (Guthrie & Wigfield, 2000). New literacies, particularly those defined by Web 2.0, revolve around this interaction. Through the inclusion of Web 2.0, teachers give students an opportunity to research and discuss their reading together. Blogs, wikis, social networks, and other web tools allow students to tag information of interest and post discussions and responses to each other's ideas and interpretations. This social interaction can serve to motivate students to interpret texts on a deeper level than they might otherwise have if they were just responding to a singular audience of the teacher.

The Theoretical Foundation of New Literacies

To fully appreciate the new literacies and why limiting them in schools is an area of concern, it is important to understand the strong roots they have in time-honored literacy theory. While new literacies themselves are new because they are born from technological advances, the underlying philosophy is not. This is true of many aspects of education. John Dewey, for example, while not focused on literacy specifically, promoted philosophies about schooling, in general, that argue for the inclusion of new literacies in the classroom.

For Dewey (1938), properly educating students meant a move away from performing a task simply because tradition dictates it and adults values it. The individual and his needs should be the central determiner of what and how each student is taught:

> The traditional scheme is, in essence, one of imposition from above and outside. It imposes adult standards, subject-matter, and methods upon those who are only growing slowly toward maturity. The gap is so great that the required subject-matter, the methods of learning and of behaving are foreign to the existing capacities of the young. They are beyond the reach of experience the young learners already possess. Consequently, they must be imposed; even though good teachers will use devices of art to cover up the imposition so as to relieve it of obviously brutal features. (Dewey, 1938, pp. 18-19)

Although Dewey wrote these words 70 years ago, it is apparent in today's schooling that this approach still exists within schools. While Dewey and his colleagues were facing their own technological revolution, the explosion of technology in today's world has made the gap Dewey spoke of even larger. As today's students immerse themselves into the digital world that surrounds them, the approach of most adults who are not familiar with the world of the Millennials seems completely foreign to them. And rather than forming an attitude that urges them to continue to learn, students begin to lose their natural tendencies to want to learn (Dewey, 1938). To Dewey, this means consequences greater than just a lack of preparation. "The pupil is actually robbed of native capacities which otherwise would enable him to cope with the circumstances that he meets in the course of his life" (p. 48). Because of this, it is the teacher's responsibility to look beyond the past, and in a sense, even the present, to prepare students for the world awaiting them.

Experiences in order to be educative must lead into an expanding world of subject-matter, a subject-matter of facts or information and of ideas. This condition is satisfied only as the educator views teaching and learning as a continuous process of reconstruction of experience. This condition in turn can be satisfied only as the educator has a long look ahead, and views every present experience as a moving force in influencing what future experiences will be. (Dewey, 1938, p.87)

If today's educators are truly looking ahead, they cannot avoid the reality the new literacies present. Reading and writing, skills that already look very different from those in the past, will present new challenges in the future. Ignoring this does a disservice to students who need to be equipped with the skills needed to critically work with the texts presented by technology. As Dewey (1899) recognized more than 100 years ago, "Knowledge is no longer an immobile solid; it has been liquefied. It is actively moving in all the currents of society itself" (in Dewey, 1959, p.47). Today, knowledge certainly has not solidified. Instead, it has, if possible, become even more liquefied, making it even more important reexamine what it means to be literate in today's society.

The debate over what it means to be literate in not a new one, just as the furor over how to handle controversial texts is not. Like Gee (2000) currently asserts, Bakhtin (1986) argued that language is learned though contextualized social interaction. Bakhtin believed that people of different generations, classes, professions, etc., have their own dialects that carry their own viewpoints, experiences and assumptions, which makes all language socially and personally situated. These various perspectives create gaps in language. As Anne Haas Dyson (2000) points out, this causes tension between children's thoughts and their community and social experiences. "If the resulting tensions become the occasion for public deliberation, learning to write may become linked to learning to participate in a complex community of differences" (Dyson, 2000, p.129). Thus, researchers like Dyson who adopt many of the stances of the new literacies look to Bakhtin to explain how children respond to the world around them as they work with language.

Bakhtin (1986) coined many terms that can help explain some of the philosophies underlying the new literacies. Polyglossia, a contestation of language, was used by

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Bakhtin to explain his belief that it is essential for people to free themselves from the tyranny and myths of one's own language. For today's youth, technologies have influenced much of their literacy practices. To fully free themselves of some of the myths that this language has created, students need to learn how to debunk the myths created by the language. They need to understand what they are actually saying. In addition to polyglossia, Bakhtin also used the term heteroglossia to describe how multiple voices engage in dialogue with text, in a sense celebrating diversity within texts. This diversity is exactly what occurs in the world of the Internet that is composed of hyperlinks, flashing images, and a cacophony of sounds. Diversity also allows the learner to play multiple roles, interacting "as both problem generators and problem solvers" (Langer, 2004, p.1046). Through this process, students can share personal knowledge, provide feedback to peers and build new meanings (Langer, 2004), creating a language environment as portrayed by Bakhtin, where language is what establishes reality rather than describes it (Bakhtin, 1986). Language is a collaborative process not an individual creation. This view of language reflects the reality of the electronic world. The advent of Web 2.0 has created a collaborative environment that has people sharing, arguing, and co-creating ideas that mirror the literacies of the new times. This reality reflects exactly what Bakhtin believed language to be.

Perhaps one of the most influential theories proposed by Bakhtin, however, that supports the philosophy of the new literacies is his speech genre theory. Bakhtin believed that people speak and write in a variety of genres, and that while their forms have very definite constructions, most of us do not even realize we are switching genres during the course of a conversation (1986). As Bakhtin points out, the possibilities of speech genres "are boundless because the various possibilities of human activity are inexhaustible, and because each sphere of activity contains an entire repertoire of speech genres that differentiate and grow as the particular sphere develops and becomes more concrete" (Bakhtin, 1986, p. 60). From this point of view, the technology that has created new forms of communication such as blogs, vlogs, wikis, etc., are simply emerging genres that have grown more complex as the relatively new sphere of the Internet "develops and becomes more concrete."

While the term speech genre may not seem to work with these new forms of communication because they are primarily written, Bakhtin included all genres, both written and spoken, in his theory. To understand language in any form is to understand life. "After all, language enters life through concrete utterances (which manifest language) and life enters language through concrete utterances as well" (Bakhtin, 1986, p. 63). In today's world, much of today's language exists because of the use of technology. A new form of language has emerged through the shortcut of instant messaging, and sites are often created collaboratively rather than individually. All of these utterances have impacted life, making them impossible to ignore. What the world is witnessing right now is the "restructuring and renewal of speech genres" (Bakhtin, 1986, p. 66) as humans are creating new platforms of communication. These new genres are not a new fad that will disappear in a few short years. They have changed the way humans communicate, the way humans read, the way humans write. Ignoring them neglects legitimate genres that need to be understood if we are to understand human communication. Yet, it is easy to understand why schools have a tendency to do this. Teachers who have less of an understanding of these new genres may feel unprepared to incorporate them into the curriculum.

> Many people who have an excellent command of a language often feel quite helpless in certain spheres of communication precisely because they do not have a practical command of the generic forms used in the given sphere. (Bakhtin, 1986, p. 80)

It is precisely this feeling of inadequacy that strengthens the need of incorporating new literacies in schools. Teachers need to learn how to become fluent in these new genres if they are to adequately prepare students for future emerging genres. Disregarding them because of personal insecurities does not give students the foundation they need to truly understand language, rather it leaves students feeling confused as to how they relate to the speech genres they do learn in school. New literacies are merely a portion of the speech genres students need to master, but they have as much significance as any other genre.

Vygotsky (1978) also believed that language is a process. Like Bakhtin (1986), he said that words do not merely express thoughts, but that thought exists because of words.

Vygotsky argued that humans are unique in that they are the only species that have created culture, and as a result, every child's development, including language, is influenced by the culture within which he is raised. It teaches children both what and how to think. If this is the case, then new literacies cannot be ignored. Today's popular culture permeates with technologies like iPods, instant messaging, blogs, cell phones, and so on. If their learning is influenced by these technologies, ignoring their existence ignores a major part of their learning hardware. To Vygotsky, teachers are mediators between the learner and the text (which reflects Leu, Kinzer, Coiro, and Cammack's. view that teachers have a new role). Higher mental processes occur when they are mediated by tools including symbols, material or another human's behavior. This makes new literacies an exciting opportunity for teachers in the classroom. Teachers can help their students build awareness and understanding of the text technologies, and they can activate higher mental processes by using the symbols associated with the new literacies.

Based upon Vygotsky's framework, Gordon Wells (2000) suggests six directions that should occur within the classroom:

1) The classroom is seen as a collaborative community.
2) Purposeful activities involve whole persons.
3) Activities are situated and unique.
4) Curriculum is a means, not an end.
5) Outcomes are both aimed for and emergent.
6) Activities must allow diversity and originality. (pp. 60-61)

New literacies provide a path for all of these. As previously discussed, the technologies that make up the new literacies are collaborative in nature. Users interact with each other, creating new knowledge bases that were not present before. This leads to the idea that activities should be purposeful and involve whole persons. As learners collaborate together on purposeful, authentic assignments, "learning is not simply the acquisition of isolated skills or items of information, but involves the whole person and contributes to the formation of an individual identity" (Wells, 2000, p. 61). Furthermore, through this collaboration, each learning opportunity becomes unique to the learners involved as they become co-creators of the experience. This means that while others may use similar technologies at a similar time, the exact learning experience cannot be replicated. This

also means that learning now becomes a process that students practice, rather than isolated pieces of knowledge. This is particularly important when working within the new literacy framework because simple facts are now easily attainable. It is now the working with the information that should become the focus of the learning experience. If the process becomes the focus and experiences rely on the individual, then outcomes of an activity can no longer be completely predicted because there is no way to know which direction the learners will take the activity. This indicates that rather than rigid tests to determine the learning that has taken place, educators must be prepared for diverse outcomes. According to new literacy theorist, these are the very skills needed to succeed in the future; they are also the processes valued by Vygotsky.

> Writing should be meaningful for children,…an intrinsic need should be aroused in them, and…writing should be incorporated into a task that is necessary and relevant for life. Only then can we be certain that it will develop not as a matter of hand and finger habits but as a really new and complex form of speech. (Vygotsky, 1978, p. 118).

> Rosenblatt's (1978) transactional theory reflects similar thinking. In fact,

Rosenblatt (2004) drew Vygotsky when discussing the "sense of word" (p. 1366). Rosenblatt argued that readers approached text not as blank slates, but rather as readers who have their own personal histories full of experiences that shape how they perceive what they read. Each time a reader approaches a text, the experience is unique, neither completely independent or dependent on personal experience.

> Human beings are always in transaction and in a reciprocal relationship with an environment, a context, a total situation. The classroom environment, or the atmosphere created by the teacher and students transacting with one another and the school setting, broadens out to include the whole institutional, social and cultural context. (p. 1388)

This reflects an awareness that learning is not isolated to the classroom. Students' entire experiences shape how they approach all texts, and today's students interact daily with technology that influences how they work in the classroom. The reading of technological texts does not transform literacy practices, nor does it make technology irrelevant. Rosenblatt's view suggests that literacy and its definition is constantly changing, just as

new literacies are constantly changing. New literacies simply bring Rosenblatt's theories into the 21st century because students still do not come to texts as blank slates, but their own personal histories now reflect the technologies that they constantly use.

The Hidden Curriculum

Despite the strong theoretical roots of new literacies, there still remain few instances of their use in schools. In part, this can be traced to the idea of the hidden curriculum that is present in schools. As Philip W. Jackson (2004) points out, schools rely heavily on standardization, resulting in "repetition, redundancy, and ritualistic action" (p. 95). While there are not specific lessons that explicitly teach these traits, students learn how to navigate the school rules early in their school careers. It is this conformity that underlies the hidden curriculum, a curriculum that students and teachers must be adept at if they want to have successful school experiences (Jackson, 2004). Because the new literacies rely on collaboration and the creation of new knowledge, this repetition and redundancy cannot occur. Teachers no longer hold all the power to the learning situation, violating one of the basic premises of the hidden curriculum. Rather, if the new literacies are embraced, the school routine will look very different on a day-to-day basis. For teachers and administrators who are masters at the hidden curriculum and comfortable with the division of power it offers, this can make incorporating the new literacies threatening. But perhaps even more importantly, this also threatens the community that surrounds the school because having mastered the hidden curriculum during their own educational experiences, parents and community members expect their own students to do this, as well.

Lankshear and Knobel (2003) make a similar argument in their discussion of the deep grammar of schooling. They point out that the teacher-directed learning and the emphasis on reading texts to gain knowledge make schools one of the last places the new literacies can be expected to be found. "School learning is learning for school; school as it always has been" (Lankshear and Knobel, 2003, p. 31). It is this deep grammar that makes it difficult for schools. And the difficulty will only get worse rather than better. New literacies and their practices will "gradually become embedded in everyday social practices" (p. 31), which means that the issues that schools are just now beginning to deal

with will become much more complex as schools are expected to negotiate the deeply ingrained grammar of schools and the increasing demands on preparing students for a technological world.

The complexity of this issue stems from the notion of in and out of school literacy practices. Because schools stress the importance of staying focused and engaged with teacher-driven lessons, many students learn through the hidden curriculum that disciplined attention is a desired quality. But the media students interact with does not operate within this framework (King & O'Brien, 2002). Once again, this creates a tension between how student are expected to act within school and the reality of the world they live in outside the school walls. By continuing to promote this dichotomy of literacies, academic literacies will continue to be a separate skill students are expected to be adept at, a skill that may not translate to the real world. There are, however, reasons that this dichotomy exists. As David Flinders (2004) points out, students and teachers who enact academic curriculum, which traditional print literacies are a part of, are also enacting cultural patterns of belief that reflect how society views school. Within these beliefs are different notions of language. Most of the language used in school is decontextualized, meaning that the language denotes only what the literal definition implies (Gee, 2000). While this use of language has historical roots within the school, Gee asserts that according to the multiliteracies philosophies set forth by the New London Group, this use of language is harmful, particularly to children of poverty and minority who have not been versed in a language that cannot be connected to their own personal experiences.

Yet this use of language continues to be a reality within schools because the grammar of schooling requires it to be. Students learn to expect it, even if they cannot make sense of it. Teachers expect students to learn it, and the community expects it to be taught. As a result, the curriculum and the definition of literacy become narrower and narrower as policies are put in place that ensure that these academic languages or school literacies are indeed taught. Tests are designed to measure this, and as a result, tests become the priority within schools (Eisner, 2004). So once again, the poor, less-privileged students suffer from this notion of language and school. "There is something deep in the culture and purposes of institutionalized education which means that, mostly, it works better for some groups of people than others" (Kalantzis & Cope, 2000, p. 118).

As long as society continues to promote the traditional structure of schools, which carries within it the hidden curriculum, overcoming the obstacles to adequately preparing students will be difficult, if not impossible.

For students, this raises serious issues about the future of their literacy opportunities. Historically, schools have asserted that they are the best place to teach the literacy skills needed to operate within society (Lankshear & Knobel, 2003). Yet, today schools do not do this. It is apparent that the face of literacy if very different today than simply reading from a text. As schools continue to neglect this reality or, at the most, approach it inadequately, students will not be equipped with the skills they need both today and in the future.

> One consequence of this is continued exclusion, failing, and negative labeling of very many students who, in fact, have abundant control of language uses needed for negotiating the spaces in which they will spend much of their time. More problematically, forms of curriculum irrelevance and associated exclusion locks many such students out of subsequent opportunities to acquire literacies involved in diverse practices they could choose to participate and excel in, given the option. (Lankshear & Knobel, 2003, p. 73)

Clearly, adhering to the hidden curriculum or the deep grammar of schooling leads to practices that are not in the best interest of many students. While adopting the new literacy stance can provide a possible answer for students who do not understand or conform to the language of academia, schools are frequently challenged by the attitudes and understanding of the public they serve. As a result, power struggles can ensue, which over the past several 100 years has repeatedly led to the censoring of texts.

The Changing Face of Technology and The Roots of Censorship

Censorship battles assault the public daily as newspapers spread the word about the latest novel challenges or recent issues surrounding the use of the Internet in public schools. While some may believe that this is a fairly new phenomenon, the fact is that censorship has occurred throughout history, particularly at the advent of new technology. To fully understand how this can be true, it is important to first understand what it means to censor.

When most people reflect on the meaning of censorship, they envision the removal, suppression or restricted circulation of literary, artistic or educational materials…on the grounds that they are morally or otherwise objectionable according to whatever standards the censor believes in. In a sense, it is one person or one group who has decided that because they don't like the information contained in the text or image that no one else should be exposed to the material either. According to Goodson (1997), there are different reasons that censors cite, most falling into one of three categories: claims to protect innocents from profanity and blasphemy; calls for materials that only relate to high culture; and moves for political correctness that tries to eliminate perceptions of racism, sexism and other isms. Whatever the motive, however, the truth is that censorship comes from people of all backgrounds and beliefs, and it often stems from fear of differences.

Censorship of any texts, whether print or digital carries many implications for teachers of the language arts. Instrumental to the English classroom is the need to think. Composing written responses, reacting to images, analyzing ideas in texts all rely on the ability to critically think about materials. However, rather than seeking to expand the knowledge base found in texts, censors seek to limit the materials students are exposed to. English teachers who experience censorship find that rather than being able to expose their students to a variety of ideas and viewpoints, they are only able to offer a narrow representation of the world, a representation that appeals only to the group that created the boundary. This reality serves as a stark contrast to the world that our founding fathers sought to create. Think about the fate that Ben Franklin or Thomas Paine might have suffered if censors banned many of their controversial ideas. It is the exposure to ideas different than our own that allow us to become critical thinkers and consumers. As students learn how to acquire knowledge, they must learn how to sift through information and make choices rationally and logically. Without the information to sift through, students are deprived of the ability to learn these skills.

A contrasting definition of censorship that many fail to think about is the censorship that often takes place through the selection of materials. It is through selection by teachers and administration that students gain access to the materials that allows them to build the skills previously mentioned. However, the fear of outside censorship is often

real enough that schools themselves try to eliminate the potential problem as they choose the materials for educating students. At times, a chilling effect exists that makes schools skittish because of previous censorship attempts. Rather than risk drawing more attention, teachers and schools will purposely select materials they believe will fit within the acceptable standards of the censors. Other times, teachers themselves choose the materials according to their own personal values and belief systems. And sometimes, the censorship takes place before the materials even make their way to the schools as publishers choose to cut controversial lines or passages from their selections in an effort to create textbooks that will appeal to a broad range of customers (DelFattore, 1994). Whichever the case may be, students in the language arts classrooms suffer because they are not exposed to the contrasting viewpoints that will help build the skills previously mentioned.

For some, the perceived risks of a text make this a sacrifice worth making. New ideas can be threatening, just as the advent of new technology can be. As technology begins to infiltrate a culture, becoming an everyday occurrence, the fear it brings begins to fade. Today, citizens around the world cannot imagine how to communicate without the alphabet. There was a time, however, when the alphabet did not exist. Before its arrival, humans relied on oral language to transmit knowledge and communicate (Bogdan, 1992b; McLuhan, 1964). The introduction of the alphabet changed how societies operated as sound became divorced from the communication process.

> If technology is introduced either from within or from without a culture, and if it gives new stress or ascendancy to one or another of our senses, the ratio among all of our senses is altered. We no longer feel the same, nor do our eyes and ears and other senses remain the same…The result is a break in the ratio among the senses, a kind of loss of identity. (McLuhan, 1964, p. 24)

While this passage was pulled from McLuhan's explanation of Plato's reaction to the alphabet and the diminishing value placed on oral tradition, it can also apply to today's dilemma many in society face as sound and images return to the forefront of communication, usurping much of the importance of print. Plato, one of the world's earliest censors, struggled with why and how written words, which he termed poetry, were educational (Bogdan, 1992b). To Plato, poetry represented illusion that had no place

in the reality he defined through the scientific method. Because of this, although he first allowed censored forms of poetry into the Republic, he later banned all forms of poetry (Bogdan, 1992b). Today, critics of social networking spaces like MySpace and Facebook pose similar arguments, as they question the alternate identities students create online. Also, like many modern objections, Plato distrusted the quality of knowledge and thinking that this new technology presented to learners:

> You who are the father of letters, from a paternal love of your own children have been led to attribute to them a quality which they cannot have; for this discovery of yours will create forgetfulness in the learners' souls, because they will not use their memories; they will trust to the external written characters and not remember of themselves…you give your disciples not truth, but only the semblance of truth; they will be hearers of many things and will have learned nothing; they will appear to be omniscient and will generally know nothing; they will be tiresome company, having the show of wisdom without the reality. (Plato, cited in McLuhan, 1964, p. 25)

Clearly, this sage who lived approximately 2400 years ago, shared many of the same fears that people possess today. Through his words, today's scholars can begin to understand the roots of censorship.

From the alphabet, manuscripts began to develop, shaping many of the literacy practices of the Middle Ages. Scribes were needed to create books, which meant that books were a fairly rare commodity. As a result, reading aloud and dictation became commonplace as people sought out ways to share the knowledge contained within books (McLuhan, 1964). Learning, while not oral in the strictest sense, was still shared aloud as the lack of available books led to few readers and multiple listeners (Chaytor, cited in McLuhuan, 1964). This new form of literacy soon met its own challenges with the invention of the printing press. Once again, new technology confronted the practices of literacy. With the capability of mass-producing books, reading aloud soon became obsolete, as readers could experience the text firsthand.

> The printed book was a new visual aid available to all students and it rendered the older education obsolete. The book was literally a teaching machine where the manuscript was a crude teaching tool only. (McLuhan, 1964, pp.144-45)

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This sentiment echoes that of today's world. With the advent of Web 2.0, many of the tools still used in schools have become crude renderings of what students actually need to succeed. And just as the transition from print to digital poses problems to many educators today, so did the transition from manuscript to print proffer similar dilemmas. At this time, the mass production of books, many argued, led to a homogeneity that split the heart and mind (McLuhan, 1964). As books became more and more common, Plato's early fears appeared once again. How would the accessibility of new ideas, ideas that could not be as easily controlled, affect society?

Typically, as the world is experiencing today, the first impulse was to restrict access. England's Parliament returned to an idea that could be traced back to the Roman era: the licensing of books (Milton, 1929). Authors of this time, including John Milton, argued against this form of censorship. Much of Milton's argument fit within the gap and continuum theories described by Bogdan (1992a & b) that will be used in this study. Milton recognized the viewpoint currently held by continuum theorists in that he knew that books can carry influence:

> I deny not, but that it is of greatest concernment in the church and commonwealth, to have a vigilant eye on how books demean themselves, as well as men…for books are not absolutely dead things, but do contain a progeny of life in them to be as active as that soul was whose progeny they are. (Milton, 1929, p. 86)

Books, as well as all texts, do contain messages in the spirit of their creators, and thus, the writers of texts can influence readers.

In Milton's (1929) view, however, this is not a strong enough argument for the licensing of books. To him, it is an assault on God: "He who destroys a good book, kills reason itself, kills the image of God, as it were, in the eye" (p.86). In Milton's view, societies that follow the teachings of God do have the ability to achieve the gap, to step back and determine through reason the intent behind the works themselves. To illustrate his argument, Milton traces historical instances of censorship, pointing out that the societies that promoted licensure were "the most anti-christian council." Indeed, Milton uses the story of Dionysius Alexandrinus, a godly man who was challenged about the books he was reading. Once challenged, Alexandrinus fell into a great internal debate, wondering if he was offending God by reading the contested books. He soon received his

answer in a vision sent by God: " Read any books whatever come to thy hands, for thou art sufficient both to judge aright, and to examine each manner" (p. 93).

It is interesting that within Milton's (1929) arguments there appears to be a seed that also recognizes the censorship of new literacies that is to come hundreds of years later. For Milton recognizes that censoring of books begins to blur the line of where censorship will end. He points out that if one were to follow the logic of censors that music, dancing, clothing, "all the mixed conversation of our youth" (p. 99) will soon have to also be censored because evil can exist everywhere in the world. This very existence, Milton (1929) argues, is why God gave humans reason, the ability to step back and achieve a gap, to make judgments for themselves. "They are not skilful considerers of human things, who imagine to remove sin by removing the matter of sin…when this is done, yet the sin remains entire" (p. 100). As Milton points out, removing objects of lust cannot remove the lust itself. And, he maintains that sin and virtue must co-exist, so by removing all sin, one also removes all virtue. To Milton (1929), it is the gap that creates learning, not the mindless following of texts that the continuum suggests: "Where there is much desire to learn, there of necessity will be much arguing, much writing, many opinions; for opinion in good men is but knowledge in the making" (pp. 109-10).

The value and diversity of opinion also became integral to Ben Franklin's (1962) answer to would-be censors nearly 100 year later. In a budding democracy, the newspaper became an important communication tool, keeping the citizens of the United States informed. Advertisements also began to appear, and like other areas of print, they brought controversy. It was through an objection over an advertisement that Franklin responded to the censorship issue. Franklin's apology outlined to the readers of his paper why printers had the responsibility to print texts of varying opinions: "The Opinions of Men are almost as various as their Faces" (p.76). Throughout all ten of the arguments presented in his apology, one can trace the importance of opinion, particularly the idea that printers do not agree with everything they print. Yet, to Franklin (1962), this is the very reason printers should continue to share diverse ideas. If printers were to only print what they believed, the world would only have one set of opinions from which to form their own.

A world guided by one opinion cannot exist as a democracy because democracies rely on the input of all its citizens if they are to function properly. Absence of diverse ideas leads to forms of governance that America's settlers sought to escape. Indeed, Alexis de Tocqueville (1962) stressed that freedom of press not only shaped political opinions, but the face of cultural practices, as well. The censoring of the press in democratic societies, de Tocqueville claimed, is dangerous and absurd:

> When the right of every citizen to co-operate in the government of society is acknowledged, every citizen must be presumed to possess the power of discriminating between the different opinions of his contemporaries, and of appreciating the different facts from which inferences may be drawn. (p.112)

Echoing Milton's arguments, de Tocqueville (1962) asserted that good and evil must exist together if freedom is to survive. Today, the Internet is frequently blamed as the root of evil, leading to a disassociation from violence and a general decline in communication. However, through blogs, online newspapers, articles, and other sites, people now have access to vast quantities of information and opinions. And while this immense resource creates fear in many, it also continues to push the ideas of its users in multiple directions, assuring that citizens can continue to educate themselves in ways that will ensure the continuance of democracy and freedom. If there are any questions of the factuality of this, one must only look to examples like China where bloggers and bulletin board operators must register with the government if they want to escape fines and the shutting down of sites (Watts, 2005).

The fear the latest technology evokes becomes more understandable, however, when one considers the shift in focus that has occurred over the last 150 to 200 years. The farther Americans move away from the events that led to the building and maintenance of a democracy, the more they concentrate on protecting youth. This sheltering of youth first became apparent in the 1960s when Mel and Norma Gabler challenged the Texas State Board of Education's selection of statewide-adopted textbooks (Hefley, 1976). During a strenuous campaign to remove textbooks they deemed objectionable, Mel Gabler stated, "The parents of the children of America have a right to a public school system where the instruction is based upon the truth" (Hefley, 1976, p.26). At no time, did Gabler question

whether or not his truth was the truth of other parents. Neither did his followers. And the Gablers drew quite a following.

In the following decade, residents of Charleston, West Virginia, posed a similar challenge to their school board. After seeking guidance from the Gablers, a crusade began to remove textbooks from their schools as censors claimed that the books were "filthy, trashy, disgusting, one-sidedly in favor of blacks, and unpatriotic" (Moffett, 1989, p. 14). What followed was mass hysteria, leading to plans of bombing the cars of children whose parents defied the boycott, harassment of school teachers, and even the arrest of the superintendent and two board members for contributing to the delinquency of minors (Moffett, 1989). Unfortunately, in this situation, the censors prevailed, creating guidelines for textbook adoption that including the sentence, "Textbooks must not intrude into the privacy of students' homes by asking personal questions about interfeelings [sic] or behavior of themselves or parents" (p. 23). With this small victory, censorship cases began to grow, with schools reporting increases as large as 37% in one year (Moffett, 1989). It was this increase that paved the way for the censors to expand their efforts to other areas, including today's Internet technology because as Milton warned, the logic of censors, if allowed, will continue to spread beyond the pages of books.

The attempt to restrict ideas in formats other than print is not new to Web 2.0. In his 1898 essay "What is Art," Leo Tolstoy (1964) contrasted the value of art that reflects popular religious perceptions with art that presented outdated ideas:

> And such art has always been highly valued and encouraged, while art transmitting feelings already outlived, flowing from the antiquated religious perceptions of a former age, has always been condemned and despised. All the rest of art transmitting those most diverse feelings by means of which people commune with one another was not condemned and was tolerated if only it did not transmit feelings contrary to religious perceptions. (p. 441)

For Tolstoy (1964), this condemnation was not an evil because he believed religion provided guidance toward progress. He challenged those who replaced religious art with art "which aimed merely at giving pleasure" (p. 443). This foreshadows many of the arguments made by today's censors who feel that students should not be exposed to anything that does not promote high culture (Goodson, 1997). Implied within Tolstoy's

explanation of why art is condemned is also the notion of the danger of transmitting ideas not held by popular society. Once again, there is the echo of fear that Milton (1929), Franklin (1962), and de Tocqueville (1962) warned against.

But just like the hysteria of the West Virginia textbook case, fear can lead to irrational reactions. While textbooks and novels in schools are often the targets of these fears, many times it's the reading that comes from out-of-school media that causes the most concern. Consider the frenzy created by Senator Joe McCarthy in the 1940s and 50s. The United States was so fearful of Communist ideas that films and the artists involved in their productions were banned from theaters. This was not the first form of popular culture targeted, however. In the late 1800s the dime novel burst onto the scene making novels accessible to everyone, rather than just the wealthier public (Jones, 2002). While these novels appealed to the youth, many adults objected to the lessons they felt youth were learning from them. Religious groups accused them of being Satan's agent that worked toward "destroying the youth" (Jones, 2002, p.134). Other groups, including teachers, librarians and doctors claimed the books were guilty of "overexciting youthful appetites," resulting in physical and behavioral illnesses (Jones, 2002, p. 134). Pulp magazines and violent movies gradually took over as the objects of concern. This is not unlike the fear the public currently has in regards to the Internet. Scared by the rash of school violence and online predators, representatives and senators are scrambling to enact legislations that will effectively bar student access to Internet sites (McCullagh, 2006).

While these actions may be alarming, they are easier to understand when placed within the context of the historical events that have preceded them. Considering the concept of the rhetorical situation can also aid in the comprehension of why these events are occurring. As Lloyd Bitzer (1968) explains there can be no instances of rhetoric without the situation that invites the discussion to occur. For schools today, as well as in the past, the rise in technology has lead to a situation of fear, a situation where there is disagreement as to how to best approach Web 2.0 in the classroom. This is exactly the type of situation that invites rhetoric as "a particular discourse comes into existence because of some specific condition or situation which invites utterance" (Bitzer, 1968, p. 4). The problem of whether or not to include the new literacies in the classroom invites such discussion. The realization that such a situation exists is not, however, enough to

fully understand how it relates to the current debate. To do this, one must identify the three components of a rhetorical situation and the roles they play: the exigence, the audience, and the constraints (Bitzer, 1968).

An exigence "is an imperfection marked by urgency…something waiting to be done" (Bitzer, 1968, p. 6). Although not all exigences are rhetorical, meaning they can be modified, the case of new literacies and the school curriculum is. As today's technology races faster and faster, changing daily, the need to decide how to address them within the school becomes more and more urgent if schools are to adequately prepare students for the future. But this is not a question for schools alone. If it were, the situation would cease to be rhetorical. As in all rhetorical situations, however, schools have an audience, a local culture, that schools must be cognizant of as they create their curriculums. With this audience comes constraint. For the public the schools serve, most often these constraints come in the form of the fear described earlier in this section. There is a belief that the Internet and its associated sites has led to increased school violence and student vulnerability. Schools as rhetors must recognize their audience and the constraints that come with it if they are to successfully navigate the boundaries they must work within. Because it is possible for this situation to change, schools find themselves in a rhetorical situation, but the change must come from the audience, which serves as a mediator of change (Bitzer, 1968). As has been the case historically, before the change can occur, censorship, or the removal of the questionable items, often comes first. When threatened, humans seek to banish the object of alarm, and this is exactly what is happening in schools as a response to the new literacies. Schools must continue to convey the message of the importance of new literacies, however, if they hope to convince the public to mediate the change in literacy instruction.

Limiting the New Literacies in Schools

As history has shown us, as new technologies become routine in society, the fear they bring with them fades. In the meantime, however, students' educational experiences suffer as communities fear opinions different than their own. But, as John Stuart Mill (1962) argued almost 150 years ago, this silencing of opinions is harmful in ways we may not be able to imagine: "We can never be sure that the opinion we are endeavoring to

stifle is a false opinion; and if we were sure, stifling it would be evil still" (p. 6). By its very openness, the Internet beckons to its users to make mistakes from time to time. It's difficult to always make valid judgments as to the truth of information. The ease of discovering information that is shocking frightens many parents. Yet, the Internet will never cease to exist, so students need to be equipped with the skills needed to discuss and critique the information. The reality of today's schools was created more than 100 years ago, after citizens had already overcome fears of earlier technologies. From time to time, new skirmishes erupt surrounding technological advances, but today's world is facing change in a magnitude that has not been seen since the Industrial Revolution. With schools populated by digital natives but designed by digital immigrants the vision of what students actually need becomes skewed. There is also the change factor. People of different generations often feel differently about change. For people who are comfortable with and feel part of an established order and value system, people like teachers, politicians, clergy and parents, change often triggers a need for more control (Jones, 2002). Young people and others who feel more future-oriented see change as exciting. "The more a medium threatens our control, the more we'll expect to see danger in it" (Jones, 2002, p.149). This is where the disconnect comes into play as the necessity of redefining literacy contrasts with the fears of those responsible for making sure students become literate.

As the community remains fearful, failing to recognize the emergence of new literacy skills, the perception of declining student ability sparks many public debates (A. Luke, 2002). Teachers claim that the increased usage of computers, video games and television have lead to disengagement from social interactions. Print deficits are also blamed on the increased engagement in digital technologies as teachers maintain that this time displaces practice in traditional reading and writing (A. Luke, 2002). These beliefs, combined with the lack of professional development and resources for teachers who are willing to expand the literacy canon, guarantee the limitation of new literacy texts through the simple process of text selection (A. Luke, 2002). The use of filters introduces the other approach that censors traditionally use. Frequently, this attempt to limit access to online texts does not work because, as John Perry Barlow believes, "Netspace cannot be controlled in that way. The more elaborate the filter, the more elaborate will be the

search to find ways around it, and the more powerful these resistances become"
(Lankshear & Knobel, p. 61, 2003). And just as students seek out books they are told not
to read, they also seek out ways to access online content blocked within schools.

While examples of schools attempts to limit the use of new literacies are
numerous (e.g. Hudson, 2000; Vara, 2005; McCullagh, 2006; Witte, 2007), the blame
cannot be placed at schools' doors alone. Much of this phenomenon finds its roots in the
notion of in-school and out-of-school literacies (Alvermann & Eakle, 2007). Because
students immerse themselves in popular culture and technology and the literacies that
accompany them, students refuse to recognize this separation, bringing their own literacy
experiences with them as they enter the school environment. This leads to a blurring of
boundaries, despite the attempts to impose them (Alvermann & Eakle, 2007).
Dichotomies like in- and out-of-school literacies and generational and global literacies
may be more harmful than not. For many, the new literacies are perceived as adolescent
literacies because this is the generation that have developed and nurtured this new form
of communication. Hagood, Stevens and Reinking (2002) argue that this distinction
should not be made. Rather, they assert that all generations must learn the skills
associated with the new literacies in order to operate successfully within contemporary
society.

> So, rather than categorize which literacies belong to which age group, generation,
> or social class, thereby allowing people to dismiss one another's literacy practices
> based on potentially divisive differences, we propose the need to examine
> contemporary literacies across categories. (Hagood, Stevens & Reinking, 2002, p.
> 80)

Contemporary literacies differ from traditional literacies in that they merge sounds,
symbols, and even kinesthetics with print literacies. In a sense, the world is returning to
many of the forms of communication favored hundreds of years ago. If schools neglect to
integrate all forms of semiotic modes, as has been argued repeatedly in this chapter,
students are deprived of areas of essential growth:

> The single, exclusive and intensive focus on written language has dampened the
> full development of all kinds of human potentials, through all the sensorial

possibilities of human bodies, in all kinds of respects, cognitively, and affectively, in two- and three-dimensional representation. (Kress, 2000).

While neglecting these individual needs should be an important concern, what may be even more vital to society is the fact that by creating policies that emphasize a return to basic skills, schools are not producing students who can meet the demands created by all sectors of economic growth (A. Luke, 2002). Part of this problem can be traced to a world that still maintains the mindset associated with an industrial world. In a world that emphasizes capitalism, past value has been created through the scarcity of materials (Barlow in Tunbridge, 1995). This does not hold true with information, which is the foundation that the digital world has been created on. For information to be truly valuable, it must be shared and built upon collaboratively. If the shift is going to be made from scarcity to familiarity, there needs to be a change of mindsets. Students need to be allowed to learn through doing and experimentation. If the boundaries remain where they currently rest in most schools, this will not occur.

We should be wary of administrations and political 'visions' that burden schools with fears of students accessing vicious websites while gutting the curriculum of the kinds of learning opportunities that look beyond 'values' like efficiency, performativity and cost-benefit maximization…Such 'outsider' logic will always privilege 'gross filters' over educational opportunities for young people to learn how and why to find distasteful things distasteful (to the extent that they truly are). (Lankshear and Knobel, 2003, p. 77)

If schools and society are to find a way to negotiate the boundaries enacted upon schools, there needs to be a move away from dichotomies and capitalistic mindsets. As Dewey (1959) explained schools should exist to help keep societies going. This means that everyone should work together "along common lines, in a common spirit, and with reference to common aims" (p. 39). With the apparent shift in global economy toward digital commodities, this means that communities and schools must re-examine what skills will be needed in the future and how students can be assured of gaining these skills without the limitations currently assaulting them. Relying on the past cannot shape the future. "If we keep asking the same questions, we'll keep getting the same

answers…Caught in our repetitive arguments, we forget that we've been here before"
(Jones, 2002, p.43).

A Summary of the Issues

To fully appreciate why the limits of using new literacies in school must be understood, it is important to recognize the changing face of this world and how this will shape the demands placed upon learners. With the merging of technology and literacy, schools are faced with challenges that are very different from, while at the same time very similar to, the evolution of literacy from the time that precedes Plato. Technology, whether it's the alphabet or the Internet, has always impacted education. As a result, society often reacts with fear. Yet, what has remained constant, is the need for citizens to learn how to work with the new tools technology provides.

This study seeks to explore how today's educators negotiate the current boundaries placed upon schools by their communities as they respect the expectations of society, yet seek to prepare students for a very different world.

CHAPTER 3 - Methodology

This study was designed to explore the rhetorical boundaries schools must work within when incorporating the new literacies into the language arts curriculum. Despite research that points to the benefits of adopting this philosophical stance and integrating many of the new technologies into the curriculum, schools frequently find that their local cultures impose constraints on how they can be used in the classroom. To help define these boundaries, explore the mindsets that create them, and understand how educators balance the boundaries with their students' needs, this study was qualitative in nature, using interviews to gather information. This chapter has been organized into six sections: research design, selection of sites, selection of participants, researcher's role, data collection, data analysis and summary.

To keep the study focused on this purpose, interview questions were designed around the previously mentioned research questions:

Primary Research Question:

How do secondary schools negotiate the tensions created at the rhetorical boundaries of their local cultures by the content and emerging genres of new literacies pedagogy?

Subsidiary Research Questions:

1. How do secondary schools identify the rhetorical boundaries they must operate within?
2. What attributes of the emerging genres do secondary schools see as beneficial in terms of classroom instruction?
3. How are the rhetorical boundaries influenced by geographic location (i.e. rural, suburban and urban)?

I gathered the information to answer these questions through interviews with 34 individuals in three Midwestern school districts. These interviews, along with observation notes were then coded and analyzed to arrive at the study's conclusions.

Research Design

While research has been conducted on the value of new literacies and on the censorship of print texts, little is known about the combination of these two issues. As Strauss and Corbin (1990) point out, this quality of the unknown make qualitative research a solid approach to identifying and understanding the issues that lay within the boundaries teachers face when using new literacies. In fact, because of the multiple genres that make up the new literacies and the wide array of opinions with the local cultures that schools work within, qualitative research is the best approach because it allows the researcher to dig deeper into the questions of interest and is "not constrained by predetermined categories of analysis" (Patton, 1990, p. 165). There are many options available under the umbrella of qualitative research, so after much thought I designed the study using grounded theory based on interviews with individuals who have participated in the decision-making process in regards to the literacy curriculum. The homogeneity of the group to be interviewed also points to the use of grounded theory (Creswell, 2006). Additionally, I chose this approach for many of the same reasons that Anselm Strauss, co-developer of grounded theory, created the theory:

> (a) the need to get out in the field, if one wants to understand what is going on; (b) the importance of theory, grounded in reality, to the development of the discipline; (c) the nature of experience and undergoing as continually evolving; (d) the active role of persons in shaping the world they live in; (e) an emphasis on change and process, and the variability and complexity of life; and (f) the interrelationships among conditions, meaning, and action. (Strauss and Corbin, 1990, pp. 24-25)

Although all of these are important when researching how educators negotiate the boundaries imposed by their local cultures when using new literacies in school, the last three are particularly significant. New literacies and the theories that support a shift in viewpoint in literacy education rely heavily on active meaning making by the people

involved in their use and creation, as well as the meaning assigned to them by key decision makers. As previously mentioned, they are also difficult to define because technology and the skills needed to be literate in society are constantly changing. These two factors combined with the relationship between the increasing need to be fluent in new literacies and the fear that communities have of these technologies, made grounded theory a viable avenue of exploring the issues surrounding their use in schools.

I relied on interviews because I was interested in gaining a subjective understanding of how educators recognize and negotiate the new boundaries imposed upon them as the genres of new literacies emerge (Seidman, 1991). After developing the interview protocol and conducting a pilot study consisting of a veteran English teacher, a newly-established English teacher and a curriculum specialist, I was able to refine the protocol to ensure the questions I asked gathered the information I sought (Strauss and Corbin, 1990; Creswell, 2006).

Through interviews, I explored emerging themes through the use of grounded theory, as well as the question of how schools negotiate the rhetorical boundaries using the gap and continuum theories Deanne Bogdan (1992a & b) has applied to the censorship of traditional texts. (see Data Analysis section for further explanation of these theories.) Newspaper articles and the use of firewalls in schools suggest that the public believes in the continuum theory, an idea that the "aesthetic immediacy and irresistibility are seen as conditions of a…chain reaction from author to text to respondent, which begins with the divine inspiration of the poet and ends with the passive reaction of the respondent" (Bogdan, 1992a, p. 11). In other words, students are unable to adequately separate themselves from the information discovered on the Internet, making them vulnerable to the messages they receive. The study allowed me to explore which districts do establish restrictions that suggest they subscribe to the continuum theory, as well as examine which lean toward the gap theory, the idea that through critical analysis, students can learn to make judgments about texts from a more objective stance (Bogdan, 1992a).

Selection of Sites

Due to varying levels of access to technology, I was interested in whether or not demographics influence where the boundaries are drawn in regards to the new literacies. To explore this idea, three demographically different school districts were selected for the study. I also wondered whether the age of the student influences where the boundaries are set. Therefore, I had each district office assist in the selection of a middle and high school to contact for the study.

Initial contact of selected sites (Witt City, Vickville and Skillen) occurred via email to superintendents and assistant superintendents. Upon an explanation of the study, each administrator provided me with a list of individuals who fit the roles of interest. Although I was uncertain how my request would be received, I was pleasantly surprised by the interest each district had in the study, an indication that while schools may not be where they need to be in regards to new literacies and the incorporation of technology, they are definitely interested in learning more about the phenomenon.

School District # 1: Witt City Unified School District

District environment

Witt City is a moderately sized suburban district made up of 18 schools, including three middle schools, two high schools and one alternative school. Nearly 9,000 students attend their schools, and more than 1,300 teachers, administrators and support staff work within the district. Situated between two urban centers, Witt City, while technically suburban, has more of the feel of its urban neighbors. According to the state district report card, 46.2% of its students qualify for free or reduced lunch, and its student body is primarily composed of white and black students: 48.1% are white (a number that has been steadily declining) and 41.1% are African American. While only 6.7% are Hispanic, this number has been growing over the last few years. In regards to Adequate Yearly Progress, the district has not met standards in reading in the past six years, and has only met standards in math once in the past six years. Complicating matters, the district also did not meet graduation rate expectations during the past school year. Despite these obstacles, however, the district has accomplished many positive steps in educating their children. In 2008, 95.3% of the students regularly attended school, which is up slightly

over previous years and slightly higher than the state average. Despite the fact that the district did not meet expected graduation rates, 83.5% of its students did graduate from high school in 2008. In addition, two students were named as 2007 National Merit semifinalists, and ten have been chosen as finalists in the past seven years. Both high schools also have debate and forensic squads ranked in the top 50 across the nation.

In terms of technology, the district prides itself on its commitment to keep up-to-date with advances. It supports both Mac and PC platforms, and the technology department offers technology grants for teachers who have projects they wish to fund. In the past year, the district has worked to revamp the infrastructure, tightening areas it felt allowed too many security breaches. Its current technology plan focuses on student learning, teacher preparation, administration and data management, resource distribution and technical support.

Community demographics

Although the school population suggests that Witt City is made up of almost an even distribution of white and black citizens, this is not quite the case. Witt City's web page says that seventy-eight percent of its approximately 28,000 citizens are white, and 16.9% are black, leaving Hispanics and other races to make up the rest of the population, indicating that much of the white population is aging, much like the appearance of the community itself. Similar to the school demographics, however, is economic status of the community. The median household income is just more than $42,000 per year, which is above poverty level, but certainly does not support a lifestyle deemed comfortable by most of middle-class America. Also significant to understanding this community is the fact that 75% of the housing is valued at less than $100,000.

School District #2: Vickville Unified School District

District environment

Vickville, with 13 schools including one junior high, one high school and one alternative school, is markedly different from Witt City. With the nearest urban center more than two hours away, Vickville is a very rural district. While Witt City has approximately 46% of its students who are economically disadvantaged, according to the

state's education department, Vickville surpasses this number with 71.42% who are. Another striking difference is in the area of diversity. In Witt City, nearly half the population is black, but only 2.28% of the students in Vickville are black. Yet, 69.26% are Hispanic, which is a significantly higher portion than the state's average of 11.9%. In regards to state testing, 31.6% of Vickville's juniors fell below "Meets Standards" on the state reading assessment, a percentage that was higher than the state's average of 19%. On the math assessment, 43.5% of juniors failed to "Meet Standard." The 2008 attendance rate for this district was 91.4% and the 2007 graduation rate was 92%, a number slightly higher than the state average.

Despite the district's financial struggles, district administrators say Vickville values technology and is committed to finding ways to fund its integration. One challenge posed, however, comes from the infrastructure of the buildings themselves. The middle school building is older, providing unique challenges to bringing the wiring up-to-date. And although the high school is relatively new, it was built before many of today's technologies were developed. The structure of the building has made wireless access extremely difficult.

Community Demographics

Made up of nearly 26,000 residents, the population of Vickville is not reflective of the school population. Although the majority in schools are Hispanic, the community's web site shows demographics that state 51.5 of the town's residents are white, with 42.9% Hispanic. Of the minority residents, 25.2% are foreign born. In Vickville, the median household income falls just short of $43,000, a figure very similar to Witt City's.

School District #3: Skillen Unified School District

District environment

Skillen educates students on a smaller scale than both Witt City and Vickville. With only six schools in the entire district, all students (just over 2500) in Skillen attend the same middle school and high school. At 40.45%, a figure taken from the state's education department, economic hardship is significantly less pronounced in Skillen than in Vickvile, but it is relatively close to Witt City's. It is also very homogeneous, with

87.24% of its citizens classified as white with the remaining students fairly equally split among African Americans, Hispanics and other races. In terms of state assessments, Skillen is a Title I district that has been on improvement for the past three years. The district has made progress, however, as the 29.2% of juniors scoring below "Meets Standards" on the 2007 state reading assessment dropped to 17% in 2008. Math made similar strides, as juniors scoring below "Meets Standards" fell from 32.1% in 2007 to 17.1% in 1008. The 2008 attendance rate for this district was 93.9% and the 2007 graduation rate was 86.5%.

Skillen has made a commitment to increasing technology in the classroom. This includes LCD projectors in all classrooms and SMART boards in the elementary classrooms and wireless air slates in the secondary classrooms. According to their curriculum initiatives, they also allow video streaming and Internet access through these tools.

Community Demographics

Skillen, made up of approximately 13,000 people, is about half the size of the previous communities. Its median income of just over $38,500 is also lower than that of Vickville and Witt City. The racial make-up of the community is very similar to the district's with 90.6% of its residents classified as white.

Selection of Participants

The determination of interview candidates was based upon the individual's role within the school system. At the district level, three people were interviewed: the curriculum director, the technology director and a literacy coach. As the ultimate decision maker for the language arts curriculum, the curriculum director's perspective on new literacies and their use in school plays a large role on whether or not they are included in schools. Do curriculum directors value the integration of technologies and their accompanying literacies enough to include them in curriculum? Similarly, technology directors also have influence on whether or not the technologies are used in classrooms because it is the decisions made by these people that determine whether or not the technology is available. Technology directors also work to install and monitor many of the firewalls that are put into place within districts, which is very important in

determining the accessibility of Internet sites. Another interesting perspective is that of the literacy coach. Literacy coaches are a relatively new phenomenon as schools have become more and more focused on making sure students are literate. Once again, though, the question arises about what these schools view as literate. Do these specialists who work with language arts teachers view literacies in terms of new literacies and, as a result, work with their teachers on ways to incorporate this philosophy within in the classroom? Or are these positions solely focused on the traditional view of literacy that has been previously discussed?

Although much of the atmosphere of an educational system is set at the district level, the individuals at each school make the day-to-day decisions. It is these individuals who are often the ultimate determiners about whether or not philosophies like those adopted by new literacy advocates are apparent in schools. Because the principal serves as a liaison between upper administration and schools, and between the community and schools, the principal is a key player in determining how the limits of new literacies are defined. Similarly, lead English teachers frequently set the tone of what is expected and acceptable in literacy instruction. Other teachers follow their example, viewing their experience as a guide to what the community expects to happen in the classroom. In some schools, however, English teachers do not always take the same approach to literacy instruction. Departments that are generally more conservative, can feature progressive teachers, while progressive departments can also feature more traditionalists. This is where the interview with new English teachers can be valuable. Do more established teachers have more latitude in their use of new literacies? Are newer teachers restricted more than their colleagues? Is there a need to establish a trust with the community before venturing into less chartered territory? The final person of interest was the librarian. Although librarians do not directly instruct the literacies, they do serve as a resource and many teachers work side by side with them. Librarians are seeing more and more changes as technology quickly advances. What role do they see technology playing in terms of literacy instruction? In terms of how students use these technologies in regards to literacy practices?

This selection method would have resulted in a total of 33 interviews, 24 at the school level and nine at the district level. However, as expected, the numbers were

altered to reflect the availability of participants in each district. Only Skillen had the expected 11 participants. Upon agreement to participate in the study, I discovered that Witt City and Vickville both had alternative schools, so I broadened the study to include a principal and teacher from those schools. Witt City had willing participants in each selected role, bringing the total interviews there to 13. Only Vickville could not provide each of the desired roles. At the high school level, there were no new English teachers; the middle school did not have an available librarian, and the English teacher I was to speak to at the alternative school became ill during my visit to Vickville. All total, I interviewed 10 individuals in this district. Combined, I conducted 34 interviews, well above the minimum of 20 interviews desired in grounded theory (Creswell, 2006). See Appendix A for a list of all the interview participants.

Researcher's Role

Although I worked daily in a language arts classroom for nine years and hold my own biases in regards to using new literacies within the classroom, my focus in this study was to step back from my own practices in order to understand how educators identify and work within their limitations when working with the new literacies. To help establish this distance, I selected districts that fit the demographic criteria I had established but were not a part of my own professional experiences. Theoretical sensitivity is an important part of the study, however. According to Strauss and Corbin (1990), "theoretical sensitivity refers to the attribute of having insight, the ability to give meaning to data, the capacity to understand, capability to separate the pertinent from that which isn't" (p. 42). In addition to a familiarity with the literature, my experience as a language arts teacher in a public school setting allowed me to acquire "an understanding of how things work in that field, and why, and what will happen there under certain conditions" (Strauss and Corbin, 1990, p. 42). This insight gave me a better understanding of the data collected in the interviews, providing a framework within which to work when looking for common themes (Strauss and Corbin, 1990).

Data Collection

Because the intent of the study was to understand how educators identify and negotiate the rhetorical boundaries they are expected to work within when addressing the emerging genres of the new literacies, the data collected were qualitative in nature. Once I received IRB approval (see Appendix B), I conducted one-on-one interviews in August and September of 2008. Interviews were audio-taped in order to ensure accuracy of collection, and I took notes during the interview process in order to capture the body language that accompanied the answers.

Interviews

In-depth, one-on-one interviews helped me to distinguish where educators identify their boundaries in regards to the multiple genres presented by the new literacies. Because a solid interview protocol was critical in assuring that the interviews elicit the information I desired, multiple drafts were written prior to the pilot study. Questions were designed to pinpoint the changes educators have seen in technology during the course of their teaching careers, to identify what software and hardware students have access to while in school, and to gauge teacher perceptions of the benefits and dangers of using these new genres in schools. Once the initial protocol was created, questions were shared with an English teacher who is generally considered to be innovative and knowledgeable about current technology, revised, and then shared with a doctoral student who works with educational technology. This input resulted in questions that expanded Web 2.0 applications to programs such as FlickR, an online photo organization system, added gaming, Palm Pilot and iPod hardware, and offered teachers an opportunity to express which technologies they would like to see in included in schools.

Once the interview protocol was tightened, a pilot study was conducted to determine whether or not the questions would extract the information I desired. Initially, I was concerned with the first participant's focus on teacher access rather than student access. However, tightening the wording and rephrasing a few questions in the next interviews solved this problem, leading to answers that, although they did refer to teacher access, focused primarily on student access and the advantages and disadvantages of this access.

The interview protocol contained a mixture of structured and unstructured questions (see Appendix C). While many of the questions were open-ended, designed to probe for teacher perception, others were presented in list form, giving educators an opportunity to answer simply yes or no. These questions were not meant to be limiting. Rather, they were designed to make educators think of the various genres that have emerged as a result of technology. While interviews began with a set of predetermined questions, I had the option of varying their order and inserting original questions as information was gathered during the discussion. This flexibility allowed me to explore individual perceptions, gathering much more descriptive data than adherence to a script would do. As mentioned, the recording of the interviews ensured accuracy of the gathered information, and it also helped me identify questions that elicited the most valuable responses. Notes also allowed me to interpret how strongly the interviewees felt about their answers as answers were accompanied by notes about facial expressions and other body language.

Observations

Although the primary data was collected through interviews, my observations as I visited each building were recorded to help me gain a clearer picture of the larger role technology played in each district. These observations, paired with notes about each participant's body language and expressions, helped shape my interpretations as I began to analyzed the data collected from each interview. Through these notes, I was able to assess how what I observed matched with what participants had to say.

Data Analysis

Because of the qualitative nature of the collected data, the coding process was crucial to the success of this study (Strauss and Corbin, 1990).. Data collected during the pilot study indicated that definite themes could be determined from the interviews. Initial themes seemed to indicate that issues such as fear, lack of access and resources, and student infractions help define the boundaries in regards to using new literacies. Additional interviews and coding helped determine whether or not these themes were consistent across the studied districts and educators.

To ensure the accuracy of the data collection, interviews were audiotaped on an iPod, allowing for ease of listening and re-listening during the transcription process. Throughout the interviews, I also took notes to capture keys phrases and ideas, as well as observations about body language. Once all the information was transferred to Word documents, it was time to begin the analysis stage. To do this, I turned to the qualitative research program HyperRESEARCH. Although there were other programs available to help analyze data, a colleague of mine had talked favorably about its ease of use. This decision made, I began to import the Word files into HyperRESEARCH. I knew that the future write-up of the data would require pseudonyms, but the sheer number of interviews prompted me to keep each person's correct name during the analysis stage. This helped me to keep each person's personal expressions and voices in mind as I examined the data. Once I finished writing up the data, I used Word's find and replace function to insert the selected pseudonyms for each participant.

As I began analyzing the data, I read through each of the interviews before beginning to assign codes (see Appendix D). Because coding requires inductive thinking, the codes were developed directly from the data in the transcripts. Initially, I came up with 21 codes, but after analyzing four or five transcripts and further examination of each of the codes, I began seeing overlap between ideas such as teacher knowledge and time, realizing that ultimately what each participant was referring to was the change required to classroom practice when working with technology. Further analysis of the initial codes allowed me to collapse the 21 themes into the nine that ultimately define the study. HyperRESEARCH allowed me to easily find the pieces of text that were assigned the original themes and reassign the final nine themes. Once I had developed the nine themes, I continued to code the data, looking for the emergence of more themes. After coding two more transcripts from each of the remaining two districts, I began to see I had reached a saturation point and began to actively look for the occurrence of the themes in the remaining transcripts.

Upon completion of coding, HyperRESEARCH allowed me to examine the data by theme where I could begin to see the similarities and differences between districts in regard to each of the themes. I was also able to determine the level of concern each of the themes held for each district, allowing me to rank the importance of each theme to each

district during my presentation of results. All of these aspects of hyperRESEARCH assisted me in my attempt to develop the picture the data were drawing.

While this first step in the coding process was very data driven, the second step involved taking a step back from the data itself and examining the relationships that emerged between the identified themes. Thus, for axial coding, I abandoned hyperRESEARCH and, instead, created multiple diagrams on scratch paper until I was finally satisfied that I had achieved an understanding of how the themes related. At this point, I developed three categories that helped explain how educators negotiate the use of new literacies. Upon completion of this process, I then turned to the gap and continuum theories as described by Bodgan (1992a & b) in order to determine how the new literacies fit within the context of censorship, as well as how educators negotiate those rhetorical boundaries.

Grounded Theory

As previously discussed, grounded theory was designed to help researchers begin to explain phenomenon that is difficult to quantify. According to Strauss and Corbin (1990), there are seven criteria that users of grounded theory should keep in mind:

1. Are concepts generated?
2. Are the concepts systematically related?
3. Are there many conceptual linkages and are the categories well developed?
4. Is there much variability built into the theory?
5. Are the broader conditions that affect the phenomenon under study built into its explanation?
6. Has process been taken into account?
7. Do the theoretical findings seem significant and to what extent? (Strauss and Corbin, 1990, pp. 254-256).

These questions were critical in guiding the coding and analysis of the data. In order to adequately answer the research question, concepts were generated through the coding of participants' perceptions, and links between each perception were made to help define how secondary schools identify the rhetorical boundaries imposed around the new

literacies and to understand how schools operate within these boundaries. Due to the changing nature of both the new literacies and public perceptions, I always kept in mind the variability that exists within the discovered information, as well as the conditions and processes that influence these findings. I explored these conditions through the subsidiary questions two and three, examining whether the perceived benefits of new literacies influence how educators negotiate the boundaries and if these boundaries are influenced by geographic location. Although a single study cannot answer whether or not perceptions will change over time as the public becomes more comfortable with the new literacies, it definitely opens an avenue for future research. And finally, I was on the look out for significant themes that emerged.

Gap and Continuum Theories

The continuum theory can be traced to Plato who used the metaphor of a magnet to illustrate the idea that there is a chain reaction from the author of a work to the text and then to a passive reader. Under this theory, readers do not have the ability to resist the author's power that reaches them through the text (Bogdan, 1992a). It is this stance that most censors adopt as they view texts as "inextricably linked to its behavioral effects on respondents, effects concerning the relative state of the individual and collective imagination with the prevailing cultural ethos" (Bodgan, 1992b, p.3). In other words, censors of texts believe that words have power to influence individual behaviors, which in turn can impact the entire culture. On the other hand, the gap theorists argue that readers have the ability to break the chain through critical analysis. Proponents of this theory say that readers and viewers can recognize the difference between the world of the text and the real world. By stepping back from the text, readers can learn about the world by judging the texts from the standpoint of their own values and belief systems (Bogdan, 1992a).

While much of the debate regarding the gap and continuum revolves around the censorship of literature, Bogdan has applied the idea to other texts, including film and advertisements (1992a & b). With the expansion of the definitions of literacy and texts, I believe that the gap and continuum are also valuable in understanding the attitudes the public and school communities have toward the new literacies. Furthermore, as Bogdan

(1992a and b) also points out, there is no clear either/or to the gap and continuum. Rather, there seems to be truth to both theories. It is through this mindset that I approached the issue of limits of new literacies within schools. Where do members of the school community feel that the influence of new literacies falls in reference to the gap and continuum? What are their perceptions of where members of the communities they serve place new literacies? Understanding these perceptions aided me in forming a clearer picture of how secondary schools negotiate these tensions. Obviously, if the new literacies are seen as falling into a continuum that influences student behavior, schools will be more mindful of working within the boundaries, regardless of the potential benefits the new genres possess. If however, educators approach the new literacies from a gap point-of-view, they might begin to push at the boundaries, gradually convincing their local cultures to allow more of the new technologies and their accompanying texts into schools.

Establishing Trustworthiness

As with all qualitative research, precautions needed to be taken to establish trustworthiness within the study (Creswell, 2006). To accomplish this, I gathered data from multiple school districts, as well as multiple levels within each district, corroborated my identified themes with an independent researcher, and analyzed the data through multiple lenses.

To ensure that the data collected were not unique to one particular district or regions, I selected three districts with distinctly different characteristics. Then, within each district, I spoke with employees at three different levels: administrative, high school and middle school. This provided me with data from multiple viewpoints within each district.

In order to double check my interpretation of the data, I asked my major professor to examine information collected during the study to verify that I was correctly identifying the emerging themes. This corroboration took place as early as the pilot study where we both examined the transcripts to determine the not only the themes, but also whether or not the interview questions effectively addressed the research question. Then,

once the study was complete, upon my initial coding of the data, my professor independently analyzed the themes and their appropriateness to the data.

Finally, I employed three lenses through which to analyze the data. First, I used grounded theory to develop open codes and axial codes to help explain the ideas emerging from the data. Once themes and categories emerged, I turned to gap and continuum theories to help interpret the perceptions that developed during the axial coding phase of analysis. To further bolster the trustworthiness of the study, I then returned to the literature to examine how my findings related to earlier examples of educators' reactions to new technologies.

Summary

This study has been designed as a qualitative research study using the grounded and gap/continuum theories. After conducting one-on-one interviews with educators from three school districts, I identified themes that help ascertain how educators define and recognize boundaries when using the new technology literacies. These themes enabled me to explore the primary research question of how secondary schools negotiate these rhetorical boundaries. The gap and continuum theories were used to situate the censorship of new literacies occurring within the three districts on a defined spectrum. Axial coding allowed me to identify broader categories that help explain the model developed through grounded theory. To strengthen the trustworthiness of the study, I designed the study to include the viewpoints of teachers and administrators in three different districts at three levels, corroborated my findings with my major professor, and used three different lenses to analyze the data.

CHAPTER 4 – Identifying the Themes

Throughout the months of August and September of 2008, I spoke with 34 individuals from three districts in an effort to gain a better understanding of how schools negotiate the use of technology. Interviews ranged from 20 minutes to more than an hour. All data reported in this chapter, as well as the following chapters, is reported using pseudonyms to protect the privacy of the participants. This chapter explores the themes that emerged during our discussions.

October and the first half of November were spent transcribing the audio recordings of each interview, coding the information using hyperRESEARCH and describing the perceptions of each code within the individual districts. HyperRESEARCH allowed me to separate each district's information and identify the frequency of each theme, which uncovered that, while each district mentioned the same nine themes (change, dependency, distractions, funding, immediacy, inappropriateness, infractions, misinformation and safety), the degree of concern varied within each district. (See Appendix E for the definition of each theme.) While one district may have felt a theme was an issue, another may have believed that the concern was not unique to technology or even a concern at all. One commonality emerged, however: Individuals in all three districts were the most concerned about how changing technology and its implications on classroom practice impacted education. The following sections break down each theme within each district. The first district discussed, Witt City, was the most restrictive of the three districts. This is then contrasted with Vickville, which allowed for the most access. Finally, Skillen presents a district that rests between the two extremes. Within each district discussion, each category has been organized from the issues that cause the least concern to the issues that received the most mention.

Witt City

While technically considered a suburb of a Midwestern city, Witt City possesses the feel of a suburb transitioning to a more urban culture. Witt City accommodates a diverse mix of citizens, many who feel the financial crunch, as indicated by nearly 44%

of the district's students who qualify for free or reduced lunch (State Department of Education). Housed in a building constructed in the early 1900s, Witt City High reflects the diversity of the community as I witnessed during my first visit where the hallways bustled with students walking to and from class. With the focus of my study on technology, I paid close attention to evidence of its existence as I walked toward the office. The absence of iPods, mp3 players, and cell phones was notable as I searched the hands and ears of the students I passed. Upon entering the office, however, I noticed a young man using the phone. A small white cord trailed from his other ear, signaling the existence of the tiny earbuds associated with the small music players. Next to him, the secretary waited for him to finish his conversation with his parent, then asked him politely to remove the player in school. This exchange provided me with my first indication on the school's stance on the use of personal technology during the school day.

Similarly, my visit to the middle school across town showed evidence of diversity, as well as the absence of personal technology. As I entered the office, I stumbled onto a humorous exchange between two boys, one white and one black, who were debating the merits of in-school suspension versus out-of-school suspension. This conversation was punctuated by the arrival of a teacher escorting a young man to the office for refusing to give up his cell phone that had rung in class. Evidently, the middle school, like the high school, banned the use of personal technology during the school day.

Students at the alternative school faired no differently. I arrived at this school on a particularly busy day. Despite my appointment, I waited for more than hour to visit with the principal who was busy dealing with a student I could hear yelling in the back room. This gave me ample time to observe students who entered the office, students who were always accompanied by an adult and searched with a metal detector. After sitting through two lock downs, I assumed the sole reason the searches were conducted was for weapons. Yet, I found in my later conversation with the principal that there was a good explanation for the complete absence of personal technology: students are strictly forbidden from carrying any form of this technology, and the metal detectors help locate its existence, as well as the existence of weapons.

While these observations provided valuable insight into the day-to-day negotiations of personal technology and education, the conversations I had with district

and school professionals allowed me to gain a better grasp on what factors helped define the boundaries set within Witt City schools. Within Witt City, I interviewed a total of 13 individuals (see Table 4.1). At the district level, I spoke with Lee Babcock, the executive director of secondary education; Caroline Caan, the technology director; and Lynn Darby, the communication arts instructional coach. At the high school and middle school, I visited with the principals, librarians, English department chairs, and a relatively new English teacher: Walt Garland, high school principal; Amy King, high school librarian; Kathleen Hess, high school English department chair; Jill James, a second year high school English teacher; Bruce Levitt, middle school principal; Julie Pine, middle school librarian; Diane Mather, English department chair; and Jane Nichols, a third year middle school English teacher. Because the alternative school is constructed differently with each teacher teaching all subjects to a small group of students, I interviewed only two individuals: Grace Eliot, principal; and Paula Flynn, teacher. The bulk of my discussions with these individuals took place over two weeks in September 2008. Due to scheduling conflicts, however, I was not able to catch up with Diane Mather until early October.

Table 4.1: Interview Participants in Witt City

Name	Position	Location
Lee Babcock	Executive Director of Secondary Education	District Office
Caroline Caan	Technology Director	District Office
Lynn Darby	Communication Arts Instructional Coach	District Office
Walt Garland	Principal	High School
Kathleen Hess	English Department Chair	High School
Jill James	Second-Year English Teacher	High School
Amy King	Librarian	High School
Bruce Levitt	Principal	Middle School
Diane Mather	English Department Chair	Middle School
Jane Nichols	Third-Year English Teacher	Middle School
Julie Pine	Librarian	Middle School
Grace Eliot	Principal	Alternative School
Paula Flynn	Teacher	Alternative School

After identifying which forms of technology were accessible in the schools (see Table 4.2), I listened to our conversations again and began coding the data to identify the boundaries the community of Witt City works within. (See Appendix F for definition of technology terms.) During the coding process, nine categories emerged that helped define these boundaries: immediacy, funding, misinformation, safety, distractions, infractions, inappropriateness, change, and dependency. These categories will be described and explored in the following sections.

Table 4.2: Accessible Technology in Witt City

Technology	Accessibility
Gmail/Email Accounts	Blocked
Blogs	Primarily blocked/Specific sites open by teacher request
Wikis	Accessible
Social Networking Sites	Blocked
Social Service Sites	Blocked
YouTube	Blocked
Instant Messaging	Blocked
Cell Phones	Not allowed
Personal Organizers	Not allowed
Personal Gaming Stations	Limited use in specific programs
Online Gaming	Primarily blocked/ Specific sites open by teacher request and administrative approval
iPods/mp3 Players	Not allowed for personal use/Some available for specific classroom uses

Immediacy

The immediacy technology brings to society, in terms of both the speed information can be accessed, as well as disseminated, caused concern for three of the interviewees. This aspect of technology was particularly troubling to Kathleen Hess.

> I think we're in an information overload age. We've become so obsessed with
> information even though it's inaccurate. And spin, we're obsessed with spin. I
> think there's something very frightening about that immediacy I was talking about
> because that's just less thought, and clearly as an English teacher, I'm interested
> in thought. I think that that immediacy leads to less thought.

Jane Nichols expressed a concern about immediacy, however, that differed from Kathleen's concern about lack of thought. Jane feels that students have learned to expect

things immediately, which changes the way they learn. "I also think they're in the process of everything happening right now because they're used to instant gratification." Bruce Levitt shared some of this concern with Jane. "There's a part of me that says, I wish we didn't have Internet access. I wish we didn't. Why do we have to be so instantaneous? Why does it have to be at our fingertips?"

Having the Internet at our fingertips leads to another aspect of immediacy that Kathleen stressed over and over was "troublesome" and "frightening." She worried that people were not only gaining access to information they shouldn't because of immediate access, but that they were also jumping to say things in emails and blogs and on social networking sites they may have reconsidered if given time to think. "I worry that they're going to get themselves into trouble because of that immediacy. They'll say something out there that they shouldn't have, you know. Employers look at people's Facebooks if they're public."

Funding

While budgetary issues regarding technology were not a concern mentioned by many, only four of the 13 interviewees commented on the financial burden of technology, for Lee Babcock and Caroline Caan this was an issue that evoked strong feelings. As executive director of secondary education and technology director, Lee and Caroline spend a great deal of time working in areas of budget, so both individuals devoted a portion of our time together speaking of the impact cost has on available district technology. As Lee recognized, this availability can directly impact the draw the district has on new hires.

> When we hire, when students come to us, they expect to have access to the same type of technology that they have at home. And when we hire teachers, especially young teachers, they come to us expecting to have access to technology that they're used to at the college level, as well as in their personal life. They know what's out there, and they want the speed and the luxuries that come with up-to-date technology. So how do we budget for that?

According to Caroline, the budget is much more complex than many teachers realize. As teachers return from in-services and conferences, they frequently want to

incorporate much of what they learned into their classroom. With the increased global reliance on communications technology, many of these new ideas revolve around technology. Each new program, whether it's web-based or not, requires something from the overall system because, Caroline explained, nothing is truly web-based. The increased demands from recent years lead to a rebuilding of the entire network infrastructure over the previous summer. This new infrastructure, as well as the new machines, programs, and accompanying support do not come cheap, which can limit the resources the district can provide. This leads to what Caroline says is her greatest fear in terms of technology:

> They [teachers] want us to get more, and I think that's what I'm afraid of in terms of technology is funding. As the need and the demand continues to grow and programs are added, the biggest challenge for our department is to support it.

Lee echoes similar fears in terms of technology.

> Paying for technology can shut down the entire system because it consumes your budget and all of a sudden you can't give teacher raises and all of a sudden you can't put a new roof on a building. You know, the roof's leaking but you've got new computers, and sometimes you're forced to make those choices.

> For schools, this is a relatively new complication. Ten to 15 years ago, most teachers relied on overhead projectors to present information, and computers were used primarily in labs to teach keyboarding. Schools could reasonably project three to five years into the future and budget for technology needs. This is not the case today. With advances in technology taking place every six months to a year, schools are frantic to keep up with the technology needed to keep their students competitive in today's world. Compounding the challenge, Lee says, is trying to evaluate the staying power of the technology itself. "Keeping up with the pace of technology is difficult and trying to discern what's a flash in the pan technology as opposed to what's something that's going to stand the test of time."

> Another financial aspect that Jill James brought up was the availability of technology in students' homes.

> Some kids don't have computers at home and I think, no matter how accessible computers are, say, 'Oh, they're only $500,' which is a lot cheaper than before, but some people don't have $500 for a computer. So, when technology progresses

and only 3/4 of your students have that, then it's hard for me to negotiate expectations. I don't know what to tell them right now. Usually, I say try to go the library, let them go during class. But how many more years can you keep doing that for? I mean, it should almost be expected. So, I struggle with that.

Misinformation

Closely tied to the immediacy of information is the category of misinformation. Once again, this category did not emerge frequently from the conversations (only four participants mentioned it), but like funding and immediacy, those who did talk about it felt strongly about the dangers of the inaccurate information available to students today. Kathleen, in particular, emphasized this category, often discussing it alongside immediacy. Particularly troubling to her was the reliance on Wikipedia for information. Instructional coach Lynn Darby found this problematic, as well.

> I also don't always believe they're getting the best information because there's all this [Internet resources]. They still believe that if they read it or hear it or whatever, it's actual information, whereas a teacher was more of a filter.

Lee Babcock shared the concerns of Kathleen and Lynn, but he believed that students were learning from this misinformation.

> One thing they're learning is the vast amount of information that is available to them. I believe they are also learning that not all information is valid and reliable, but I think that lesson, the validity and reliability lesson, is learned through trial and error, if you will. So, in that they maybe latch onto something believing it's true then later find out that it's not. So they learn through a life-lesson that not everything I read and see and hear is going to be accurate.

> Kathleen was not as optimistic about a school's chances of accomplishing the lesson of validity and reliability. Six times in our conversation she spoke of students' inability to differentiate between authentic facts and misinformation. At first, she simply alluded to her concern, "To a high school student or younger, I think they're still really unable to tell those clues, and so a lot of times they gain misinformation." Yet the longer we talked, the more she centered our conversation around this idea.

I think we have to be very careful about how we teach kids to understand authenticity and the role of it. I'm not sure we'll get there. I think there are a lot of kids that aren't mature enough to be able to understand how to handle it. But I think as they get older they are more and more capable and that it's our job--just as it's our job to teach them how to measure ingredients. You have to teach them how to be cautious of misinformation…You have to be sophisticated enough to be able to catch the text clues that lead you to believe this is not real. And they're pretty sophisticated text clues.

Lynn Darby also referred to sophistication when reading Internet texts, and she, like Kathleen, expressed an uncertainty that secondary students possessed the ability to discern these clues.

I think that they're getting a lot of information, but I don't always think they have the sophistication and knowledge to choose what's right, what's real, so I don't know if they're learning more. I just know they have more information.

Safety

Going into this study, I was prepared to find safety as one of the concerns that educators discussed when examining the possible boundaries of the new literacies in the classroom. After all, who hasn't seen Dr. Phil's or Oprah's shows on just this topic? What surprised me, however, was just how infrequently the issue cropped up. It was definitely a larger worry than the previous three categories, but only seven respondents, just over 50 percent, mentioned it. Both librarians, Amy King and Julie Pine, asserted that student safety was the primary reason sites were blocked on the district network, with Amy expressing some worries over on-line stalking. As technology director, Caroline Caan agreed that safety is one of her first concerns when working with the firewalls. "I always take a security approach to it first. Student safety and network security have always been a priority, so any access that's requested, we look at is it safe for the students and is it safe for the network?"

Diane Mather, lead English teacher at the middle school, names safety at the top of her list of concerns. Technologically savvy, Diane worries what can happen to her students who do frequently use sites like MySpace and facebook. "I think that for things

like the MySpace and the blogs and that sort of thing, I think it's a safety issue. They all have to lie about their age when they sign up for it, and they lie about other things, too. They put themselves at risk." Because of this fear, Diane fully supports the unavailability of these types of sites at school.

> I think that's perfectly a legitimate thing. I don't think that we need to involve ourselves as part of the chain of events that got someone kidnapped because the 13 year old said she was 18 and was going to be at the bowling alley at 7 tonight.

This apprehension relates directly to Diane's own experiences with her nieces' MySpace pages.

> I would really fear those kids who are out there on those social networking pages. I have an 11-year-old niece who last Thanksgiving was in town. And we were looking at her MySpace page, and we were like, why do you even have one? And she had terrible things on her MySpace page, sexually explicit language and blogging things that shocked her mother when she saw it. My daughter is 27, and she reported her and had her blocked. She had done the same thing for another cousin who a year before, when she was 11, had a MySpace page and had her hair all, she's blond, she had it all poofy in her face and said she was 16. And she is the one who said that she, in her blog, about how unhappy she was with her mother. 'My mother doesn't understand me. We're always fighting.' So here I am, an unhappy child; it's obvious in my picture I'm not really 16; and I go bowling with my friends on Thursdays at the Webster Grove Bowling alley at 7. And it's like, okay, she has told any predator who happens upon her, how to find her.

Grace Eliot also worried about who people can meet on social networking sites because of the sheer anonymity that the sites provide.

> I mean they've been dangerous. There have been predators that have been on those sites and who have lured kids away. I think there have been some dangers related to that that many people are not aware of. You know that country-western song that talks about when I'm on the Internet, I'm this person, and in real life, I'm this person. I point that out to my nieces and nephews. I said, 'You have no idea who you're talking to.' When I'm talking to kids, they'll tell me stuff about

who they're talking to on MySpace or this and that and I say, 'You don't know who you're talking to.' And they'll say, 'Well, yeah I do. That's so-and-so.' I say, 'How do you know that? Maybe it's somebody else saying they're so-and-so.' 'No, oh no, that's my friend.' 'No it's not. Maybe it is, maybe it isn't.' It's very difficult for them to differentiate that, and they don't seem to have a good understanding that somebody may be lying to you. You know there are people out there who aren't truthful about who they are and what they're up to. At the middle school, first year I was there as an assistant principal, one of the students came up to me and said, 'Youíre on MySpace.' I said, 'What?' 'Well, yeah. You're on MySpace. You're talking to us on MySpace.' I said, 'No, I'm not.' 'Yeah, you are. You said…' I said, 'No, I didn't.' 'Well, somebody's on there saying they're you.' I said, 'That's what's happening. Somebody's on there saying they're me, but I am not on there.' So, there's that danger too, of impersonating someone and then doing something obnoxious that then you could then get blamed for. I've never been on MySpace.

For Lynn Darby, on-line predators make up just a portion of the pool of people who prey on the unsuspecting.

People who are unscrupulous or criminal always find a way to make that stuff work for them. It's just made it easier for them to access bank accounts and that kind of thing. So you really have to be, you have to see the great thing that it is, but also be so cautious and so responsible constantly, and that is so hard to do.

While student safety has been cited as a major factor in the decision to block sites, that doesn't mean that there isn't a question of the appropriateness of doing so. Caroline believes, however, that student safety comes before the ability to access such sites at school.

It's a tricky place to be. I think that we need to keep our students safe, and we need to protect them from a lot of that content that's out there. I also see the other side of should we be filtering, should we be monitoring? The state says yes we should, and I agree with it that we need to make sure that the school is a safe place for them and teach them appropriate safe searches, and teach them the tools and the ways to find the information in a safe way.

<center>***Distractions***</center>

While the previous four categories evoked strong opinions from a few individuals, the remaining categories were much more prevalent. For ten out of the thirteen respondents, the use of technology equaled distractions to the educational environment. As a teacher who has heard complaints about cell phones ringing during class or iPods blaring in students' ears, I was not surprised by this concern. What did surprise me, however, was the number of times this concern was raised in regards to teachers rather than students. Because of this, I have divided this category to explore how distractions are viewed in terms of students and, then, teachers.

Students

Cell phones were viewed as having no educational value and were, in fact, seen as a detriment. When referring to cell phones, Walt Garland said, "It's an intrusion to education, so that creates a conflict of interest with all of us." Despite this view, though, all of the educators I spoke with recognized that the majority of students carried them. This reality led to a reluctant truce between the faculty and students. Bruce Levitt explains.

> I'd say 85-90% of kids in this building have them. We have a policy. Our policy is we don't allow them out. And it says in the planner: we don't allow it. We don't want it. It can get you in trouble if you have them. Now, here's the reality. We don't look for them. We could spend our whole day confiscating 500 cell phones out of 600 kids or 550 of them. But what we say is we don't want to see them; we don't want to hear them. If we see them or hear them, they become ours.

One of the issues with the use of cell phones is the lack of control over what information is transmitted during the day. Lee Babcock believes that this is the primary reason that cell phones, as well as other distracting technology are not allowed in their schools.

> I think mostly because one, it can become a disruption to the educational environment, and two, we can't control it as much, and that lack of control causes, may cause, can cause, issues in sense of we can't control the texting, and what

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sometimes happens is that creates into some problems, socially, for students, or

cheating because of that. We don't have a filter for that.

Besides, Jill James asserted, students often spend too much class time looking for the

opportunity to text.

Some of them will sit and wait until the teachers not looking just to type their

message, so the whole class, even though it's one message, or two messages,

they're trying to wait for that moment so they never hear a word that you're

saying.

Similarly, the other forms of technology that were not allowed in schools were

also seen as distractions. "It [personal technology] distracts them from what they're here

for. It takes away from their learning" (Jane Nichols). Because of the view that these

technologies distract from the educational environment, the policy on banning personal

electronics was widely supported. "They're clearly getting it. Most of them are getting it

at home anyway, so it's in entertainment form. They can do it at home in all hours of the

day and night. They don't need to do it at school" (Julie Pine).

Walt Garland considers distractions such as these detrimental to the educational

environment.

I think the battles are still going to be making sure the resources of technology are

used to improve education and not just to buy time. Students can definitely waste

a lot of time with some of the negatives, like the kind of language they use.

And the technology may not even have to be present to provide the distractions. Jane

Nichols believes the entertainment factor has changed the way students learn, leading to

distraction even when the technology is not present in the room. "[We are] constantly

fighting for their attentiveness and also fighting for ways to get them interested."

Teachers

Students are not the only ones who can fall victim to the distracters technology

brings. Walt Garland worries that some teachers may use technology improperly, leading

to a misuse of the resources.

Here's the danger. At times, the technology can truly become a waste of time.

One of the dangers that we warn our teachers of is just because you have kids on

the Internet, just because they're on, whatever they might be doing, emailing a

pen pal or something, if there's not a concise objective to what they're doing then they are truly wasting time, no more, no less than they would be wasting time watching a television show, whereas it could be worthwhile if there was some sort of curriculum that went along with it.

Too much access, Walt says, can cause teachers to "become inefficient in their work and sometimes can stress the resources of the system." Caroline Caan agreed that this has been a problem in the past. With so many options available to them, Caroline said that teachers frequently did not use the tools in the manner they were intended.

We used to allow teachers to do video and audio streaming, but they bogged down our network so much that we couldn't do that because they would just play the radio all day…we used to allow iChat, and we had to block that because we had some teachers that weren't inappropriate, but they weren't using it for instructional purposes. They weren't using it for team collaboration. They were using it to talk about the game they were going to go to that night, so we definitely have some of those difficulties. There's a fine line of giving resources and then them balancing it with using it strictly for instructional and for curricular and being able to monitor those.

To Walt, the more technology available, the more opportunities teachers, as well as students, have to be distracted. "It's like as the access has increased, these avenues of inefficiency have increased, as well. So you're either wasting the resource, or you're wasting the time." As a former teacher, Julie Pine agrees.

I think teachers have had too much access to their private email accounts. A lot of teachers are just browsing the Internet. So, I think keeping teachers on task in the classroom [is important]. I know the district has denied access to private email and things like that now for adults.

Infractions

Infractions concerned eleven out of thirteen of the Witt City participants. No matter the form these infractions take, either behaviorally or academically, the trouble kids can get into when using technology gave educators another reason to restrict its use.

This section explores the two avenues students can take in terms of infractions with technology.

Behavioral

Behaviorally, students seem to be able to get into the most trouble through Internet usage. Walt Garland said discipline problems result from "kids going certain places they shouldn't go." Yet, discipline is a reality that won't go away because, as Bruce Levitt said, you can't block everything on the Internet.

> The more restrictive you get with the filter, the less websites, the good ones are recognized as potential problems, so that's probably the biggest thing we see at middle school. To have access to other things, kids, teachers have to be those super sleuths, observant or they're on the wrong web site. (Levitt)

Lynn Darby also remarked upon students' tendencies to go to forbidden sites, which she says has resulted in decreased access during school.

> It's almost like students are programmed to go to the not-so-desirable aspects during school, so it's almost like we're constantly the computer police, and it trickles down to administrators. I think that's the battle: being able to focus on the positive aspects of using technology but then as being seen as just locking it down, so we're basically word processing and being allowed to go to a few educational sites.

There is a question, though, to whether or not the locking down of the Internet actually stops students from accessing the blocked sites.

> The kids know ways around the barriers that we put up. You can go out to the Internet and get a script that will bypass the firewalls. They will buy a proxy server that will get you to where you want to be and every year you've got to deal with kids doing things that they shouldn't do. (Garland)

> Witt City takes the firewalls and infractions involving the filter seriously.

According to Lee Babcock, when students do try to access forbidden sites, the administration knows immediately.

> That's the reason we have a person pretty much, I wouldn't say 24 hours a day, but a major part of their job is to watch our network and when a student goes, or attempts to go, someplace they shouldn't go, they're red flagged, and that student

gets a little, you mentioned instant message, there'll be an instant message sent to that student, saying watch where you're going. And if they continue to go there, then it becomes a discipline issue.

Caroline Caan explained this process further.

Before we kind of restructured our department, and also revamped our own hardware and software in the back end, we didn't have a great system for monitoring students, and so even though we had the basic content filtering to meet DESI standards, we had students that were able to hack or try to hack. So now we have the ability to track those students and shut them down immediately, but we always have the challenge of our students are too smart for their own good sometimes, and they either try to hack the network or they try to use proxies to bypass all our security.

Students who are caught trying to hack into the system often end up losing technology privileges, which can lead to issues in some of their classes.

We've had kids who are brighter than we are and who have hacked into things and then had their technology privileges taken away. I had a student who did that last year, and so his technology privileges were taken away, so I could never allow him to do anything. And that was frustrating for him and me both, but it was his fault.

The Internet is not the only aspect of technology that can cause students to break the school rules. Lee Babcock describes the use of personal technology as "the day-to-day battle of put your cell phone away, put your iPod away, that type of thing, and listen to what I'm telling you." Along with their ability to cause distractions, cell phones were seen as an easy way for students to find trouble. Some of these infractions can be as simple as texting during class. "It's very difficult to catch them texting because you don't wait until the teacher's watching you to do it, and it can be pretty sneaky with that." For Bruce Levitt, however, the discipline issue is much more serious than sending text messages during class. "It's just a hotbed of potential problems: harassment, fights, on and on and on if you begin to allow that kind of access."

Bruce says that while parents want their kids to have access to their cell phones to aid in safe trips home, the phones often have other uses.

It's not for safety and security on the way home. It's to notify your buddies: let's
get him. And that's just a cell phone. Or a kid on the bus who has a problem and
mom knows about the problem before we do. That's a problem. And mom comes
up here and is hot and bothered and only has their kid's point of view, and we
haven't even had time to work on the full picture.

Because of this, Bruce cannot understand why a nearby school district allows the use of
cell phones during lunch. He believes that the district has done this in deference to
parents.

Like, when Goering (pseudonym) allows their kids to use their cell phones during
lunch to humor parents who want their kids to have that access to their phone
versus when a student in this building says a racial slur because he's mad and
upset and the kid that receives it is mad and upset and then texts 12 of his friends
what happened, and we don't know anything about it. Teachers don't know
anything about it until those kids want to get that kid in the restroom in the next
passing time.

In his view, the communication avenues opened up by technology has completely
changed how they interact with each other.

I think about the bullying that goes on, the harassment that goes on with kids over
text messages, MySpace, Facebook, on and on and on. What you used to have to
do a little more face-to-face, or maybe through the grapevine of people talking,
relaying it (he snaps) shooo…it's instantaneous. I don't like that. Kids become
more bold, more ruthless. That's that impersonal piece.

Grace agreed with Bruce, stating that she had not seen any positive interactions occur as a
result of Web 2.0.

My experience as a principal has been that they use that to harass each other, in
various ways—sexual harassment as well as verbal harassment and bullying,
which I have seen happen on there. I have not seen anything personally anything
good come from that (Web 2.0).

Again, stories such as these that involve kids using technology to harass other people had
lead to many of the restrictions in the district. Schools are afraid of the potential

consequences of allowing them. "They could bully while they're at school, and then we become responsible."

Academic

Discipline issues do not only result from behavior infractions. Witt City faculty said the technology explosion has caused more and more issues of academic rule breaking that lead to student discipline. For example, Jill James said that cheating can occur across the building now as students text answers to friends in other classes. Eventually these infractions create more work for the office.

> In the area of student discipline, you have the issue of cheating, plagiarism that, that becomes tricky because all of a sudden, you know, a student turns in a paper, and how much have they actually created as opposed to how much have they maybe searched on the web and cut and pasted? Also the use of PDAs and texting during tests, during assignments. Camera phones that maybe can be used to cheat. Those types of things.

Plagiarism seemed to be a major concern, particularly at the high school level, although Julie Pine also mentioned it as one of the problems that goes along with technology. For Walt Garland and Kathleen Hess, what alarmed them was not only the amount of plagiarism that occurs, but also the fact that some students did not appear to learn from their past transgressions.

> Another big thing, too, this may be an even bigger thing than that one [bypassing the filters]--I know it is--is the issue with plagiarism, and our message to students is that if you can go find it on the Internet we can find that you found it on the Internet, but they'll go and copy off entire papers, just cut and paste the whole thing. We had one kid that did it three times, caught him all three times. Did you think we're going to stop looking? What is up? I guess he really wanted the F. Please fail me.

This ethical issue, according to Kathleen, can be even more complex than it first appears. When referring to a former student, she noted, "Every single writing assignment that I gave him was plagiarized." According to Kathleen, this student became more and more sophisticated in his plagiarism attempts.

His plagiarism was increasingly more embedded, not in his text—it was always blatant text, like entire text plagiarized—but I mean embedded in the Internet, like it was harder and harder for me to find… I pulled his writing portfolio and everything he'd written as a freshman had been plagiarized and he hadn't been caught. He's plagiarized everything he'd ever written for Witt City High School. It was very strange. And he could never explain to us why he did it.

The plagiarism issues plagues every department in the building. The consequences for this in other departments are not always as severe, which Kathleen feels sends students the wrong message.

I'm terribly troubled, and I've always been terribly troubled, but the research assignments that they do in other departments. There's a lot of just cutting and pasting and plagiarizing, and it's accepted. We've done a lot of talking as a building about that, but I'm not sure how much of that really and truly can be controlled. They're being allowed to just rip right off the Internet.

So while Kathleen believes that schools do have some responsibility for teaching students how to work with technology, she also thinks that students' irresponsible use of the technology through their attempts to go around the system factor into the tightening of the rules.

It's tricky. In some ways, as we feel, I'm sure both of us [Kathleen and the researcher] feel, about education as a whole that you're damned if you do, and you're damned if you don't about everything. We are asked to achieve the impossible on a daily basis, and this is more achieving the impossible because if it's our responsibility to teach our kids how to be critical thinkers about technology that's available to them, but if you give them the inch they take the mile, so if those things are available to them, so then they get themselves in trouble, and they're not really being academic, and they're not learning, it's a catch-22 on a daily basis with everything we do, including this issue, which is just depressing.

Inappropriateness

Closely related to distractions and infractions, the third category of inappropriateness also received mention by eleven of the thirteen interviewees. Because of the openness of the Internet, anyone can post anything on the Net. At times, this means that youth are exposed to material that they might not be ready for or that makes them (or adults) uncomfortable.

One thing that really does worry me is what kids can access. I think everyone who has a boy at home has had the experience of you know, the stuff they like to look at, and then what they come into contact with. Some of it is sickening. It is sickening, and I hate that it brings that stuff into your house. And sometimes you don't know that your kid has seen it… that makes me ill.

While much of the material available on the Web is not much different than material previously available only in print form, the ease of accessibility alarms many educators and parents. Some see this accessibility as directly influencing kids' views on the world today.

It's such a shame that so many bad things can be put on there and be put out there and kids that may not have been exposed to that. Kids are growing up faster than they've ever grown up. I learned a lot from two older brothers, seven and five years older than me. I learned it because I heard them talking. And it was probably talk that they were having when they thought I was asleep. I learned things from older brothers. Now, somebody can get on the Internet, and they may inadvertently get to some web page, website and get a very shocking education without anybody's help, without anybody's guidance. Wow! You know, that isn't something you need to be looking at.

Jane Nichols agrees that this access has changed the face of childhood.

They have access to anything and everything and that is making them grow up faster because they are having to, unfortunately, mature faster and lose part of their innocent part of their childhood because they are seeing and doing things through Internet and everything that I couldn't even imagine knowing at a seventh-grade level and being 13. Therefore, their attitudes are different. Their

behavior is completely different. They have access to anything in the entire world
at their fingertips, and some of it is very negative and it's definitely showing.

This content can put teachers on edge because, as Julie Pine said, not all sites monitor the content that is made available to the public. Thus, the extra monitoring needed to make sure that students are not accessing inappropriate sites can be frustrating for teachers. "In the library, I'm constantly monitoring both sides of the computer so I can see what they're on, where they're going," Julie said.

While inappropriate sites can tie in with student infractions because some students deliberately try to break the school rules and access them, that's not always the case. There have been times when students have innocently stumbled upon pornographic sites during the course of their research. Diane Mather shared an example of this.

One time I had my students doing a research program about child labor, and I
guess because of the way the search engines went, they ended up with a porn site
that our filter didn't catch.

This was not an isolated event. As a former science teacher, Walt Garland remembered a similar event.

One poor girl, years ago, again when we first had real access to it, was just surfing
through sites and an aggressive pornographic site came up and started flashing
image after image. I sat behind her watching it happen. She was shocked. I was
shocked. (*laughs*) That's been an issue.

To help prevent as many cases of this as possible, the district has put firewalls designed to look for exactly this type of inappropriate material in place. Administrators at Witt City believe that this is the responsible thing to do. "I do think that like with anything, there needs to be some, it needs to monitored for its appropriateness for this age group," Lee Babcock said. He later adds that school districts are obligated to do this to reassure parents that schools are a safe place for their children to be.

We do have a responsibility to our students and our parents and our community to
say we're only, we're going to the best of our ability, only put things in front of
our students, information in front of our students, that is appropriate and has some
validity, has some reliability to it, is not obscene, is not going to corrupt them in
some personal manner. You know, obviously, there's plenty of stuff out there that

is detrimental to an adolescent that we wouldn't want and that's the reason we

have the firewalls. That's the reason we have the filters.

Caroline Caan echoed Lee's assertion that sites become blocked because of inappropriate material. She said the district blocks blogging sites, YouTube and social networking sites "to protect them from not only viewing things that they are not supposed to view, but also to provide that separation and that safe place for them where they don't have to worry about predators and they don't have to worry about accessing information or video that's not appropriate."

Access is not the only issue teachers have with inappropriate material. Because students are so savvy with technology, allowing cell phone access in school can lead to the posting of inappropriate material, Diane Mather said.

It is the phones and the pictures. You know most of the things are innocuous.

They're taking a little picture during passing period. Oh, no big deal, but then

when you have something when kids have a little freedom, like on field day,

they're out there dirty dancing, and 'Oh great! We're going to be on Fox 4 News'

because we can't control every movement, and the kids have the phone…not that

they aren't doing it at the skating rink too, but, you know, you don't expect to

send your kids to school to tork.

Bruce also believes that just because kids are doing something outside of school is not reason enough to allow it in school. The risk of exposing students to inappropriate material also guides his policy for allowing movies to be shown in the classroom.

Whatever gets shown on that movie, we can also be held accountable for you've

exposed kids to it. The school is doing that. We have to really guard against being

the lighthouse. They may get it at home, parents may be okay, all of that, but

we've got to hold a certain standard. No matter what's changing out there in

society, we have to hold that standard.

Dependency

Dependency on technology caused concern for eleven people, as well. In one sense, one might consider this new reliance on the communication tools associated with technology an offshoot of change. Yet, when talking about change, most teachers

discussed the issue very matter-of-factly. Research, keyboarding and testing are just a part of the fabric of America's schools, so it made sense to incorporate technology into these arenas. The tone of the conversation changed drastically, however, when the ten respondents addressed the dependency the school community had on technology. This concern manifested itself in different ways. Sometimes it was directed toward students and parents, but other times it centered on teachers and administrators. Ultimately, though, each speaker expressed frustration at the increased dependency on technology.

> The conflict, I think, is that we're often not focused on the thing right in front of us because people are multi-tasking. Technology has made it so that it is almost expected that you multi-task all the time, and that can be hard…I don't always know if we focus on the important things. We've got all these peripheral things that are constantly coming up.

Email, or what Kathleen Hess referred to as "the burden of email taking over our lives" crept into most conversations. Most respondents, like Bruce Levitt, felt ambivalent about the public's reliance on email. "I think email is good in some ways, and it has become so impersonal in other ways. It's so easy to email somebody, but yet it's so hard to get up and go see them." The most common complaint in regards to email revolved around its volume, resulting in a tremendous amount of time spent sorting through messages.

> I did a study one day, and I just said, I'm going to stay on top of my email today. I'm not going to really go out and do stuff, go see classrooms, all that kind of stuff. I'm going to stay in here and stay on top of my email, hour by hour. And at the end of the day, I had dealt, I had either put the email, responded to it, deleted it, or put it in a folder because I felt like I needed to hold on to it. That was an all day job. I had to take a portion of each instructional period, probably 15 or 20 minutes of each instructional period, to stay on top of hourly emails. And I can't devote that kind of time to it. (Bruce Levitt,)

Diane Mather agreed, saying, "I get so many more emails a day than anyone would ever need." Kathleen Hess expressed a similar sentiment:

> Email can be so beneficial because I can contact parents easily and all that stuff, but sometimes it's a terrible burden. I get too much email. I get email that's

unimportant to me. I have to sort through it every day. It's just yet another burdensome task.

As Kathleen said, the ability to contact parents can be a benefit of technology because messages can be relayed when teachers have a break. A common complaint, however, was just how much parents have come to rely on electronic communication.

> Parents now have access to live grades, tardies. We'd get emails constantly from the same parents, 'Why'd my child just get a tardy?' 'Why didn't they turn this paper in?' We would get emails all day long, and teachers would just have to have a policy of not responding to the emails until the end of the day. Parents would almost want to have a live chat with you on what's going on.

In addition to a dependence on email, according to Walt Garland and Bruce Levitt, parents also expect to be able to access their students via cell phones. "Parents want them to have it [a cell phone] all the time. Students want to have it all the time" (Walt Garland).

> Parents are not the only people in the school community who expect to be able to access information via technology. With its increased use, Witt City administrators can contact principals at any time.

> As building principal, I'm expected to leave this [a blackberry] on at all times, even when I'm home. I'll receive phone calls from Dr. Babcock, 6:30, 7 o'clock, 8, 9 o'clock at night—school related. Not a lot, but I'm expected to be connected with my bosses. That is a severe change over the last 3-4 years, whereas you could kind of like leave your job behind. (Bruce Levitt)

Parent and administrator's dependence on technology did not comprise the biggest concern, though. One issue revolved around the dependency teachers now have on technology for daily instruction. In a district like Witt City where there has been an issue of network reliability, this raised some trepidation.

> More and more of them [teachers] are coming to the point of they've got something on their monitor. They're showing a video clip, 2 or 3 minutes, to support the instructional goal of the day. When certain systems shut down in our district, it's almost like I can't teach my lesson today because I was going to do these things. (Bruce Levitt)

Lee Babcock agreed.

> It's become so vital to what we do, personally and professionally. And I say that
> in the sense of both the student and the teacher that when we don't have it, it
> really shuts down the system. When the server's down, when the network's down,
> when a computer is broken, it is such a disruption that it almost shuts down the
> system. And for teachers and students who don't know the old ways of
> instruction, you know the chalkboards, and the greaseboards, without the
> SmartBoards, without the TV projector, the LCD or the PowerPoint, all of a
> sudden, they're at a loss. 'What do I do now? I don't know how to teach without
> that. I don't know how to learn without that.' We are very dependent on
> technology.

This frustration was echoed by teachers who complained that despite the technology
department's efforts, they cannot rely on technology to work, which can derail a day's
lesson. This sometimes leads to a reluctance to instruct with technology.

> Its lack of use can be problematic, however, to students who have come to expect
> some aspect of its use in their daily lives. Because of this reliance, Caroline Caan, as well
> as others in the district believes that students learn differently than they have in the past.

> They're learning how to do research without the boundaries that they used to have
> from the books. They're also learning in a completely different culture, and I
> think that's more of the networking, the social networking, that's available to
> them and resources and, it almost, it goes beyond learning and becomes an
> expectation for them to have certain resources available to them and to be able to
> well, 'why can't I just have an interactive model that will teach me that?' Some of
> our teachers are getting there, but I think it's more of our students that are having
> that expectation of having the access to that data and being able to almost be
> limitless in what they can find.

Lee Babcock believes these expectations can be so great that some students almost lose
their ability to learn when they are not met.

> I would say that our students are very dependent on computers, and very
> dependent on the Internet, and very dependent on technology. You know, try to
> take an adolescent's cell phone away and see how they respond. It becomes, you

know you talk about Maslow's Hierarchy of needs, it's almost like the absence of that device creates such a roadblock for them that they cannot continue educationally or socially, whatever. So, I, yeah, I would say that at times there is too much access to technology, but it's a fine line, and I think it's a case-by-base basis. I think anytime we can become too dependent on anything, and then for some reason that's gone, if we can't continue, then that becomes a problem.

Amy King worried about the time kids spend on using technology. She feared that it leads to no real interaction and that they were "losing the human connection." Issues like these cannot be solved by the lack of access in school, however, because as Jane Nichols pointed out, students are so immersed in technology outside of school that it often follows them into the classroom.

Now they're not only communicating at school. They're communicating outside of school, and that also means that there's drama in their lives outside of school that they bring to school with them. So it's harder for them to get focused 'cause maybe they're thinking about that nasty email about them or maybe somebody posted something about them.

This aspect of students' dependency on technology worried Kathleen Hess, as well.

It's like a new conflict for kids because there's individual self outside of school, and how I talk like that and how I act like that, versus school self. And that has always been there. That's been in existence since the beginning of education. But now, they have a new conflict because there's their technology self. There's my facebook personality…and that interweaves with their academic life, and it makes it difficult for them to switch to academic life.

For Kathleen, the problem goes much deeper than just switching to academics when at school. She believes that adding their technology lives to the balance detracts from what students are able to accomplish.

I would even say within that, when I was talking about individual self, school self, technology self, like Internet self, there's even, because there's that other public sphere, that space, because of that, it's like kids have a whole nother world to manage. So, it's sort of like my email thing, you know what I'm saying? It's like another burden. It's like they have to manage their extracurricular selves; they

have to manage their homework selves; they have to manage their in the classroom self, their home life self, their friend self, and then, now, they're adding a whole nother realm where they have to manage. I have to get on facebook, and I have to say this, and I have to post this on so-and-so's. It's like a whole nother realm of self that they have to manage, so their time is just as limited, more limited. So like that same thing with my email that I have to manage that and that takes time away from thought, does the same thing to them. It takes more time away from thought.

Kathleen also believed that this juggling of worlds can sometimes lead to identity confusion. While discussing this, she referred back to the boy who had been caught continuously plagiarizing.

It was like his real presence, his authentic physical presence was always hidden and unclear, and uncertain of whether or not it was real, and who are you really? but he clearly had a very strong Internet presence. So I almost wonder if he had a conflict between what is reality and what isn't.

Aside from the complexity of this issue, teachers also remarked on the day-to-day dependency they see in their students. Traits that have developed as a result of the continued use of technology outside of school have resulted in habits that teachers struggle against in the classroom.

[We are] constantly fighting for their attentiveness and also fighting for ways to get them interested, especially in the communication arts area it seems like we are constantly battling over what is the correct way to say or write something. OMG is not a word. LOL should not be in your essay. (Jane Nichols)

This frustration cropped up more than once in the conversation with Jane.

It is so hard to get the students to write complete sentences and to finish an essay in correct grammar. They don't know how to spell words correctly. They don't know how to punctuate a sentence, or how to use even the correct verb tense. Everything is so much more difficult especially when getting them to write a piece of writing because they are so used to their language, their language that they email something in. It's almost like they have completely forgot how to write

correctly and so we have to spend a lot more time on that than normally you wouldn't have to.

Julie Pine agreed and worried that most of students' writing experiences revolved around their own use of technology.

> I worry about the lack of writing the kids are doing, formal writing, I guess I should say. And what instant messaging and what not is doing to their vocabulary and to their grammar, punctuation skills.

Change

The rapidly changing nature of technology and its impact on classroom expectations definitely has an impact on how educators in Witt City view technology and education. Structurally, schools have changed very little since the early 1900s (school web site). The stability of the structure of school is very comfortable for teachers, parents, and other members of the schooling culture. As mentioned in previous categories, the access to technology is viewed as having changed student expectations and how they learn. This does not always match with the ways schools traditionally operate. When visiting with the members of the Witt City district, twelve out of thirteen mentioned, either directly or indirectly, the expectations this change has brought.

For many teachers, technology as it looks today was not a part of their teacher education courses. Learning the new technology can be seen as intimidating. "I think we just have a lot on our plate and when we throw technology in, it can be overwhelming," Julie Pine explained. Training in this technology can take hours of time, which can hold some teachers back. At the top of Lee Babcock's wish list is adequate training for teachers so that they can effectively make use of the available data that their testing programs provide the district.

> [I would like] staff development for teachers that allows them to stay on the cutting edge of technology but, you know, there's so much. I mentioned our formative assessment Acuity. There's so much information in that software and in that program, that teachers don't have time to really know what's there and to run the reports that really can impact an individual students instruction and modify their curriculum. There's just not enough time to dig and to drill down into that

data, and it's frustrating to know that it's there and not be able to have time to get to it, then to really be able to sit those students down and to say, 'You know what? I looked at all of the information last night. You five, we're going to work on sentence structure over here, and over here, guys, we're going to work on fluency and reading and over here we're going to work on…because this is where you need it the most. The time and training is not there to actually get there.

Underlying this desire, however, is the viewpoint that the technology can be used to facilitate what has always been done in education. Like Kathleen Hess admits, technology may not be used if it is seen as simply another way to accomplish a task.

I don't use that [technology] very often because I'm very old school, and I'm also a very hands-on learner, and we teach like how we learn, so I tend to paper and pen and underline and highlight.

While Kathleen pointed to her own learning preferences as a factor in deciding whether or not she will incorporate technology, Paula Flynn said that for her it's a matter of the type of students she works with.

Last year we had a computer lab and we did do some things, looking up some things. But that is just so fraught with them trying to get away with things that it just was not doable. So I don't know how helpful I'm going to be because with this group that I teach you have to be kind of old school. I mean I see all kinds of great things in the future with tech and how it can be used and adapted and all of that, but with my clientele, they just can't be trusted.

Lee also sees that some teachers do not like to use technology because it does not match their own belief systems about education.

We still, philosophically, we have teachers who believe that the writing process, the actual pen, pencil in hand on paper, is more beneficial than sitting at the keyboard and creating at the computer, and they will tell you that sometimes access, you know students say, 'I don't write. I type,' and so, those teachers would tell you that those students have too much access, that those students, all students, need to learn to put their thoughts on paper with a pen, with a pencil, and not just at a computer. So there would be people who would tell you that they

have too much access because they are getting away from that art of writing, which they feel is beneficial.

Walt Garland agrees that this is sometimes the case, as well.

> Right now we have a room full of drafting desks that I would bet in five years will be gone. They're just holding on because of an archaic desire, I think, more than anything else. It's kind of like holding on to the typewriters because the kids really still need to know how to use a typewriter.

> This viewpoint makes sense when one considers how frequently the benefits of technology were seen in terms of ease of content delivery. For example, Lynn Darby talked about her desire to bring ELMOs, document cameras that project material onto screens, to secondary classrooms.

> It just makes things so easy and cuts down on this endless copying, and it's immediate. A student asks a question, and you say, yes, I have something like that, and you can immediately show it to them.

And both Lynn and Diane Mather believe that keyboarding and research are the primary use of technology in the buildings. There is also the issue of the reliance on the technology for testing. Frustrated with the lack of computers available for classroom use, Diane complained, "I think that primarily our computer usage here has turned into test taking, like the Acuity test that we're doing now." This was an issue that she returned to over and over: "We want to test them, and we want to test them, and we want to test them."

> Caroline Caan affirmed that much of the computer usage is devoted to various testing programs.

> We have so many assessment programs that right now, we have probably, we test two twice a year that are two weeks at a time, and then we have another one that's a two week window that we test three times a year. So if you do that, that's six, eight, ten, twelve weeks out of the year that their computer resources that are available to them for enrichment are used for assessments. And that's a lot. That's kind of where I've gotten into that discussion of where do we have our focus? Is it on assessment? We do data-driven instruction in this district, so assessments very

critical and you can't do data driven instruction without the assessment and that

data, but then you're taking away your resource for enrichment.

The repeated testing does not provide many opportunities for teachers to use the computers for classroom projects, and Diane viewed this focus as a waste of educational time.

I really do not like all the testing that we do, in case you haven't guessed that

already. How often do we have to weigh a 5 pound bag of flour to know what it

weighs and to be able to determine what you can do with it from there?

If, however, one takes on the view that public policy promotes through programs like NCLB, the technology is being used very effectively in schools. This viewpoint sees schools as preparing students in traditional subject matters with test scores assessing their gains. It does not allow for using technology in courses geared toward what many consider 21st Century literacies.

"Our students are really improving their proficiency in the subject areas and

showing progress. We're getting our money's worth, I guess, out of the software

and the hardware, when we do that. Our students really are showing

improvements. We're doing good.

Despite the limited uses of technology in schools, however, most students have

enough access outside of school that they often know more than their teachers.

Student use of technology is leading educators, rather than educators leading

technology use for students. Students are so technologically inclined and

advanced that they are so cutting edge that we as educators are having to keep up

with the student rather than the students keeping up with us, and so sometimes it's

the staff member that has to brought up to speed.

This situation can create a disconnect between students and teachers, a situation that Jane Nichols found herself in when she first entered the classroom.

I think there's also conflict between myself and the students because I didn't have

those technologies growing up, and so I learned a completely different way than

how I'm having to teach them. And so I have had to kind of change the way I

address things because there was a lot of conflict between me and them because I

didn't understand why they weren't getting it and why they couldn't do it.

Jane felt so strongly about this topic that she returned to it later in our conversation.

> If you are teaching in the regular, old, traditional way you're going to lose the students because they're not going to be learning. You have to think of new ways to get them involved, get them active and engaged in their way.

Despite her strong opinion, however, it didn't make her feel completely comfortable with the direction education seems to be taking.

> I think the kids are just going to be more and more technology inclined and at some point we're going to have to adapt and learn more, which scares me because I'm not a very good person on technology.

Julie Pine expressed similar ideas on her ability to keep up. "I hear the kids always talking about new things, and I don't keep up with a lot of it."

Vickville

Almost 350 miles from Witt City and more than 150 miles from a major metropolis, Vickville feels like a step back in time. With a district that is nearly 70% Hispanic, Vickville's population varies greatly from the rest of the state, which is comprised of more than 73% whites. To further differentiate from the rest of the state, more than 70% of Vickville's students are economically disadvantaged (State Department of Education). Despite the lack of funds, the community cares about education. This was evident from the relatively new building I entered when I visited the high school. Like my earlier visit to Witt City, I paid close attention to evidence of technology as I entered the building. Obviously, classes had started. The halls were bare, but I spied large monitors gracing the walls of the lunchroom, evidence that technology was seen as important despite the tight funding. After visiting with the principal and librarian, I ventured into the halls during passing period. Immediately, I noticed students with cell phones to their ears. This sight confirmed what I had learned in my earlier conversations, signaling to me that Vickville viewed technology very differently than Witt City.

The middle and alternative schools did not reflect as much technology activity. As students left for open lunch at the alternative school, some pressed cell phones to their ears, but this technology was not present in the building itself. Similarly, the middle

school, housed in a building much older than the high school, lacked any evidence of personal electronics. Yet my conversations with the faculty in both these buildings painted a picture of principals who were receptive to integrating technology into school and who foresee an increasing reliance on this rapidly changing phenomena.

As in Witt City, my discussions with Vickville's district and school professionals provided me insights into the factors that influence the boundaries within Vickville schools. I had the opportunity to interview a total of 10 individuals who worked with Vickville schools (see Table 4.3). At the district level, I spoke with Dennis Albrecht, the assistant superintendent of secondary education; Karl Beamer, the technology director; and Claudia Diamond, the instructional coach for the high school. At the high school, I met with Laurie Chandler, principal; Vivian Flack, librarian; and Tracey Epstein, a veteran English teacher. Since there were no new teachers in the English department, I did not have the option of visiting with someone with a new perspective. The middle school provided David Hempel, principal; and Nina Jones and Lynn Isaacs, both English teachers. At this school, I was unable to visit with the librarian. Finally, I talked with Charlie Goodyear, principal of the alternative school. Although, I originally intended to visit with the school's only English teacher, illness prevented her from meeting with me. Due to the distance I traveled to interview Vickville's personnel, I spoke with all participants over the course of approximately 10 hours. All interviews took place in September.

Table 4.3: Interview Participants in Vickville

Name	Position	Location
Dennis Albrecht	Assistant Superintendent for Secondary Education	District Office
Karl Beamer	Technology Director	District Office
Claudia Diamond	Instructional Coach	District Office
Laurie Chandler	Principal	High School
Tracey Epstein	Veteran English Teacher	High School
Vivian Flack	Librarian	High School
David Hempel	Principal	Middle School
Lynn Isaacs	English Teacher	Middle School
Nina Jones	English Teacher	Middle School
Charlie Goodyear	Principal	Alternative School

As with Witt City, I listened to each of the conversations, identified accessible technology (see Table 4.4), and coded the transcriptions according to the emerging themes. During this process, the same nine categories emerged, although the order of each code's frequency differed from the frequency of concern in Witt City. The most remarkable difference occurred within the funding code. In Witt City, this concern was minimal with only three participants mentioning it as a factor. All but one participant in Vickville mentioned funding as a major roadblock in their schools, reflecting the poverty the district battles on a daily basis. Again, the nine codes that emerged include immediacy, misinformation, safety, inappropriate material, dependency, distractions, infractions, funding and change.

Table 4.4: Accessible Technology in Vickville

Technology	Accessibility
Gmail/Email Accounts	Accessible
Blogs	Accessible
Wikis	Accessible
Social Networking Sites	Accessible before and after school
Social Service Sites	Accessible
YouTube	Limited accessibility
Instant Messaging	Accessible before and after school
Cell Phones	Allowed during passing periods and lunch
Personal Organizers	Allowed during passing periods and lunch
Personal Gaming Stations	No
Online Gaming	Accessible before and after school
iPods/mp3 Players	Accessible before and after school and with some exceptions

Immediacy

Although immediacy caused great concern for Kathleen Hess in Witt City, this issue was raised only once in Vickville by Laurie Chandler. For Laurie, the danger of immediacy comes from students who in a flash of anger do not stop to think about how quickly information can spread through the use of technology.

> You know, even high school aged kids, girls in particular can be very vindictive and what you think is between you and I ends up being forwarded to somebody else whether it was intentionally or not, and who knows where it goes. That's the biggest concern I have for kids, and I always say, do not put anything, never post anything that you would not show your mother. And then I get to thinking: well, maybe you not even post what you would show your mother. But as a general rule, I don't think they even think about that. I think they think even when they text, it's a conversation between you and I, not between you and I and all your friends, and high school girls can be best friends one minute and enemies the next,

especially the younger girls, and I worry about that because kids are going to get hurt through that process. And that's, I don't know how we fix that, but I think that's only going to grow rather than decrease.

Misinformation

As pointed out earlier, misinformation can be closely tied to the immediacy of information that is associated with technological communications. Dennis Albrecht recognized this close connection, and although he said that he thinks that the ability for anyone to access the resources provided by the Internet is a positive change, he also understands that this can be difficult for those who don't know how to assess the accuracy of the information.

However, the flipside of that is, you could go to blogs or anything else that's out there, the instantaneous nature of that and…it's very difficult without skills to determine the validity of and authenticity of the information you're getting. And it is out there, and it's out there for good. That information is out there forever.

While this was the only instance in our conversation that Dennis mentioned misinformation, Vivian Flack and David Hempel were also concerned about this aspect of technology. As a librarian, Vivian particularly worried about students' abilities to discern the accuracy of information. "Being able to determine what is good information has been also a huge [conflict], because they just go out and they put in a phrase and it pops up, and they go okay, and they take the top thing off the list." To help combat this, Vivian works with kids to teach kids how to work with sources and, in particular, to use library databases whenever possible.

Misinformation worries David Hempel because he says, if students turn to the Internet and rely on inaccurate information, it is difficult to remove the impressions that site has left.

When a kid goes out on Wikipedia or contributes to or explores is that knowledge exact? or is fictitional to some nature? So the harms are that we could be learning a whole lot of things that are not exact and true to the disciplines. One of the things that we do know, as a teacher, you're the content masters. In virtual learning, they are no longer the content masters because they are more of a

facilitator, but at least they're monitoring the exactness of knowledge. So, what we may be getting is some incorrect information, and it's like concrete. Once it sets up, it's hard to remold. So some information may not be as clean as what it would have been if we would have been the content masters.

For David, it is this lack of "exactness of knowledge" that can cause the most problems for teachers because they no longer have complete control over the information that students obtain. He pointed out that students do not always recognize that when they pull from blogs that the information is simply someone's opinion and not a true fact. This can lead to a perpetuation of misinformation. "Some people may take history and change it, unintentionally," David explained.

While some of the misinformation may be relayed unintentionally, what alarms Vivian is the information that is posted to purposefully mislead readers.

Anybody can put anything on the Internet…if they want to say they're a brain surgeon or that they have the cure for cancer or whatever, they can say so. They can also mislead you horrendously. We always talk about some of the funny ones because there's some great websites out there that are funny, but then you have [sites] just really designed to make somebody else's life miserable. We have to teach them to be so discriminating.

Tied closely to this concern was the fear that Vivian returned to over and over during our hour-long conversation: the tendency to believe anything that is in print.

I think what's so scary is that you see everybody just like, oh, okay, that's the way it is instead of being a thinking population, and you do wonder…These things take on a life of their own…There are still people out there who believe all these outlandish tales about politicians because they say, well I read it on the internet. I think that's a huge thing.

Safety

Although he just mentioned it in passing, Charlie Goodyear was one of the four respondents who brought up safety when discussing student issues with technology. Once again, this category was significantly less troublesome to educators than I believed I would find when I first began the interviewing process. Laurie Chandler stated that she

believes the inability to manage some technology in regards to safety plays a role in the sites that students are not allowed to access. Students' tendencies toward fearlessness feed some of her worries about technology.

> They're not scared of anything, and that's the part, I guess, that concerns me. They don't know to be scared, which in a way is kind of nice, but on the other side of the coin, there's creeps and crawlies that are out there on the other side. That's the part that concerns me.

Vivian Flack also worried about the lack of fear possessed by students.

> I think that, we probably didn't realize how kids [are] responding and putting up websites and stuff and then putting their pictures out there and then somebody that lies to them about who they are or finds out where they live. I mean, it's a scary place anymore when you can zero in on somebody's address or picture or that type of thing. I think we have to teach kids that these are wonderful things to use but be aware that there are people out there who are using them in a bad way.

For Vivian, this concern was magnified by students' assumptions that they know who they are communicating with on the Internet.

> There's predators online. That's scary to me because of the kids, and no matter how many times you warn them, don't be open to these people to just in general, but oh yeah, I know who this is. No, you don't.

> Online predators and dangerous websites were not the only safety concern raised, however. As Dennis Albrecht pointed out, the wealth of information that schools store online put districts in a sensitive position in regards to ethics, as well as student safety.

> There's clearly a conflict of ethics when you look at technology. You know, just the simple fact of privacy and immediacy which puts you in position, we currently now have IP based surveillance systems in buildings. Just to give you an example of the conflict. Is it wise to give access to that to the police department? And is it safe to do so? It'd be safe to give it to the police department, but is it safe that a hacker could get in and we could have a Russia-style terrorist attack in our own community. It creates that kind of dilemma.

While Dennis was the only person to see safety in this light, it was clear that he had spent quite a bit of time thinking about this issue. This was evident in his response when he

discussed the use of cell phones in school. On one hand, he understood the complaints about allowing students to have cell phones in school. At the same time, he could see benefits when examining student safety. "What a safety device, what an important piece of technology in case there really is something bad that you've got kids and teachers that can make immediate contact to the outside world."

Inappropriateness

While inappropriate sites were a concern shared by several of the participants in Witt City, this category received little mention in Vickville, with only four respondents raising the issue. Charlie Goodyear said he was hesitant to allow students to access social networking sites because much of the content is inappropriate, but he did not elaborate on that idea, nor did he mention it in regards to any other aspect of technology. Dennis Albrecht's response was similar to Charlie's. He brushed upon the idea that kids can easily get into inappropriate sites, but he did not address whether or not he felt that this was a major problem. While both men did not define what they specifically felt were inappropriate sites, Tracey Epstein suggested that the "problem of pornography" can arise. Like both Charlie and Dennis, she did not spend any time exploring this issue. She simply mentioned it as a possible consequence of allowing kids access to the Internet at school. Vivian Flack was the only respondent who talked about the responsibility schools have when dealing with potentially inappropriate sites.

> In public libraries, I know that you have to have access to everything and I'm a huge believer in that. I can't believe that people who want to believe some of the things they want to view are going to view it in public, but, why don't you buy your own computer and stay home, but I do understand, and I know, even when KU was first talking about this and they were laughing about they had the porn bank, there were certain computers that turned toward the wall, and you do have [free access]. You have a whole population in public libraries, but you have to have free access. In high school, we can, although there's no way to shut out things. They don't need to be seeing some of the sites. There are sites out there I'm just appalled by, but I guess there's an audience for them, but I would say that

in high schools you have to be a lot more discriminating. There can be way too much.

Dependency

One of the most striking differences between Vickville and Witt City emerges in the area of dependency on technology. The increasing reliance on technology by adults and teens alike alarmed the respondents in Witt City. In Vickville, this troubled six of the respondents, placing dependency in the middle as far as overall level of concern. Vivian Flack's concern echoed that of Lynn Darby's in that she worried that the constant juggling of communication technology detracts from a person's attentiveness during face-to-face interactions. "I wonder if we're losing communication with people. I mean, you'll see kids walking down the hall texting each other. I don't get that. I do worry sometimes about that type thing, that we're losing contact." As a librarian, Vivian saw similarities between society's growing reliance on technology with many of science fiction novels, including George Orwell's *1984*, and some of these similarities alarmed her. "You sometimes wonder are we going to reach that point when we are so programmed, or that they know so much about us?"

While he did not raise concerns such as this, Dennis Albrecht also recognized that technology has changed the shape of society.

> I don't think there's any question that in the 21st century, we can't afford not to be connected for very long. Sometimes that may not be a good thing, but, you know, I spent a long weekend in Phoenix, this past weekend and had 80 or 90 emails, which probably isn't a good thing. It might have been good if I had just left this thing at home. But the fact is those things are going to be waiting for me, as they're going to be waiting for the kids and the teachers. The reality is that you don't have to wait for information.

David Hempel also mentioned emails when he discussed the challenges that technology poses for him in his position as principal. This change has contributed to the fast pace that is prevalent in today's society.

Today, I get 80 to 90 emails a day that have to be responded to, at least in some kind of timeframe that answers are given. So questions and answers and decision-making is moving quicker as far as administration goes.

This increased dependency on electronic communications raises expectations in areas other than email, as well. Because so much information can be accessed instantaneously, students and parents have come to expect this in schools as well, adding pressure to teachers that wasn't present before. Dennis Albrecht explained this: "All the stakeholders live in a world where they're getting real time results and responses, and they're not real accepting of well, I'll have these grades, these reports graded next Friday and hand it back to you."

These issues were not new. Witt City shared similar concerns, just as both districts talked about how troublesome the reliance on technology can be for teachers when it doesn't always work. As a principal, Laurie Chandler has seen these frustrations with her teachers. "When a teacher puts a lesson plan together and they are incorporating technology with that and it doesn't work, that's, I think, the biggest frustration." Tracey Epstein expanded on this concern:

When the server's down, we're, our hands are tied. Not that we couldn't write by hand, but it's so much quicker to write with computers, and sometimes we're in the middle of the state writing assessment, we do that on computers, and that's a problem.

Yet while all these issues about the dependency on technology were raised, the most worrisome aspect for many of the respondents was the lack of balance students appear to have between their technology lives and their school lives.

There's no question that they're connected; they're wired. They're communicating almost 24/7, which is one of the problems secondary schools have: trying to find a balance between using and abusing the communication technology that's there. (Dennis Albrecht)

For Vivian Flack, it is this constant connectivity that can blur the distinction between the digital and real worlds. She was particularly concerned about the virtual reality world of Second Life, a program that allows users to create alternate identities and interact with people and businesses through a digital platform.

There's wonderful things about the Internet, and…I use it constantly, but it is scary that you think if they [teens] have Second Life that it becomes reality to them, and reality doesn't really exist. So it's a tough call about how much you want to encourage them to do this.

But Second Life was not the only issue that Vivian raised about students' perceptions about reality as a result of the increased reliance on technology. Through technology, advertisers now have many more avenues to reach a young audience. Vivian fears this onslaught of messages has affected how kids see themselves.

I think younger kids, I think that's part of their problem because they see those images and think that they've got to be [what they see]. We used to say, and I can remember when I first started teaching, it was the 7th and 8th graders. Seventh grade was still pretty, you know; 8th graders were starting to be more high school. Then pretty soon it was like the 5th graders were going on 21, and now, I'm seeing the 3rd graders going on 21, and it's just scary, and I do think a lot of it is [a result of technology]. As things have been out on the Internet, I think things are more acceptable on TV.

Dependency on technology has also changed the way students learn, impacting their actions in school.

I think they're learning how to use the world as a resource. I really do. I think they've got so much information at their fingertips, a lot of times they're even learning laziness. They're unlearning how to use a library. They're unlearning how to look up information. I'm guilty of it. I keep a dictionary up on my computer and if we need a word, a while ago, we needed the word dying, the two different forms. It was so funny, and one of us ran back. They know it's on my computer, and you know, we didn't even stop to use the dictionary. So I think we're unlearning things as much as we're learning things. (Nina Jones)

As a librarian, Vivian has also seen a change in not only the way students research, but also in the way publishers create reference books in their quest to produce books that reflect students' preferences for gaining information.

The Internet and their exposure to those little quick bites of stuff has made a huge change in the reference books. I'm doing a major weeding right now, just taking

books and books and books, and they're wonderful books, and I think oh I don't

know, but they're not going to go out because the kids now, they want the

pictures, the sidebars. It looks more like a screen, and that's what the research

books look like now. It has affected even the more scholarly things for high

schools because these kids are just used to that kind of, if it's not a quick bite of

information, they don't want to go through it.

Like Vivian and Nina, Tracey Epstein also worried about students' unwillingness to use

books for research.

I think they just need to know how to use books and journals so that worries me—

that it will limit them. I worry that it will limit them, and that they will rely on it

[the Internet] too much. I also worry that they won't research thoroughly enough

online, that they'll be content with the first one or two things they find.

Another concern that Vickville shared with Witt City is how student writing is

affected because of their increased use of technology communications, which relies on

abbreviations and shortened versions of words. As Vivian pointed out, texting possesses a

completely different spelling system, and she feels that one result of this instant

communication that the quality of writing has decreased. Tracey also mentioned spelling

as a weakness in student writing, and she feels the technological tool of spell check has

exacerbated the problem.

The spell check thing is kind of problematic, meaning that the kids will rely on it

and never edit their own papers carefully enough to catch their own mistakes—

like definitely often comes out defiantly, and they just click on ok.

Distractions

Not surprisingly, distractions appeared on the list of concerns for seven out of the

ten respondents in Vickville. While acknowledging this issue, however, respondents did

not feel as strongly about this category as they did about others. When compared to Witt

City, one notable difference in Vickville is the absence of concern about teacher

distractions. For the educators in Vickville, the balance between effective uses for

instruction with distraction was key in their decision-making: "As far as technology

goes—cell phones, iPods, mp3s—are they distractions or are they vital to the content?"

Charlie Goodyear asked. Dennis Albrecht agreed that distractions can be an issue in the classroom. "The disruption, the distraction that it might pose in a learning center is potentially a bad thing," Dennis said. According to Vivian Flack, this potential to distract should be the deciding factor on whether or not certain aspects of technology are allowed in the classroom.

> If it's disruptive to the classroom, no I don't think so. I think between times, it's just like common courtesy. You go to a restaurant and your phones ringing, or you're in a movie, we're seeing more and more places saying no cell phones, shut them off, you don't need that… kids here, sometimes they don't have the reality of thinking this is not appropriate. So that's one of the things that we need to be teaching. When is it appropriate to use it? There are common courtesies about using them in any way.

Nina Jones and Lynn Isaacs both agreed that allowing personal technology in the classroom often times detracts from what students are supposed to be learning. As Tracey Epstein explained, cell phones in particular can cause disruptions during class.

> I don't even want to hear it vibrate, and we have a definite school policy on that. The first time it's taken away, and the second time, it's actually OSS because they just don't want to deal with it at the administrative level.

Infractions

In Vickville, everyone but Nina Jones mentioned infractions as a concern when working with technology in school. Like in Witt City, these infractions manifested in both behavioral and academic forms.

Behavioral

Once again, the Internet offers multiple paths for teens to explore, and often these paths lead to mischief. As Karl Beamer pointed out, some students seek out sites that are not allowed in school. At times, according to Tracey Epstein, this means students are attempting to visit chat rooms in the library. Other times, students are attempting to download programs and other items off the Internet, leading to the installation of a program called Freeze, which eliminates all downloads the minute the student logs off the computer (David Hempel). Always testing their limits, these students take great care to

keep these infractions under the radar. It is not always easy to monitor which sites they are on, Lynn Isaacs said, because they are very quick to minimize windows as soon as they see teachers approach. This problem intensifies in the library because different students are working on items for multiple classes. "They're constantly opening and shut it [hoping] that you're not going to notice it. They're supposed to be [working on] a research paper, and they're off doing something else" (Vivian Flack). But, as Charlie Goodyear said, it's still easy for students to sneak off to other sites even during a monitored class: "When you're dealing with classes of 25, 27 kids, it's not always easy to keep everyone on task."

Aside from the Internet, students can also find themselves in trouble due to their cell phone use. Lynn Isaacs said that she saw some teachers struggling with students texting during class. Like on the Internet, sometimes this can be difficult to catch (Claudia Diamond). These behaviors have lead to Vickville High School's policy that allows cell phones only during passing periods and lunch, but it's not always the students who create these problems. Tracey Epstein why she thinks this access is restricted: "Because they don't use it wisely; because they're kids; because we have parents who text their kids during school, and we have no control over the parents so we take it over the kids." Despite this concern, however, Tracey really did not feel it was worth much time worrying about. "I would have to say that this cell phone business and texting during school, and using text lingo for writing is minimal. It's a minimal problem."

While these infractions are relatively harmless and to be expected by youth who historically seek to test their boundaries, other infractions can be more malicious. Bullying has always existed, but the Internet provides another forum for these behaviors. This issue particularly concerned Vivian.

> Cyberbullying has been a huge thing… It's bad enough when we have bullying in
> high school, and that's been, that's always a huge problem—always has been,
> always will be—and we do all kinds of programs to combat it.

Dennis Albrecht explained that cyberbullying is one reason that social networking sites are available at school on a limited basis.

We even had a year or so ago a kid that took a digital. It was very clear that this was a set-up jumping or fight and the kid posted the digital video of this the very following day, and needless to say this made the scenes.

While bullying is one form of infractions that has a cruel edge to it, abusing the actual equipment and theft also fall into this category. (Karl Beamer). According to Charlie, this can lead to administrators spending hours trying to track the items down.

I know at the high school one of the big issues with stuff like iPods, because I was in charge of discipline last year, was kids leaving them around lay around and getting stolen. Then the parents expect you to find them when we're never going to find them. Once they get them, they're not going to bring them back to school. So I think one of the concerns is just the amount of theft and kids losing them.

Academic

Students can get into as much trouble academically as they can behaviorally when they use technology. With the instantaneous nature of electronic communication, some students have become more creative cheaters.

I think that we have trouble at the high school with the use of cell phone and texting friends during the course of a class, rather than listening. We've had some incidents where we've put students in a separate room to make up tests because they've been absent, and they text a friend what's the answer to…(Claudia Diamond)

The electronic storage of student files also provides an opportunity for students seeking out creative ways to share their knowledge. "I know there are certain instances in classrooms where people have access into other people's files, either for good or bad, whether it's to cheat or for homework," Charlie Goodyear explained. Claudia says it's these technological advances that make it "easier to cheat by some aspects, or plagiarize."

Plagiarism is an issue that has become more complex with the advent of technology.

Sometimes the kids having too much access can cause difficulty in, what I'm going to say, making wise judgments, and it's not all lumped into plagiarism but it kind of boils down to that. When the information spits right on the printer, it's like why do we need to put this into a different format? So, really helping the kids

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understand that just because they get the answer from the Internet, you have to weave that information into your learning, not replace that with learning. So that proved difficult at times. (Laurie Chandler)

Vivian has also seen this issue as she has worked with students in the library.

I've watched, again it's a little easier now to catch them, but they would just copy something off of the Internet and turn it in as their paper. The understanding of plagiarism and intellectual property has been a huge issue. And they can't see anything wrong with it. You can copy and paste it. Well that's not your thought.

Copyright issues also provide challenges for students academically because the Internet provides easy access to a multitude of images and sounds. While users like to use these items to enhance their products, the legality of this use can get students into trouble if they do not understand the intricacies of the laws. David Hempel is particularly concerned with this issue.

Right now, it could be more destructive than it is productive, meaning that when they go out and do a mash-up, they probably don't understand copyright laws and the kinds of things that are creative commons, those kinds of things that they need to understand. So, those are the gaps. When you expand learning from the regular classroom out into the virtual world, a lot of the creativity and things occur out there, is it to become a part of their daily lessons?

He returned to this idea later in our discussion, stressing that the availability of information creates a whole new academic dilemma for students.

Do you have permission to recreate? When something is published, at the time of publication, you own it. It's yours anytime you publish it. But if you give permission through a creative commons environment, then you're working in a total different environment which allows other people to create from your works, and we have to be very careful about the legitimacy and the correctness and the ownership of the content that's being recreated because a lot of times we might be calling it ours when in essence it's someone else's.

Funding

While funding was the issue that led to the least concern in Witt City, everyone but Lynn Isaacs mentioned it as having great impact on the inclusion of technology in Vickville.

> Our particular school district is relatively poor. In fact, I would take relatively out of it based on our economic status and the minority status here. [This] limits access to our kids' life experiences that kids in Beemer (pseudonym) might take for granted or even if a kid in Beemer lives in a modest income family, the fact that they are in proximity to a major metropolitan area gives them access to social resources, and cultural resources and experience that our kids, because of the isolation, may not get. (Dennis Albrecht)

This lack of funding leads to a deficit in available equipment, a fact that frustrated English teachers Tracey Epstein and Nina Jones.

> A conflict that I personally have is getting computers into my classroom, getting technology into my classroom, finding the time in the school to use that computer. I want to use the computer lab. Well, there's only ten, and you can't have them this and this hour. It's just an ongoing conflict. It's there, but it's not usable. (Nina Jones)

This lack of computers is not due to unwillingness on the part of administrators, Vivian Flack explained.

> Here, we have an excellent administration that supports technology, and if you have an idea, you can bring it up and say, 'I think this would be a good idea,' and they're very supportive. Now, she (Laurie Chandler) has to go fight the battle downtown. They're a little tighter with the money, and you understand that, but I do watch a lot of schools where they do have to fight pretty hard.

And although Laurie is willing to obtain as many machines as possible, sometimes, she explained, the problem is larger than just purchasing more equipment.

> Probably the biggest, and I'm going to call it frustration rather than conflict, is knowing what's out there and how it will help kids but not being able to utilize it because we don't have the infrastructure in place. That's been a conflict, and I see

that as that piece, if you don't have the backbone of the program in place or the plan, the technology plan, then you can't bring the other piece in.

David Hempel, too, saw this as a large piece of the puzzle that prevented the district from providing up-to-date technological resources. In fact, issues connected to funding were woven through the 45 minutes we visited. Network capability can vary from school district to school district. Finances play a major role in how the district's infrastructure is designed and maintained.

Here's where you get into some problems because not all school systems have the same network capability. In other words, if I'm streaming video, that takes a lot more speed in the network than if I don't stream. So the type of network systems, the type of constructions of networks really is some of the barriers. The amount of information that is traveling and the bottlenecks you get into can actually keep you from doing some innovative things.

Aside from funds available to schools, the financial situation of the students and their families can also impact the decisions schools make in regards to technology, David said.

The other thing is the affordability of that technology, and you cannot provide equality of education unless all students have the opportunity. And I think that's where you get into some of the situations where all children have the same opportunity to learn, so where some kids can afford blackberries, where other kids cannot even afford a computer at home, so those are some of the things that you talked about, negotiating, and who can afford the technology and who can't. And that's where the big gap's going to be in the future—those who can afford it and those who can't, and that was predicted a long time ago.

Charlie Goodyear agreed with David, pointing out that teachers cannot expect students to integrate technology into their learning when they do not have the money to pay for it.

Sometimes there's financial boundaries as far as making the technology available. You don't want to feel like you have to force someone to buy a $250 iPod just to go to my class. At the same time you don't want the one kid who can't afford it to be left out because their family doesn't have the financial means to pay for it.

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Funding does not just restrict whether or not families can by the technology extras like iPods and blackberries. As David pointed out, many of their families cannot even afford computers and the Internet, items that many families in the US see as integral parts of their daily lives. Charlie said this influences what teachers can ask students to do.

> I think around here with our diversity a lot of our students don't have computers or don't have the financial ability to pay for Internet at home so we have to be careful with what we send home, what we expect them to do outside of school time.

Despite these limitations, Karl Beamer said, "There's a lot of things you can do." As the new technology director for the district, Karl has made putting this technology into the hands of students one of his top priorities. One program he has implemented is recycling the computers that the district replaces with new machines by giving them to incoming freshmen at no charge. As long as there are available computers, he plans on expanding this program to other classes because "they're no good over there in the warehouse."

> Despite these creative approaches, though, David predicts that students will never learn up-to-date technology because the government does not provide the funding needed to make this happen.

> In a lot of ways it's sad, but then again public ed has always been behind in funding. If you look at who gets the funding first, it's usually the military, and then the second one on the line is usually business, the third one on the line is education, so by the time it trickles down to us, we're pretty behind the curve and it's just because of funding, availability and all of those things. And you know, if you want to prepare the kids for the future, you're really going to have to put the funding and the types of things ahead of everybody else, although they get it, they do get it. It's just that we're about ten years, we're always going to be about ten years to 20 years behind the curve. It's the nature of the beast.

Laurie said that it's this financial aspect that is her biggest fear when it comes to working with technology.

> [I'm] afraid of not being able to stay up with everything that needs to be done. I mean that's the bottom line. It can really eat up a lot of financial resources in a short period of time, and when something is outdated, what do you do with it?

You've put this large chunk of money into it, but now what do you do with it? If we're going to stay up with what kids need to know, we need to have the next thing. That's the biggest frustration I see.

Yet Dennis Albrecht believes that this concern will soon dissipate as technology continues to become more affordable.

The reality is that as we're moving forward, the technology is actually becoming more economical, more accessible, so the fear that there's going to be have versus have not, I think actually, the haves will be the first to get the new iPods or the new iPhones, or whatever, but it's only a matter of six months to 12 months lead because the prices of those are going to drop to the point that a $100 laptop project, computer project, is almost a reality.

Change

For every respondent in Vickville, the rapid changes of technology and these changes' incompatibility with the structure of most schools caused concern. Whether the change encompassed classroom practice, teachers' understanding or students' knowledge, change dominated much of our conversations. When discussing change, Karl Beamer said that he has not seen much change in regards to how teachers use computers and technology, although the machines and their capabilities have transformed over the last several years. David Hempel agreed with this assessment.

I don't think the traditional classrooms, though, have changed that much, instruction-wise. I think that we're still in the same lock step agrarian that we came out with when we developed public schools, and that is the factory model. I don't think any of that's changed. I think there's some potential for it to change, but there is a huge learning curve, now.

Because the structure of schools looks very much the same as in years past, so do many of the strategies teachers use in the classroom. They simply have an electronic spin to them.

The use of technology, I'm afraid when I look at it, is unfortunately, many of the strategies that we're using, educational strategies, teacher-led strategies, are extremely limiting because teachers are so far out of the loop. They, at best, are

digital immigrants, and some of our teachers aren't even immigrants yet in that new world. As a result, often times when you see the use of technology, it's really nothing more than a typewriter process. I mean we could be back to a manual or electric typewriter. It's basically using it for word-processing, more than we are communication, more than we are research. (Dennis Albrecht)

According to Claudia Diamond, one reason this is true is because teachers who have not grown up using technology find it scary. As an instructional coach, she sees teachers with different comfort levels, so she tried to explain the mindset of these teachers.

This is the way I've always done it. I have lesson plans that match, and I really don't know how to integrate technology. And I think it's frightening. I remember when computers first came out and I had, I taught out at the college, and I had a 60 year old gentleman, and he was afraid that if he touched the keyboards on that computer, and that was the big old honking computer, he was afraid that it would explode if he touched the wrong key, literally explode. And his hands were just shaking, and I think we've gone from that but yet at the same time, I think there's still people like that out there that if I mess up even one key, I'm scared, and so we have teachers on that side of the spectrum to teachers just coming out of college that are so knowledgeable and they're not helping teach each other or communicating with each other.

Lynn Isaacs described a similar scenario, contrasting this reality with what students in today's classroom need.

I would say it's hard for teachers to change: paper, pencil, sitting at the desk, teacher lecturing, students receiving information and soaking it in and getting it and understanding it. Now our kids need hands on things. They need to be active in it and responsible for it and experimenting with it. It's hard for us, and we're scared of the unknown. That's sometimes where our educators fall. They're great teachers but it's old school.

This tendency to cling to the comfortable, Claudia said, makes teachers suspicious of technology.

I think the old way of teaching sometimes, we get too grounded in that and think of technology not as a help but as a (searches for word) antagonist. I don't know

what word to use, but it's almost like they think of one in competition with

another rather than using technology to enhance what they're already teaching.

It's just something that they want to get rid of. Turn off your cell phones; turn off

your iPods; turn off your computers, and lets learn something. Whereas, it really

could be an avenue to learn more and greater.

This viewpoint concerned Claudia so much that she returned to it later in the
conversation, asserting that "they've got to change the mindset that it's a bad, evil thing
into it's a really good thing."

Some of this mindset may stem from a misunderstanding of the true nature of
technology in today's world. Vivian Flack's response that she would rather talk to a
person than text, and Tracey Epstein's statement that she does not see a point to allowing
cell phones in school serve as a reminder that the world they grew up in is very different
from the communication world today's students reside in. Yet age is not the sole
determinant of this understanding. David Hempel, who is of the same generation of both
Vivian and Tracey, has a clear grasp on how technology has impacted today's society,
but he also recognizes that many teachers do not.

I don't even think that they're aware. I don't think that they have gotten to a true

understanding of what Web 2.0 and what Web 3.0 is or what the conceptual age is

actually going to be like. Again, I think the whole information age has passed us

by where we were accessing information and pulling information in because

we've gone to something entirely different now. When you look at Web 2.0, when

you look at Web 3.0 and you look at creative commons and all of the things that

are actually being built in the virtual world, I don't think they have, a lot of them

(teachers), even have a close idea of what that is unless you're in an age of

upcoming teachers where teachers have experienced it. They're the digital

natives; they understand it; they're bringing it with them as they come. Now will

those teachers be able to thrive in the existing educational world? To some extent

because again there's going to be limitations mainly because of the bureaucracy,

the existing policies and some of that has to change in order for that to work.

Because so few teachers really understand how much the Internet and similar
technologies have changed the shape of today's world, Dennis Albrecht said that many

schools mistakenly believe they are making progress basing their assertion solely on the availability of equipment.

> Quite honestly, I think it's easy, you could make a case that we're making great progress, not just us, any school district, by looking at the number of computers and the number of ports that we've made available, and the number projects that people have assigned that use PowerPoint or some form of technology. So you could make a case that look how much we're doing now that we weren't doing five years ago, but the reality of it is, look at the business community and the world and what the kids are doing before they get here, and we might have made ground, but the reality is that the ship is going at a 100 miles an hour and we're swimming at about 15, so we're making ground, but we're losing. The liner has long since left us.

For the teachers who do understand the direction technology is taking us, however, they often face battles with the teachers who do not. Claudia Diamond has witnessed this in her work at the high school.

> There's kind of been teacher against teacher when one teacher wants the use of iPods and technology because they know how to use it, so that they're trying to get their kids to bring those in, and then the other teachers saying, no, you have to leave those. Don't even bring them to school. I don't want to see them. If I see them, you automatically fail.

Tracey said that in addition to sending conflicting messages to students, this battle can also lead to problems for the teachers who do allow students to use their personal technology in class because students question those who do not allow the use. This can lead to tension among staff. According to Charlie Goodyear, another consequence of the misunderstanding of the nature of the change in technology is the mistaken belief that it will change back to where it was before.

> I think sometimes we lose the battle with technology because I think teachers have gotten in a rut because it seems like it's too big of a headache to try and deal with this. I don't want to go through all the hoops with this, so I'm just going to teach my normal way…I think a lot of teachers think it will go away... I'll be

patient, not mess with it, and it will go away in a couple of years. It's not going to. Technology is here to stay.

Technology is here to stay, and Dennis says that its rapid pace "forces teachers to get out of those comfortable boxes." David Hempel believes that once teachers really begin to understand how the new technology works that they will begin to embrace the change.

> I think teachers, once they saw kids making daily contributions to that, the wealth of information that could be built in a collaborative environment and how knowledge grows, that they would be less fearful of it. But I think a lot of times the deficit is understanding it, how it works. And a lot of times you want to know how it works versus that of how to apply it because learning how to create a wiki is not very difficult; learning how to apply a wiki is another thing altogether and how that's going to allow knowledge to mushroom.

David stressed that once schools begin to truly understand the nature of the change, that they will have to change the way they approach schooling.

> I don't know whether or not we really know what it is, overall. And I think once the light bulb comes on, I think there'll be a huge change in the way we do things. We'll have to change our frontal delivery style. We'll have to go to facilitating learning versus that of the sage on the stage. Things'll have to change drastically in the classroom, too.

But, this change will have to be much more widespread than at the local school level. State testing required for schools to obtain federal funding dictates much of what schools do with technology, and these standardized tests reflect a view of more traditional skills. Testing can even impact the actual physical set up of the school.

> This concept of hauling kids down to a quote computer lab, to me is really an outdated concept, and yet we're in the process of redesigning our middle school and creating a second middle school. The bond issue is going to go to the public in January. In the design is one computer lab per team. Now, the reality of that fact is that the state testing, which is now virtually online, if it isn't you're crazy anymore, almost requires that we have separate dedicated labs just for testing purposes.

Laurie confirmed Dennis's statement, pointing out that much of her school's technology can only be used for testing because the vast amount of testing required of schools.

> Being able to manage when we can test has been incredible. We already have a master schedule for the entire year of testing, and our four computer labs are tied up for 75% of the school days, just for testing. So, that really limits our ability to use it for instruction.

Despite these limitations, Charlie said that this testing does allow teachers to tailor their instruction to individual students because the results are almost instantaneous.

Another aspect of change revolves around the students themselves. Vivian pointed out that students' knowledge about technology was much greater than that of most teachers, and Karl called it a "separation of generations." For Tracey, this has resulted in learning about technology from her students: "They're very comfortable and not afraid of the technology at all." This comfort is not accidental, because, as Dennis explained, today's students' brains look very different from the brains of past students.

> What we do know from functional MRIs and all other brain studies is that our kids are wired differently, they truly are, and if we don't teach in the manner in which their stimulation has already been established, we're not going to get them.

Besides the challenge of reaching students in their own language, the adeptness of students and technology has also lead to students who know how to get around the barriers schools place on technology, Dennis said. This can be stressful to teachers who are responsible for monitoring students using the technology. "Making the time to keep up with the technology, with how fast the kids are is difficult and scary," Lynn explained. She also pointed out, like Tracey had earlier, that students are eager to teach what they know. Perhaps, it would be wise for more teachers to listen because Dennis asserted that students will not be content to allow the separation between their out of school use of technology and their school access to continue in the manner it does now.

> They're not going to accept not having access to things that they know are faster, better or more appropriate use of their time and creativity than some of the million things that we're doing right now. I think we're clearly on the cusp of that kind of, probably, revolutionary change.

To get to this point, though, teachers themselves are going to have to change the way they think about technology, which means they will need greater access to training. This aspect of change came up frequently in our conversations. For some teachers, this means working through details beyond just the use of the technology itself. Nina explained that topics like classroom management also impact how teachers see the integration of technology.

> I think that teachers are also afraid of little things like the timing. How much time do I need to give my students to do this? What is a good time? What's not? When do I start to think, oh they're playing, they're not working. I think those are just time, class management issues with technology. How do you manage your class around it?

When administrators think of time, however, they worry more about keeping training at the same pace as the changing technology, Dennis said. Claudia echoed this idea, sharing her frustration with just how quickly knowledge changes.

> I mean right when I think I have something figured out, I'll collaborate with some other person and find out, 'well how the heck do you do that?' and then they have to teach me that part and then I think I have that figured out and then something new comes. It's ongoing learning, just constant—constant and ongoing.

Charlie said that this frantic pace makes it very difficult to become adept in any one program.

> You constantly have to review and upgrade and you spend so much time changing programs you never really get good at one—at least that's something I've seen here. You're always trying to come up with something new, which isn't a bad thing, but sometimes I think we should give one a chance before we jump into the next.

District programs are just a small piece of what teachers need to keep pace with in terms of technology, however. The collaborative element of the Internet results in constantly changing resources that teachers need to be familiar with if they are going to adequately prepare their students. Tracey explained that the sheer amount of information and programs out on the Net can be daunting.

I'm just confused as to how to use it. I wish I knew how to use blogs better. I wish I knew how to use the blackboard better, but I don't feel afraid of it anymore. That's not to say I haven't in the past. I've seen that I can't ruin it. I've seen that it's pretty flexible, and there's so much you can do with it, just endless opportunities.

Tracey was not alone in her desire to learn more, and as Dennis said, the administration was very willing to provide training. The problem, however, that faculty frequently raised was the lack of sustained support.

I think one of the biggest problems is we have training in the district but we have them once and then we expect the teachers to go run with the program instead of having continuous training. I think from learning all the new programs myself is that without continuous training you forget stuff easier. It's not like you're using it everyday, so as long as you're trained we can use a lot of technology. (Charlie Goodyear)

Even with these challenges, there was a definite understanding among the individuals at Vickville that change would continue to define technology and that schools would need to find a way to work within this reality. David said he felt that students would be allowed more access once teachers became more aware of the free tools and software that the Internet can provide. There are teachers, Charlie said, who do want to explore the options available to them, that "want to try anything." Although he said that each request would lead to more training, which can be daunting, ultimately the district encourages these requests. Dennis supported this observation.

Teachers need to learn not only how to use what we have, but, quite honestly, we need folks out there that are aware of the new trends: what's available, how things somebody's come up with, you know, we could use this more traditional thing in this way. If you don't have some dreamers and schemers out there going to conferences trade shows, etc, that can come back with the newest and the greatest, I guess, sometimes you don't even know you have things.

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Skillen

Like Vickville, Skillen would be considered a rural town. Similarities end here, however. With nearly half the population of Vickville, just less than 13,000 people call Skillen home, and unlike Vickville, the majority of Skillen is white. Picture the typical small town, and you'll get a good feel of what the town of Skillen is like. People smile and wave when you drive by. Very few chain restaurants or stores grace its streets. Yet, just 35 miles away, residents can find all the resources they need in the nearby suburb of Beemer (pseudonym).

Entering the schools feels much like it did 15 to 20 years ago. Students mill the hallways or greet you as office aides. Teachers hurry past. Just looking around the halls, one would find no evidence of the technological advancements that have taken place in the last ten to 20 years. This is not to say that the district is not aware of the technology or that they don't use it. What is lacking, rather, it the first impression of where the school stands. In Witt City, the first interactions between adults and students I witnessed immediately indicated that the use of technology was more restricted in that district. Conversely, as I watched the students with their phones and iPods in Vickville, I knew that student use was more tolerated. None of these clues exhibited themselves in Skillen, so it was only through conversations that I was able to get a better understanding of how participants viewed technology.

During my time in Skillen, I had the opportunity to visit with eleven individuals (see Table 4.5). At the district level, I interviewed Lindsay Lawrence, assistant superintendent for curriculum and instruction, Jessica Nokes, technology coordinator, and Jane Pendergrass, instructional literacy coach. The high school respondents included Thomas Riley, principal, Emily Tyler, English department chair, Bobby Visitor, a first year English teacher, and Chloe Yeats, librarian. While at the middle school, I spoke with Kevin Aiken, principal, Brenda Cavett, lead 8th grade English teacher, Roxann Empire, a first year English teacher, and Diane Goldberg, librarian. Skillen was the first district I visited, and interviews took place throughout the month of August 2008.

Table 4.5: Interview Participants in Skillen

Name	Position	Location
Lindsay Lawrence	Assistant Superintendent for Curriculum and Instruction	District Office
Jessica Nokes	Technology Coordinator	District Office
Jane Pendergrass	Instructional Literacy Coach	District Office
Thomas Riley	Principal	High School
Emily Tyler	English Department Head	High School
Bobby Visitor	First-Year English Teacher	High School
Chloe Yeats	Librarian	High School
Kevin Aiken	Principal	Middle School
Brenda Cavett	Lead 8th Grade English Teacher	Middle School
Roxann Empire	First-Year English Teacher	Middle School
Diane Goldberg	Librarian	Middle School

Once again, I began to identify the accessible technology in the schools (see Table 4.6). Then, during the coding process, the same nine categories emerged. Just as in the previous schools, the significance of each category varied, but dependency was a much less concern for individuals in Skillen than in the previous districts. Change, though, continued to top the list, as every individual mentioned this in some form or another. From least mentioned to most mentioned, the themes explored in the next sections include dependency, immediacy, safety, funding, misinformation, distractions, inappropriateness, infractions and change.

Table 4.6: Accessible Technology in Skillen

Technology	Accessibility
Gmail/Email Accounts	Accessible
Blogs	Limited/Sites opened by teacher request
Wikis	Accessible
Social Networking Sites	Blocked
Social Service Sites	Accessible
YouTube	Blocked
Instant Messaging	Blocked
Cell Phones	Allowed before and after school
Personal Organizers	Allowed
Personal Gaming Stations	Limited
Online Gaming	Blocked
iPods/mp3 Players	Allowed

Dependency

While dependency on technology caused great concern for members of both the Witt City and Vickville communities, only two teachers in Skillen mentioned concerns that would fall into this category. The face of dependency also looks slightly different in Skillen. One difference involved email. This was clearly an issue for the other districts as the expectations parents and other stakeholders increased as they rely more on email as communication. Members of Skillen did not mention this concern at all. Another dependency issue not raised in Skillen was the overlapping of students' outside of school writing habits like instant messaging language with their academic assignments. One similarity that came up, however, dealt with the reliance of teachers on technology in day-to-day instruction. Emily Tyler found this dependency on technology can create conflict when it doesn't work.

For instance our wireless labs that we have now, two of them with 25 laptops on each that we can wheel around to classrooms we haven't been able to use yet because it's not printing or something's not working on it. And then, it's kind of a snowball effect. Then those don't work, so then in the classroom we get behind or students don't have accesses.

Roxann Empire's concerns about dependency were more student-centered. She, like Kathleen Hess in Witt City and Vivian Flack in Vickville, found the increasing dependence on technology to communicate alarming.

It frightens me that kids are losing the ability to communicate face to face and that there's an intimacy that's lost when they're blogging, emailing, texting, instant messaging, whatever it is, and it just scares me to think where this might lead us as we go down the line.

Roxann felt that the dependency on cell phones, in particular, is so ingrained in kids that they will defy adults to protect their perceived rights to use them.

I see lots of battles over the cell phones. When I was a kid you wanted to get a car when you turned 16, and now it's cell phones. I think it's a rite of passage for these kids, and when they get them they have a very strong connection to their phone, and they really get resentful whenever you start telling them how and when they can use it, which makes them maybe a little more defiant and willing to take risks.

Immediacy

In some ways, immediacy can be closely tied to dependency, particularly in the way respondents in Skillen addressed the issue. Although no one in Skillen mentioned the reliance on email for communication, Kevin Aiken did say that students' ability to access their grades via technology has led to an expectation of immediate assessment, an expectation that is very similar to depending on email for more frequent responses. Kevin was one of three people who addressed this issue. An additional observation Kevin made about immediacy dealt with the impatience that can arise when information cannot be accessed quickly enough.

Some of the other challenges is having enough bandwidth. You know, we put all of this technology in their hands but if they don't have it instant (*snap, snap, snap*) it's slow. I mean, if I click enter, and it doesn't come up, 'oh there's something wrong with our Internet. It's too slow.' So the instantaneous, we have a need as adults, as teachers, as students, we have a need for I want that info instantly, and when that doesn't work, it becomes a challenge.

Part of the instantaneous nature of today's society arises from the change in delivery of information, which can be traced back to the Internet. Diane Goldberg explained how this impacts students. "They're the generation that's used to everything's very visual. Flash, flash, flash. That's how they like their information distributed also." Brenda Cavett said it was this change in expectations that makes it more difficult in the classroom.

Kids want everything right away, and it's harder when you're expecting them to read a book, actually a hard copy, and they want to have it done in 5 minutes, because that's what they,re used to getting—information in 5 minutes—and when they have to spend time writing and or reading it makes it difficult.

For Diane, who works with the kids in the library, a troubling aspect of this expectation of immediacy is the effect it has on how they research: "They're a generation, I think, would be happy if they could type in a question, and they would get an answer and it would be right there and they just had to print it out."

Safety

Although it was raised more frequently than the previous two categories, like in Vickville and Witt City, safety was not a largely mentioned concern. Only four respondents raised any question about safety. As technology coordinator, Jessica Nokes saw filters as necessary to keep both the network and students safe. Chloe Yeats also felt that network and student safety probably helped drive filtering decisions. But while Jessica, Chloe, and Bobby Visitor only briefly mentioned student safety, Roxann Empire particularly worried about this issues in when discussing sites that encouraged interaction between users, "You don't know who you're talking to and our job is to protect the kids while they're here. We certainly don't want to give anybody access to them or promote

that." Because of this concern, Roxann supported using filters, although she cautioned that the filters are not always enough to protect kids.

> Until we have much better filters all the way around, I think it is a good idea to not let them go to the sites where sexual predators may, or predators of any kind, might have access to the kids. You know a lot of people think that middle schoolers are just little balls of hormones, but they still are little kids in a lot of ways, which you know. They're not mature enough to be able to discern who's genuine and who's not, especially in that forum.

Roxann felt that the safety issue went beyond sexual predators or even the bullying that some students engage in, a perception that the media has confirmed for her.

> I sent an article to my administrator and our school counselor that was out of the *Washington Post* magazine, and it was about these groups of people that actually choose targets, and they will basically bully, cyberbully these people and people have committed suicide. These people sit at home on their computers, and they're probably those people that would've belonged to a counterculture in high school as well and really have felt a sense of not belonging, and they find that sense of belonging and power when they enter into these organizations, but they seem to have very little conscience about what they do because it's not face-to-face. I think we're going to see more and more of that happening so when our kids have access to the internet, they also are exposed to those kinds of people and that frightens me.

> But while both Chloe and Bobby recognized that there is a certain safety risk

involved with the Internet, neither felt that it's any greater than many of the other activities people engage in. "There are sexual predators there, but dang it, they're at the mall, too, and they're at the coffee shop, and they're at the public library" (Chloe Yeats). Bobby echoed this:

> I understand that there are plenty of things to block, things that are very unsafe, and there's a lot of time wasted, I'm sure by kids, but the benefit outweighs, because, between you and me and the recorder, people who block are more afraid of the technology in general because it's too much to understand than they are seeing the benefit of using it.

Funding

The next three categories concerned seven participants in Skillen. Funding, however, received the least attention of the three categories with each of the seven who referred to the expense of technology only mentioning the topic briefly at one point in the conversations. This contrasted starkly with Vickville, which was concerned both about the finances of students' families and the district itself. Five of the respondents in Skillen spoke directly about budgetary concerns within the school, while Jane Pendergrass and Roxann Empire saw finances affecting students' home lives, impacting how schools could incorporate technology. For Roxann, this was one reason schools did not incorporate more technology into lessons.

> I'm not saying we couldn't find a way to work them in, but then you also have the added side of not every one of these kids have a cell phone or an ipod or whatever, so that's problematic. If we can't provide those things for them, it's hard to work it into the curriculum.

Jane saw the problem in even more basic terms. "I think there might be some conflict when you think about the families that can't afford a home computer, so there's economic things that come into play there."

In regards to the district, itself, Diane Goldberg predicted that restrictions due to budget would come in to play before too long because technology is so expensive. But according to Brenda Cavett, Thomas Riley, Kevin Aiken and Lindsay Lawrence, funding already affects the schools. Brenda explained that just the availability of the equipment is influenced by financial restrictions.

> We fight the fact that they tell us it would be hard and expensive to wireless the school with all the concrete and the metal. And we would like to write a grant and get portable labs but then you can't use them because you don't have the wireless access. So I think it's, stuff is out there that you can get, it's just what can be made available.

Thomas felt that this reality particularly frustrated new teachers who were used to working with newer technology in their training. Budgetary concerns prohibit districts from keeping up with the changes in technology.

As soon as you open the box, it's obsolete and schools unfortunately can't buy
stuff every year, so they're [new teachers] going to have three, four, five-year-old
programs, hardware, so the younger teachers coming in may have some
frustration with some of that.

But Skillen has made technology a major push for the district, so most teachers and
administrators expressed satisfaction with the equipment made available to them.
Because of this, funding had the most impact on the extras that some would like to have.
This can impact availability. "It slows the system down if they're [students and teachers]
doing a bunch of video streaming and looking at YouTube, so I'm sure we bog the
system down, so finances have to play a role in that, as well" (Kevin Aiken). Finances,
Kevin said, also prevent projects like one-to-one initiatives, which would provide all
students with personal laptops. Lindsay Lawrence confirmed this, "For the MP3 players,
that's strictly budget. I'd like for us to have some kind of initiative. We don't even have a
laptop initiative. That's just budget. That's strictly dollars."

Misinformation

Misinformation concerned more respondents in Skillen than it did in the other two
districts. Like funding, seven individuals mentioned misinformation, and no one lingered
on the topic for very long. The vast amount of information on the Internet attributed
largely to this concern. As Kevin Aiken pointed out, kids learn that just a click of the
mouse can lead to both good and bad information, which makes researching even more
challenging. Thomas Riley mentioned the same topic.

The Internet is a wonderful place to obtain information but you need now to be
doubly sure of what is the source of that information, how one-sided or how jaded
or who put out this information, how factual it is and those kinds of things.

As the librarian, Chloe Yeats sees this happening frequently, and like Vivian Flack in
Vickville, believes that the desire for immediacy complicates this problem. Students want
to use the very first pages their searches uncover. Because of this, Chloe spends a lot of
time working with her students to help them understand how to evaluate information, as
does Diane Goldberg at the middle school library. Diane's frustration centers around
students' insistence on using commercial sites, rather than the databases she promotes.

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Aspects of her lessons focus on the idea that as they grow older and move onto college professors will not deem commercial sites as valid. This does not always matter, because as she said, "For many of our kids, that's too far away, too far removed." While librarians see these issues pop up daily as they work with kids, Chloe points out that teachers also need to make this a focus, as well. Jane Pendergrass worried about how effective she was at doing this, recognizing that everyone needs to learn this skill, not just students doing academic assignments.

> I think that sometimes there's too much information, and I don't think that I did a very good job in helping kids be critical about. Just because it's the first thing that pops up when you Google something doesn't mean that's really a legitimate source. Or they print out reams of paper for this report, still not being able to pick out what the main idea is, what the main meat of the information is, so I guess in that way sometimes it can almost be too much information. It's hard to discern what's really valuable and what's just on the side. That's what I think about people that have an illness and they Google it, and it's like, (gasp) because it's everything and sometimes less is more.

When discussing reliable sites, inevitably Wikipedia came up. Because Wikipedia is built on a wiki platform, anyone can add information to entries. Despite the checks and balances that Wikipedia has put in place, both Emily Tyler and Bobby Visitor mentioned it as a site that they would prefer students not use as a primary source.

> I spend some time talking with my students about how that [Wikipedia] is not the end-all, be-all, and it's highly likely that some of it's not even credible. I don't allow my seniors to use Wikipedia as a source. I then explain to them, however, that I have used it. I have checked information before, but I always check it against other information and pull from a variety of sources to see the validity, so we talk a little about that. (Emily Tyler)

Distractions

Once again, distractions emerged as a concern for seven of the 11 respondents in Skillen. Like in Vickville, students were the primary focus of this concern, although Chloe Yeats laughingly admitted that "teachers are kind of like big kids though, so they'd

probably just play on YouTube all day, as well." All agreed that technology provides multiple avenues for students to explore, and these avenues do not always involve the work at hand.

> They're just distracted, just with a mouse and a click they have this whole world, and it's a lot more interesting to be doing that than it is maybe their English essay or something. They get distracted very easily as well. (Emily Tyler)

The Internet, in particular, with the various sites that students use at home can truly entice students' attention. This distractibility leads Roxann Empire to support many of the sites blocked by the technology department.

> When we're trying to get them to do things in the classroom, anything that involves the Internet, there's always the temptation for them to go to places that they go to at home to play certain games or the online communities where they supposedly have friends or to check their Facebook or whatever, which are things, in my opinion, that don't have a good place in the classroom.

But others view distractions as simply an expectation we should have when working with kids. To Lindsay Lawrence, distractions are an issue that educators just have to learn to manage.

> I guess I'm thinking screwing around in the classroom. You know you walk into the high school class, and you have 30 kids on the computer, and all of a sudden a screen goes blank when you walk by. You know something is going on. We've just got to figure out ways to deal with that because that's the world we live in. I can't think of too much access being a problem or a conflict. We just need to learn how to deal with it.

> While this may be the case when working with the Internet, educators in Skillen try to weed out other technological distractions by banning their use during the school day. This particularly applies to cell phones. Thomas Riley said that he did not allow cell phones for precisely that reason.

> It's going to be a distraction. They're a distraction anyway—and not only just student to student, but a big problem is parents. My God, it's not, yes you need to pick up little brother for his haircut or something after school, but you don't need to be calling them. You wonder how way back in the Dark Ages when I went to

school, geez parents called the school if they needed. The message still got there. I think it's just way too much of a disruption.

Roxann also saw cell phones as potential attention derailers in the classroom.

They don't need to be calling people while somebody's trying to teach them. I think that there's so many different things you can do with cell phones that the concern would be that it would become a toy and too much of a temptation for them.

And with all the new functions of cell phones today, ringing phones and verbal conversations do not encompass all the distractions cell phones can present. Thomas, Roxann and Chloe also brought up the ability to text their friends while in class. These things can lead to, as Bobby observed, "a lot of time wasted." So, this often means that students are not allowed to bring their personal electronics to class. "As a site of education, you have to have some constraints on distractions" (Jane Pendergrass).

Inappropriateness

Everyone in Skillen, aside from Brenda Cavett, mentioned the ability for students to access inappropriate material via the Internet. While inappropriate material has always been available, Emily Tyler felt that the Internet has led to more student exposure to undesirable material.

It's allowed them to, how do I want to say this, tempted them maybe into a not so positive, in terms of information, or just putting themselves out there, and the things that they see and then the things that they can do now with the MySpace. I mean, I think Facebook is okay, but, I don't know, just all the pornography, the cyberbullying, all of these things that are happening now online, I think all that has emerged with the Internet.

The existence of these sites means that the district has had to install filters to combat the ability to access them. For Lindsay Lawrence, this is not an ideal situation, "I'd like for us to have more [access] than we can, but we're forced not to be able to because of things that are out there." Jessica Nokes said that these blocks are the only choice schools have. "Yes, they can see and hear all that on their own, but we as a school have a responsibility to not be the ones to bring it to them." In the library, Diane Goldberg feels the filters have

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made her job easier because she does not need to be constantly looking over students' shoulder. "Before we had the blocks, we would have kids get into not good for school sites, let's put it that way—sometimes accidentally and sometimes not." Roxann Empire and Thomas Riley observed that it is possible for students to stumble upon inappropriate sites because of the sheer numbers of these sites. Simple searches often lead to the unexpected. Roxann explained that this had lead to the filtering of more than just text. Images are filtered, too. "I know our images are blocked on Google and Yahoo because you can type in something that seems fairly innocent and still come up with nude photographs or what have you." But whether it's images or text, Internet searches have led to complicated classroom situations. Thomas Riley recalled an example of this.

> One of the things of course, years ago, a few years ago, a teacher in a health class, kids had to write a little paper, a little research paper and of course a popular topic was breast cancer. Well you'd type breast cancer in and hit it, a whoa! for every one legitimate topical source that comes up, you've probably got five that we don't want, and then, of course, then it registers, and the tech people are 'well, so and so was on,' and of course this kid would never go in, and they're all shook up because they're afraid to be branded.

> While visits to these sites can occur by accident, this is not always the case. Jane Pendergrass said that "they (students) can tap into things that I would personally feel are not appropriate for an educational setting." But this is not a new phenomenon. Bobby Visitor pointed out that students were visiting these sites when he was in high school.

> When I was in high school before we had server blockers, tons of kids went on to the wrong site. There was the infamous whitehouse.org and whitehouse.gov thing, and one of them was a porn site and one of them was about the White House. I don't know if that's an urban legend, because I was too terrified to try it, so there's those types of situations, but that's an individual use policy and not a teacher projecting something.

But not all inappropriate material comes in the form of pornography. Sometimes, as Chloe, just like Vivian in Vickville, shared people or organizations with malicious intent create the inappropriate sites. Because students are not always the most savvy when interpreting information they can fall prey to these individuals.

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You've probably heard of the Martin Luther King site. It's like one of the very first ones that pop up if you type in Martin Luther King, and it's actually done by David Duke of KKK. It's horrible. It's horrible, so again if they don't get lessons on evaluating and using, they really still believe that it's probably true if it's on the Internet, and that one is so well designed. It looks very much like an informational site, and I don't even show it to the kids because it's so horrible.

Infractions

The trouble kids can get into using technology encompassed the second largest concern for residents of Skillen. While infractions, like inappropriateness, had ten respondents mention this topic, each person had much more to say about the behavioral and academic consequences students faced than they did inappropriate sites. Lindsay Lawrence was the only participant not to mention this category. The rest of this section explores both behavioral and academic issues.

Behavioral

Behavioral infractions caused the most concern in this category. At times, these behaviors manifested themselves quite mildly in the form of students using their knowledge to get around the blocks to access the information they are interested in. Emily Tyler said that students can take advantage of computer privileges while she works with another student. "If I'm back here working with a student or up there, I'll turn around…and students are so smart that no matter how many blocks we put up and block sites or whatever, they're getting on them." Jessica Nokes acknowledged that despite the blocks put in place, students can find ways around them using proxy sites. While sometimes, students use proxies to access their Facebook pages or other blocked sites, other times student motivation is not so innocent. "Some of these kids are smart, way smarter than any of us, and they can do things that could potentially be detrimental" (Emily Tyler). Jessica agreed with this observation. "We have a lot of good young minds that are able to try to hack into that network and everything else, so you're always seeing those. I'd like to put all the thinking to good." Hacking into the network breaches the security of the network and is a worry that always rests at the forefront of Jessica's mind.

Thomas Riley shared that this is not an unreasonable concern as he recalled a previous student who did just that.

> One year, a very bright young man, in fact he's probably graduated from KU by now, very bright with computers, he got into the system the spring of his junior year, and we caught him. [His] parents, I don't think understood, because this kid never gets in trouble, and we ended up suspending him, and had fortunately a small enough place the county attorney came and read him the riot act, too. Never filed any charges, but saying this is a serious thing here, and hopefully got his attention.

But it's exactly this type of student behavior that can prove very scary for teachers who do not have the knowledge to know what to look for. This, Chloe said, was a concern for her.

> That is one of my biggest fears: what they can do that I don't know. Not that, it's okay that they know more than I know. That's not what I mean. It's the damaging things that they can do that I don't know, and since I'm kind of in charge of in here, I feel like that's sort of a responsibility I have.

> Using proxies and hacking into the system were fairly mild, however, when one considers the issues of bullying students engage in through the use of technology. Roxann said that she knew from her daughters how adept students can be at keeping adults in the dark.

> My daughters can sit here and they can be texting and looking you straight in the face, and I know that most of the kids we see coming in have that same capability so that lends itself to cheating on tests, potentially all the way up to bullying. We had an incident last year in my student teaching class where a student in my class sent a picture of himself to another student, a female student, of himself naked. And they also had chosen some peers to send nasty text messages to and about and make fun of and so on and so forth. So, I see the text messaging as taking away the intimacy of face-to-face communication, and I think that teenagers in general struggle with their communication skills already because they're in that stage of development where they're figuring out who they really are and then to give them a forum where they don't have a face and, in a lot of instances, there

are no repercussions for the things that they say and do…I think that's kind of a slippery slope.

Roxann was not the only one to see that current nature of communication can lead to situations full of conflict. As principal, Kevin Aiken said that these types of situations have multiplied since he was a teacher.

Kids are more sophisticated in how they bully each other. There's a lot more cyberbullying that goes on than when I first started, even as a principal. I definitely didn't have to worry about it as a teacher. But I really worry about it now as a principal.

Thomas has also seen an increase in these types of situations spilling over into the school day.

All of these things have come up to where now a lot more things, before that happened outside of school, stayed out of school, now are being brought into school. Before in the good old days where there was fisticuffs, they took care of it behind the church after school, and that was the end of it. Now it just drags on and on and on, so a lot more social challenges along with the use.

Diane Goldberg felt that students' tendencies to engage in these behaviors were a large part of why Skillen prohibits students from unsupervised use of email in school.

I know it exists outside of school. I know it does, but here, they're not supposed to check their email and, as adults, we donít want to be the ones where it happened. You know, I wasn't the one looking over their shoulder, and they sent an email that was really nasty.

Brenda Cavett also stated that this misuse of technology and parental repercussions should it happen in school played a large role in the decision to block sites like Facebook.

But, Thomas said, bullying is not the only infraction that could bleed into the school day if sites were left unblocked. The content students themselves post on personal sites could develop into a whole new set of problems should these sites be allowed to be seen at school.

I think, also, it keeps a faction, because I know there's a gazillion, a huge majority of those kids have a Facebook site, have MySpace sites, probably have stuff on YouTube, and most of it is stuff out of school, which could be very embarrassing

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and so forth. If it would be allowed that then makes us start policing their outside activities, which is something I'm not really crazy about doing. If we would allow it, 'hey! there's video from a party the other night,' you'd see kids violating training rules or some things like that. Well, then you have to deal with it.

These concerns, paired with the cyberbullying issue, shape Thomas's view of allowing certain Internet sites in school.

It's a disruption. It's a protection thing for the kids because if we would allow it, what's to say so and so can't do something from room 105 and send to the library knowing their arch enemy's on there, and now you get into issues that then blow up…I mean I'm not against those sites. There's just a time and place for them. School is not the time nor the place.

Academic

Although behavioral infractions dominated most of the discussion, teachers and administrators at Skillen were not immune to the reality of academic infractions. While the issue of plagiarism played a large role in this aspect of the conversations in the previous two districts, Thomas Riley was the only one to bring it up in Skillen. He did not feel that this was a serious issue because most English teachers are very good at spotting plagiarized papers and locating their sources on the Net. Other avenues of cheating using technology did arise, however. When discussing this topic, Chloe Yeats referenced a young adult novel to help explain the issue.

There's a new book called *Cheaters.* Have you read that young adult book? It's really good, and it's about all the ways kids cheat. They have podcasts, and teachers think they're listening to music while they're taking the test, but they're really listening to all the American history dates or whatever.

Since reading this book, Chloe said that her suspicions are on high alert when she sees students using technology at school. All cheating due to technology is not so complex. Emily Tyler shared an example of students cheating using the simplest technology: the flash drive. When a student shared a flash drive to help another student store work, the student who borrowed the drive actually lifted a paper for an assignment. As Roxann Empire pointed out, cell phones, too, "enhance their ability to cheat."

Despite these opportunities to cheat and her suspicions about students doing so, Chloe did not really believe that this is a new issue for schools. "I understand that kids cheat really, really bad with them. Okay, we didn't have that (technology) and everybody cheated, too." Because of this, she did not support cheating as a reason to deny student use of technology. "I know they will be cheating with their iPod on, but rather than deny all iPods, cheaters are cheaters and they will cheat their entire lives."

Change

Like the previous school districts, change weighed heavily on the minds of the participants in Skillen. All 11 mentioned this topic in one form or another, but in our conversation, Emily Tyler touched upon all the various feelings she had about this issue. "I was scared of the Internet when I first saw it." Once she overcame her fear, however, she said she still did not feel completely comfortable with the Internet or other forms of technology. "Because I am not technologically advanced, I get frustrated when I'm trying something new." Despite this frustration, Emily acknowledged that she often appreciated technology once she learns more about it. "It's amazing how initially I'm frustrated, but once I figure it out and it works, it makes my life so much easier."

As Emily alluded to, fears and frustrations about technology often result from change. Frequently, this is due to its lack of history in the classroom. Lindsay Lawrence said that this can be particularly difficult for veteran teachers who have been teaching without technology for most of their teaching careers. "It's not that they're not willing to use it, but it's very different from what they've been taught, the way they've done things for 20, 25 years. Making that shift has just been a challenge." But technology has forced teachers to face this challenge, Thomas Riley said.

> They're making those adjustments from maybe the way I was taught. Okay, here's a 55-minute class. I'm going to lecture today for 55 minutes. You can't do that anymore. You've got to go 10-15 minutes and, boy, then we've got to switch an activity. Doesn't mean we've got a whole new topic. You just switch, maybe they're just sitting and receiving instruction, now we're going to have a hands on thing; now, we're going to work in groups; now you're going to do this by yourself. You know. And I think teachers are starting, of course younger ones

realize it because that's what now's being instructed in their preparation classes. It's coming around.

As a first year teacher, though, Bobby Visitor is not quite as certain that teachers are actually making the necessary changes because "they're fine with what they have." He worried that he might fall into the same routine of using the same lessons year after year, just like he said many veteran teachers do. Technology changes so swiftly that teachers who do this may not be recognizing the changes occurring around them.

> It's easier to pull out my lessons from last year and copies I had from last year and just make some more copies instead of do some sort of technological advancement or watch a movie or do anything like that. I hope that I keep doing [new] stuff. (Bobby Visitor)

When teachers do make the shift, however, often it looks very similar to the way things were done before. Technology just serves as a different delivery method. Take on line gaming, for example. Despite research that examines how gaming itself teaches a completely different set of skills (Gee, 2003), participants in Skillen either saw gaming as a distraction or as Roxann Empire explained, "they see it as a way to enhance what they're already teaching in the classroom, to use some differentiated options for the kids." This viewpoint is not unique to teachers. Government mandates about what schools are expected to cover can also shape the idea that technology is only a delivery platform rather than a literacy in itself, which can lead to the belief that there is not enough time in the school day to include lessons in technology.

> I think our curriculum is very standards driven and perhaps it's just lack of meshing what our objectives and standards are with what's out there, and so until maybe that's figured out more, we'll just say no to that (allowing access to technology) during our school time, and we'll use the things that we do know mesh with our curriculum. (Jane Pendergrass)

Stubbornly sticking with the way things have always been done may not benefit students, however. With the new technology comes a need for a new set of skills, and Bobby, like Karl Beamer in Vickville, believes that students' skills don't always reflect this reality.

> See, and this is interesting, what are students learning today that they weren't learning before? Not much. The other day I was talking with a couple of my kids,

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and [we] were talking about, I don't know, looking up a word or spelling or something and I said, 'just Google it,' and they didnít understand how to do that, which is strange. I assumed that, how I work in terms of technology if I don't have any sort of knowledge, I'm going to look it up on Wikipedia. I'm going to Google it, and I have been trained on how to find good information and how to read through bad information, and so I use that, as much as possible. My kids weren't able to do that, didn't think of that as an option, which was surprising to me because of the amount that they use technology in other ways. You know, in the amount that they're chatting, in the amount that they're texting, in the amount that they're communicating in that way, but they're not utilizing the stuff that's around them, which probably means they are being used by the stuff that's around them. If you're not a master of the technology, it's probably taking advantage of you in some way.

Students may not be learning the skills they need, but the way they approach technology differs from the way many teachers do. Jessica Nokes observed that the differences between the learner and the teacher define much of the change taking place in schools.

I think it's necessary to teach them those technologies because it's not going to go backwards. If anything, we're behind, and we've just got to keep going forward. We have a lot of teachers that are afraid of the technology, but there's not a single kid, even a kindergartener, who's not afraid to try. We need to catch up.

Jane also saw this as an issue to be addressed.

Kids do like to be on the computer. That's their world, and my world is paper, pencil, books, and I would like to be more proficient at using the things that's available, technology-wise, to help my students increase their learning and their skills, to engage them, to motivate them. That's one of my goals this year because there's lots of good stuff out there.

Teachers who do not set goals for learning about technology may find themselves even farther behind because Diane Goldberg pointed out that students' knowledge about technology continues to grow more sophisticated as years pass. This larger knowledge base also changes what teachers need to teach kids when working with technology.

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Kids are so much more technologically savvy by the time they get here. It used to be that they couldn't type, well some of them still can't, but it used to be that you had to explain everything. Now, they come and know how to do that. They probably know a lot more than me about some things. (laughs) But at the same time, I would say that their search skills are not any better. (Diane Goldberg)

Perhaps students' proficiency when using the technology prohibits teaching the skills they need because several teachers mentioned a fear of students who know more than they do. Emily said that this can be particularly troubling to her.

My fears have already kind of hit home, and that would be that my students know *way* more than I do in terms of technology. And that's just probably my biggest fear, is that I'm going to be the old woman left behind and these kids are just going to far surpass my capabilities. I like to be up, and I like to be a frontrunner in everything that's going on, and I think with technology, right now, I am not a frontrunner.

On the other hand, Thomas Riley did not feel the same intimidation. Rather, he viewed students as resources to refer to when teachers run into problem. For Thomas, the bigger issue in regards to student knowledge about technology is the way it changes how they approach learning. This, he stressed again, is a reason that today's classrooms must look different from those of the past.

Along with the generational gap is the attention span. These kids, having grown up with, I grew up playing Pong, versus now you've got these realistic games that just boom, boom, boom, boom, boom, boom, boom go along. Well, you know, that's carried over. Kids don't have the attention span. You have to have more frequent change of directions, those kinds of things, and that causes some issues with instruction as far as teachers trying to come up with instruction and class activities that can keep them engaged rather than okay, I'm going to talk now for 50 minutes and watch them slowly go into a coma.

Engaging students takes considerable teacher knowledge, however. Thomas said that while the younger teachers typically appear to willing to keep up with technology, veteran teachers approach it in multiple ways. "Some embraced it; some fought it; some begrudgingly went along with it if somebody could hold their hand through it." Part of

what shapes their reactions, he added, is how much longer the veteran teacher plans to stay in the classroom. Thomas said that teachers who will be retiring soon often don't feel it's worth the fight to try to obtain the necessary knowledge. As a veteran teacher in her 50s, Jane did feel that she needs to bolster her knowledge, but the discrepancy between her knowledge and her students can intimidate her. This intimidation was alleviated, however, when she began to learn more about the situation she finds herself in.

> I heard somebody say this, and I think it's very true. My students are technology natives. I'm a technology immigrant. I relate that to stories that I've read about people immigrating from the Old Country, how the children learned how to speak English and were fluent within 6 months. The mother because she didn't have to go out in the work world, she never did learn how to speak English. And that's kind of a comforting thought. I'm a technology immigrant, so I am learning little bits and pieces here and there. They come to me, the students come to me, as natives, very proficient in lots of things. As an adult, it's uncomfortable saying I don't know how to do that. It's hard to do that to a peer, especially [hard] to do that to somebody who's fourteen.

For teachers who do commit to building their technology knowledge base, one challenge, Kevin Aiken said, is for teachers to apply their newly acquired knowledge in a way that impacts the curriculum.

> As an instructional leader, you want people to be able to use it in a manner that benefits student learning and not just in a manner of because this is cool. I've got to have the latest thing. It would scare me in that regard because if we're doing it just because we want to have it, it doesn't make any sense. But if we can impact student learning with it, then that's what we need to be doing.

As librarians, Diane and Chloe agreed with Kevin that some teachers struggle with really understanding why and how to use technology. Diane spoke of the suspicion that can accompany the sight of students who listen to downloaded books on their iPods or on the personal media players called Playaways that the library checks out to students. This version of reading looks very different than the perceptions many teachers have about reading. Research can also look altered because of technology. Chloe discussed this at length when she referred to the digital databases made available to students. Because of

lack of knowledge, Chloe said that many teachers automatically label these sources as unreliable because they were found on the Internet.

> I had a kid last year who had to turn in a college paper and since it came from a database, the teacher wouldn't accept it even though it actually was *Psychology Today*, so that's a real conflict. You can't tell the teacher they're stupid, which they're not, but you can't say, 'hey you need to get up with the times.' You can't do that. So that's really a conflict that I see. When I got my masters, I did it in the middle of the night when everybody was asleep, and I used the databases all the time.

As teachers learn more about these technologies, reactions like these may become less common. Chloe said that she has seen this happen with other forms of technology as teachers become more familiar with the benefits of their use, much like Emily referred to in our conversation.

> I think a lot more teachers have those things (iPods) now, so they're not as afraid. But when they first came out teachers, the older teachers who didn't pay attention to technology didn't want anyone to let anyone have them in their classroom because they didn't want to be mean. But now, pretty much all the teachers have them, so they're not as afraid of it, understand it. But obviously it so adds to learning. It makes things so much easier.

Due to the constantly changing nature of technology, this cycle of suspicion and then acceptance may continue to plague education because Jessica said that for teachers and staff who are uncomfortable with technology, training must be done in "baby steps." Thomas believes that taking baby steps can actually amplify the frustration, though, because technology changes in bounding leaps.

> There's times I think I'm making some progress, and then I find out, oooh, with some things. I try to play around with it as much as possible to get a grasp. I mean I know I'm only using a minor fraction of whats available, so I guess maybe it's more of a frustration—frustration with myself because I'm not really allowing myself to jump into the deep end and go. And the frustration, too, is sometimes I don't have the time to play around with it as much as I would like to or didn't take opportunities in the past, those kinds of things.

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Bobby echoed the idea that teachers must immerse themselves in technology if they are going to truly understand it. He worried that even as a young teacher who is comfortable with current technology that he might also fall behind.

> I am missing out on things. There's something that's there that I'm missing out on that can be utilized in a proper way but I haven't caught it, because I haven't, because you don't dive into it. If you don't dive into [it], then you miss the proper ways to use these things, which is what the other teachers do when they're getting too old.

Keeping up with the changes is exactly why Lindsay said that she attends technology conferences. "Technology moves so fast, it's hard to keep track of what's out there."

The quick pace of changing technology means that teachers need constant training. This can be frustrating for teachers because just as they become comfortable using a particular piece of technology, they often find they have to learn a completely new one. Roxann said she had to make an adjustment like this when she moved from the elementary she student taught in to the middle school.

> We have SmartBoards, and I had a SmartBoard in the class that I student taught in. It was really nice, but I had to go to training to learn how to use it. Well, now my classroom this year doesn't have a SmartBoard, but I'm going to have an Airliner, and I've never used an Airliner, so I have to learn. I have to go to a training this year to learn how to use the Airliner. And I'm thirty…, I'll be 38 next week, and I have a little bit harder time learning how to use things now than I would have, say, 10 years ago. I feel that a lot of these things are, it just takes me a little longer to get the gist of them. And we've gotten the SmartBoards and Airliners within a 7 year time period, and I'm looking to teach for a minimum of 20 years, so that tells me there'll be three more huge, at least, three more huge technological waves that come through and change the face of our classroom. So being older, that's a little concerning for me, just my ability to gain new knowledge and to retain it and use it.

While it does present challenges for the teachers who need to keep learning about new technologies and for the district that needs to keep pace with the changes, Jessica explained it was an important part of her job to keep providing the newer technologies

and the training to use them. Kevin said that part of the challenge of training is making sure that teachers not only know how to use the equipment, but understand how to make "the technology real world so the kids relate it". Another issue that arises with training is ensuring that it takes place at the time teachers actually need it. Like teachers in Vickville discussed, training that takes place once weeks before the teacher plans to use the technology can be a waste of time. Jane talked about this, as well.

> I'm the kind of learner that when I need to know it that's when I want to be trained for it, so even though I sit through a lot of trainings, if I don't have immediate application, I forget, and then I don't do it again for another, whatever, several weeks, so I think ongoing training is very important.

Ongoing training is necessary to keep teachers abreast of changes, but unfortunately the desire to learn isn't always enough. Lindsay said that teachers battle time when it comes to including technology in the classroom. Diane agreed. "Time becomes a factor, too, because there just isn't enough time in the day. We tried to do a blog. I couldn't monitor it. I didn't have time." Brenda expanded on the time issue because while there have been tremendous changes in technology, there have not been many changes in the other tasks teachers are expected to accomplish. This makes keeping up the change even more difficult.

> With everything else that is required for me to do, I don't have the time to spend, and that's really what it takes to learn technology. Taking the time to mess around and to look and play on YouTube, play in Facebook and know what the kids are doing, but if you don't have that time, then you're falling behind them.

Another factor in terms of time is the increased demand for testing. Again, this school requirement focuses on standardized knowledge and does not reflect the impact technology has had on literacy. This can affect how much time teachers have available to them for instructing students in technology.

> Here, it's gone from not using much technology to using a lot to going back to not using very much…When I came here to this school, and we had computer labs in each grade level, I started team teaching with social studies, and we started doing projects together requiring PowerPoints, and I was learning to use PowerPoints… We started doing that and used technology quite a bit. We'd go in and do

research. They'd put together PowerPoints. We graded them on that kind of thing, and they would get a little bit more involved with a lot of clip art, a lot of things like that. Now that we are doing a lot of our state testing on line, it's gotten to where we don't have enough computer availability. So over the past couple years, I've toned down the amount of research I can do and the amount of team teaching that we can do because we don't have the availability of the computers. So I feel like I've gone backwards, but we have more technology. Just in the sheer number of things being done online now that the state is asking, I don't have the availability to do what I used to be able to do. (Brenda Cavett)

Situations like this, the inability to access the technology needed to keep up with the change, have led to Diane rethinking the direction she would like to see education heading. "I never thought I'd say this, but I'm leaning more and more to kids having some kind of their own personal computer." Kevin and Lindsay also said they'd like to see some kind of one-to-one initiative, which would give all students access to the technology they need to keep abreast of the change. Diane felt this was necessary because she foresees even more changes on the horizon. "I think we're on the way to why are they going to need to spell? Because pretty soon, I mean I see stuff being voice activated. Don't you?"

CHAPTER 5 – Merging Gap/Continuum Theories with Gap Theory

After I had finished identifying the themes that emerged within each district, I faced the task of answering the so what? Obviously, each of the themes (safety, inappropriateness, immediacy, misinformation, distractions, infractions, dependency, funding and change) played a role in determining how schools incorporate technology into instruction, but the exact role was initially unclear. Axial coding helped to clarify how the themes influenced this. After several attempts at constructing models to explain the relationships, I found that complicated diagrams could not adequately illustrate the interactions between technology and pedagogy. Rather, at the heart of the phenomenon lies a very simple relationship: in order to incorporate technology into current pedagogical practice, an adaptation must take place. Once I recognized this basic relationship, I was able to layer my findings from the lenses of the gap/continuum and grounded theories onto this initial premise, thus creating a model that explained not only how the stakeholders within schools identified their new literacy boundaries, but also how they negotiated their use within the classroom. This chapter seeks to explain each of the layers, beginning with the most basic relationship between technological evolution and pedagogical practice. Once this foundation has been laid, the chapter will then examine where the gap and continuum theories fit within this construct. Finally, the identified themes will be added to the equation, completing the model.

From Technological Evolution to Pedagogical Practice

Although the technological evolution has resulted in a technologically savvy student population, schools do not reflect this reality. With the advent of new information technologies, it would be easy to assume that schools, transmitters of information themselves, would embrace the possibilities these innovations offer. However, as Reidl (n.d.) pointed out, this idea does not account for what he calls the technology of schools. "Simply having access to an innovative technology, in this case technologies that can change the way we access and use information, is not enough to change the way

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information is handled in our schools" (p. 2) Much of this is due to the culture of expectations that surround schools. According to Levin (2001), school cultures are "built on tradition, habit, expectations, and images of what schools should do and be" (p. 4). Further complicating the resistance to integrate the change promoted by the new technologies is the inability of schools to envision a reality different from the one they have always known (Riedl, n.d.). In fact, society itself tends to perpetuate the expectations of a static education system by denouncing perceived deficiencies in knowledge that are attributed to the access of technology. Because the Internet provides immediate access to information, students no longer need to memorize facts. This can lead to an alleged laziness or inadequacy in education, a view illustrated by a comment made by Paula Flynn. "There's an article this month in *The Atlantic* about is Google making us stupider because, you know, it just gives us the answer rather than us having to search it out and find it." This idea supports Reidl's assertion that schools are "locked into a pattern that resists changes to technologies that don't sustain what schools already do" (p. 1). In Vickville, David Hempel, too, saw this as one reason that schools have not embraced the technological evolution.

> I think that we're still in the same lock step agrarian that we came out with when we developed public schools, and that is the factory model. I don't think any of that's changed. I think there's some potential for it to change, but there is a huge learning curve, now.

One reason there is such a large learning curve for educators stems from the fact that although today's technology is evolving more quickly than ever before, it is not the first evolution that has occurred since the current model of schools was created. In fact, if one examines the advent of television, we would find similar expectations of how television would change the face of education (Reidl, n.d.) Yet, just like today's technological evolution, the reality of the television's inclusion in the classroom did not mirror its use outside of school. This illustrates the relationship between technological evolutions and pedagogical practice. Because schools cannot neatly fit the expectations and practices of a culture that relies on technology for daily communication into their firmly established structure, an adaptation must occur. Only through this adaptation can

technology appear in a form that is acceptable to the educational framework (see Figure 5.1).

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Figure 5.1: First Layer of Grounded Theory
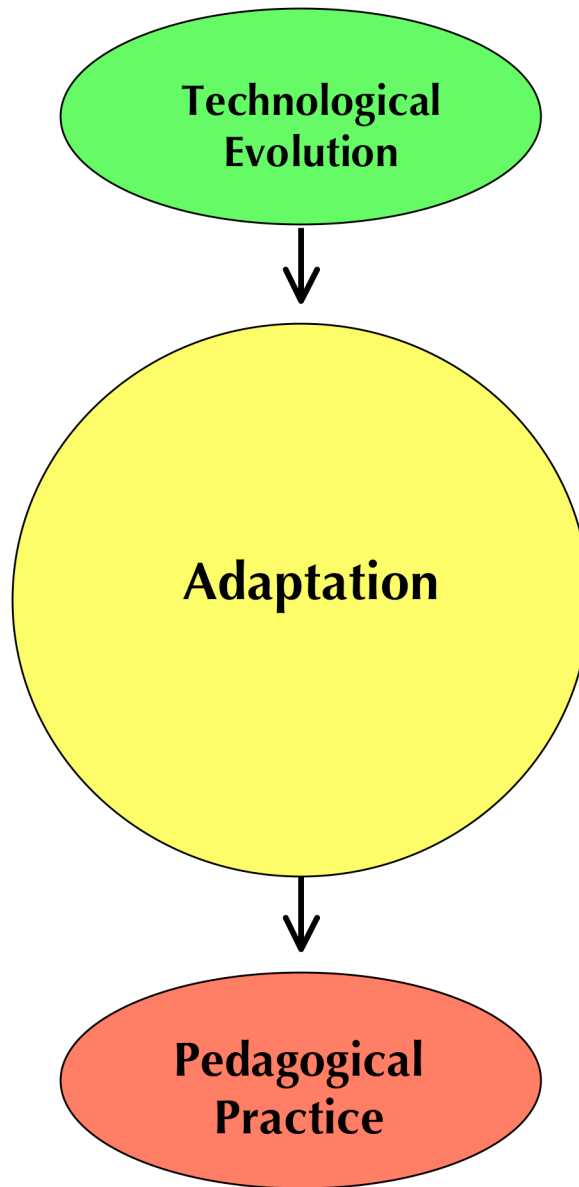
Adaptation

As discussed previously, the technological evolution does not exist in its purist form in schools because the culture it brings with it does not fit the firmly established culture of schooling. As Bobby Visitor asserted in chapter four, much of this is due to

fear: "People who block are more afraid of the technology in general because it's too much to understand than they are seeing the benefit of using it." It is this fear that leads to the adaptation of technology. The degree of adaptation varies across districts and schools. For some like Witt City, adaptation can be so severe that it verges on exclusion. Much of this is due to how schools perceive their roles and their student populations. For Witt City Alternative School, these perceptions have led to eliminating much of their student access to computers and other technology.

> Last year we had a computer lab and we did do some things, looking up some things, but that is just so fraught with them trying to get away with things that it just was not doable. So I don't know how helpful I'm going to be because with this group that I teach you have to be kind of old school. I mean I see all kinds of great things in the future with tech and how it can be used and adapted and all of that, but with my clientele, they just can't be trusted. (Paula Flynn)

While not all district or schools within districts go to such extremes, there does exist a need to at least modify the technology in every district. While some of this stems from the prescribed notion of schooling, another element that complicates the issue is fear. In terms of the latest technological evolution, much of the fear has been inspired by the vast openness of the Internet. "We can't control, we can't limit the scope of it, and since we can't limit the scope of it, we can't really have it in school" (Lynn Darby). Yet even in the most tightly controlled schools, technology in some form or another exists, which signifies that schools are not completely immune to the importance of technology. So how do schools determine what is going to make the cut? "The short answer is it's, the technology they have access to is more readily viewed as educationally grounded by the powers that be" (Dennis Albrecht). But even if the decision makers determine that an aspect of technology fits within the script of school, it's rare that these tools are used in the same way they are used outside the school walls. Once again, this is often due to the perception of how the technology fits with the goals of education.

> A lot of the driving forces are sometimes in policies and procedures by the district itself. Those are sometimes roadblocks. You can have the tools available to you, but sometimes they're frustrating because once I download Audacity on my computer and allow kids to start doing mixes with sound files and doing podcasts

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and those kinds of things, using the latest technologies, when you shut down your computer, and you open it back up, the programs are gone away because they use a program called Freeze. So, a lot of different elements there are restraining, which technology departments have gone to mainly because they don't want kids downloading unacceptable things on the computer and viruses, those things that seem to plague. (David Hempel)

Programs such as Freeze, as well as filters and firewalls put in place by the district, attribute to the adaptation process that schools use to cleanse the technology that students regularly use. When these precautions fail, as they often can when confronted with an industrious, bright human mind, schools fall back on Acceptable Use Policies, which outline very specifically what members of the school culture, students, teachers and administrators, can do with the technology. This signed agreement gives schools permission to render consequences to users who ignore the carefully outlined expectations of technology use in schools. In addition to restricting certain uses of technology, Acceptable Use Policies also ban those aspects of technology that decision makers believe have no educational value. Schools sift through available technologies, determining which fit within their educational belief systems. Only once this sifting process is complete can schools begin implementing these technological tools within their classrooms.

Pedagogical Practice

The adaptation of the technological evolution into pedagogical practice can look very different depending on the beliefs of the school, the district, and even the community that is served. Despite these differences, one commonality persists across all of these communities: a modification of technology does take place. Worldwide, today's population, regardless of age, race, socioeconomics and other labels that differentiate groups, seeks out technology to communicate, collaborate and solve problems. Users share information via Facebook or blogs, send quick messages through texts, and build upon each other's knowledge through wikis and YouTube. Yet, as Lynn Darby pointed out, in many schools the extent of technology's use revolves around research and keyboarding. At times, this does not even occur because, as teacher after teacher

lamented in all three districts, the majority of computer resources are being consumed by test prep or the tests themselves. This focus eats up the funds for many schools as the technology dollars available are eaten up by these pursuits. Nina Jones said that if she did have more technology available to her, she would use it daily within her instruction.

> I would use online references and resources daily. I use it (technology) for bell work. I think it's another mode, a modality, for teachers to type up work and save it on a USB stick and be able to use it right there in their PowerPoint. It's going to take away from writing out transparencies. It'd be a nice time saver. Now we all type them, print them and make a transparency of them.

Despite the desire for technology, layered within Nina's response, and the responses of many other participants, is the insistence on clinging to the known. Rather than envisioning new ways to implement technology that reflect its use outside of schools, most schools spend their energy on seeking out ways to make the technology conform to the techniques and methods most familiar to them. Yet it would be a mistake to assume that all schools approach the adaptation process in the same manner with the same outcomes in mind. Indeed, when examining the three districts of the study, all three held very different attitudes about technology's role in school. This resulted in dissimilar atmospheres within each school. Why these atmospheres are so varied becomes an interesting question because all schools are built upon the same premises of educating all through a very structured approach. Within the structure, however, are human operators and each person brings an individual belief system, which can create differences from school to school. To achieve a better understanding of the roots of these differences, one can use the lens of the Gap and Continuum Theories to examine why such a broad range of adaptations can occur.

Applying the Gap and Continuum Theories

As I began to examine how the themes affect the adaptation process, I looked at what each of the three districts had to say about the individual themes. Did the statements made by the participants seem to fall within the gap or continuum philosophy? To answer this question, I had to return to what each of these ideas represented. When faced with a

new text, what Bogdan (1992a) calls the seduction of reading begins. This interactive process pulls the reader in two directions.

> The first, moving *through* the felt effects of the aesthetic experience, undergone as though it were real, invites the reader's compliance with the seduction into the event; the second, moving *away* from it toward critical consciousness of the construction of the event, demands some resistance to the event. (Bogdan, 1992a, p. 11)

In today's world, in today's schools, this seduction often involves technological texts, and the very thought of this seduction sends members of the school culture scurrying to halt the process. In fact, as discussed in chapter two, schools often react much like Plato who denounced the newest technology of his time: the alphabet. Just as Plato feared that embracing the written word would degrade the oral culture he firmly believed in, schools and their stakeholders worry that increasing the use of technology literacies may negatively impact the traditional literacies valued by schools (Bogdan, 1992b). Yet schools respond differently to this worry. As evidenced in the three districts this study focuses on, some schools may tend to see their students as moving through these new texts, adopting habits that may be seen as detrimental to their literacy practices. Other schools see the potential of helping their students moving away from the texts. Then, there are the schools that hover somewhere in the middle, caught in the continuum and struggling to determine the best direction. Through an examination each district's response to the nine identified themes, I was able to gain a clearer understanding of where each district fell on the gap and continuum spectrum. Once one is able to understand the practices of the schools that fall in different places on this spectrum can help answer the question of how schools negotiate the use of new literacies within their classrooms.

Witt City and the Continuum

In expanding upon her definition of the continuum, Bogdan (1992a) describes this view as a "chain reaction from author to text to respondent, which begins with divine inspiration of the poet and ends with the passive reaction of the respondent" (p. 11). Upon examination of participant responses, it becomes clear that this is a view that is

shared by the literacy decision makers in Witt City. The depth of concern exhibited by those worried about the immediacy of accessing and posting information, combined with the frequent mention of dependency and inappropriate material, implies that the perceived ability of technology to influence student thinking and behavior plays a large role in Witt City's approach to its integration. Bruce Levitt, like others I spoke to in Witt City, believes that its mere existence within schools proves detrimental to student learning: "It's just a hotbed of potential problems, harassment, fights, on and on and on, if you begin to allow that kind of access." This statement parallels Plato's concern about written language. As Bogdan (1992b) pointed out, Plato never questioned that written language could teach something. Rather, his concern lay in the how and why it was educational. This appeared to be true in Witt City, as well. Respondents know their students are learning from the new technologies they engage in outside of school, yet they cannot see how or why it should be integrated into their educational setting. "They're clearly getting it, most of them are getting it at home anyway, so it's in entertainment form. They can do it at home in all hours of the day and night. They don't need to do it at school" (Julie Pine). This viewpoint has led to a response very similar to Plato's ban on poetry in the Republic (Bogdan, 1992b): Witt City has taken steps to restrict the access of technology within its buildings.

Evidence of this approach can be seen by the existence of the very few elements of technology that students do have access to in school. As Lee Babcock explained, the tools students are allowed to use are the ones that district employees can keep a closer eye on.

> I would also tell you that those are ones that we have some control over, that we can at least have somewhat of a gatekeeper of the information, that is filtered. Because we do have a responsibility to our students and our parents and our community to say we're only, we're going to the best of our ability, only put things in front of our students, information in front of our students, that is appropriate and has some validity, has some reliability to it, is not obscene, is not going to *corrupt* them in some personal manner. You know, obviously, there's plenty of stuff out there that is detrimental to an adolescent that we wouldn't want, and that's the reason we have the firewalls. That's the reason we have the

> filters. That's the reason we have a person pretty much, I wouldn't say 24 hours a
> day, but a major part of their job is to watch our network and when a student goes,
> or attempts to go, someplace they shouldn't go, they're red flagged, and that
> student gets a little, you mentioned instant message, there'll be an instant message
> sent to that student, saying 'watch where you're going.' And if they continue to
> go there, then it becomes a discipline issue. (italics inserted by author)

The use of the word corrupt is interesting in this explanation as it further supports the
assertion that Witt City subscribes to a chain-reaction or continuum view of technology.
As the top decision maker in curriculum, Lee's view permeates the district's approach to
integrating technology. Julie Pine who just recently left the elementary classroom to take
on the role of middle school librarian, a role that is often associated with a more open
view toward the dissemination of knowledge, expressed a similar opinion about student
use of technology. She supported the filters because many sites do not self monitor,
leaving students open to influences that can be, in her view, inappropriate and unsafe.
Using sites that contain this type of material, did not "reap any benefits" in terms of
education.

With such a suspicious stance toward technology, Witt City seeks to interrupt the
passive reactions of its students by seizing control whenever possible. Lee explained that
the inability to control technologies other than those accessed through the computer play
a key role in the decision to ban certain technology practices within the schools.

> That lack of control causes, may cause, can cause, issues in sense of we can't
> control the texting, and what sometimes happens is that creates into some
> problems, socially, for students, or cheating because of that. We don't have a
> filter for that.

The district's ability gain more control of technology did not occur immediately. Just as
technology evolved, so did the district's ability to tighten security. Ironically,
technological evolutions can hamper the use of technology just as much as they can
streamline processes for users. Witt City took advantage of some of these systemic
developments to bolster the district's defense system. Caroline Caan explained what this
looked like before current practices were adopted.

Before we kind of restructured our department and also revamped our own

hardware and software in the back end, we didn't have a great system for

monitoring students, and so even though we had the basic content filtering to meet

DESI standards, we had students that were able to hack or try to hack. So now, we

have the ability to track those students and shut them down immediately, but we

always have the challenge of our students are too smart for their own good

sometimes, and they either try to hack the network or they try to use proxies to

bypass all our security.

In addition to the district infrastructure, Bruce Levitt explained that teachers do not allow

students enough freedom on computers to give them opportunities to try to get into

forbidden sites.

With the increased restrictions on student access to technology also came

limitations on what teachers could do with technology. Once again, Caroline provided a

then versus now snapshot of what teachers can access.

We used to allow teachers to do video and audio streaming, but they bogged

down our network so much that we couldn't do that because they would just play

the radio all day. So, it's really, we used to allow iChat, and we had to block that

because we had some teachers that weren't inappropriate, but they weren't using

it for instructional purposes; they weren't using it for team collaboration. They

were using it to talk about the game they were going to go to that night, so we

definitely have some of those difficulties when you, there's a fine line of giving

resources and then them balancing it with using it strictly for instructional and for

curricular and being able to monitor those.

This snippet of conversation, as well as other comments made by Caroline, suggests that

Witt City truly embraces the philosophy set forth by Plato. Not only does the district

question the educational value of the technology for students, it also has reservations

about *teachers'* ability to separate themselves from the continuum and use the technology

in a way that enhances classroom learning. Just as Plato controlled the initial influx of

poetry into the Republic before completely banishing it (Bogdan, 1992b), the technology

department in Witt City dictates what can be accessed in schools.

I don't think we really have the searching the Internet problem because our technology department blocks every single site that could possibly pop up. I mean teachers can't even have email, besides the school one, because they just block everything. And one that that upsets me sometimes is that I'm trying to find an educational article or something, and it has a word in it that the system detects is bad, and it blocks me from the site. Or, and what I just had a problem with recently, is YouTube is blocked by the school, and yet it has commercials and interviews and any kind of thing that you want to use to go along with your lesson. You can't access it on your computer. The technology department helped me get to certain videos on YouTube from my computer, but it was a long drawn-out process, and I probably will never try to do it again because it took way too long just for one little thing. (Jill James)

Practices such as these make integrating technology into lessons difficult, if not impossible. This has led to very ambivalent feelings about technology. This ambivalence can be very divisive as teachers and students seek out ways to integrate their out of school literacies with their daily school lives.

[We're] fighting the battle to let students know that there's great things about technology, but it's almost like students are programmed to go to the not-so-desirable aspects during school. So, it's almost like we're constantly the computer police, and even it trickles down to administrators. I think that's the battle: being able to focus on the positive aspects of using technology but then as being seen as just locking it down, so we're basically word processing and being allowed to go to a few educational sites. (Lynn Darby)

For teachers like Diane Mather who can see the possibilities technology provides, the issue can be disheartening. She sees the Internet as possessing a "wealth of information," yet teachers in Witt City are unable to tap into it. "It's like having a library, and you don't get to go. The door's locked. Sorry." For Plato the locked library would have held shelf after shelf of poetry. For Witt City, this library contains hyperlinks and search engines that can lead to boundless unmonitored information.

Despite Witt City's strict adherence to the continuum stance, however, there are individuals who recognize this is not only approach one can take toward technology.

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"Our district is probably more restrictive than others you're going to talk to. We tend to lock things down rather than having it open and dealing with the issue, with kids getting into it, a little more conservative than others" (Walt Garland). Jane Nichols believed that loosening these restrictions might make school a bit more relevant. "I think it (technology) helps do real-world activities, real-life activities, connects what we do in school to their life because a lot of what we do in school isn't." The likeliness of this coming to fruition any time soon seems a distant possibility, though, given the position the district holds in the overall continuum that represents Witt City's view on including technology within schools (see Figure 5.2).

Figure 5.2: Witt City's Position on the Gap/Continuum Spectrum

<u>Gap</u>   <u>Continuum</u>

Witt City
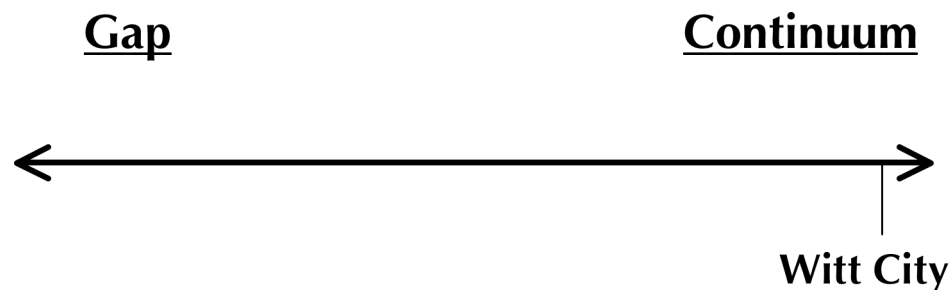
Vickville and the Gap

On the opposite end of the spectrum lies the gap, which Bogdan (1992a) states is the ability to step back from the text to achieve "aesthetic distance, which mitigates the effects of the aesthetic immediacy by enabling the respondent, through the distinction between the signified and signifier, to resist the seduction to merge with the aesthetic event" (p. 11). Critics who take on this view believe that readers have the intellectual ability to separate themselves from the text and make rational decisions based upon their own knowledge of the information, as well as of the intent of the author. While Witt City's technology practices did not indicate a subscription to this belief, teachers and administrators in Vickville came much closer to this philosophy. Once again, one only needs to look at the response of the key decision-maker, Dennis Albrecht, to get a clear grasp on Vickville's approach to integrating technology.

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The fact is, it's (technology) not something to fear, I don't think. It's probably something to embrace, but the transparency that technology is bringing to the world now is a very good thing because now you don't have the smaller handful of keepers of the good stuff or the knowledge.

This view contrasts starkly with the opinion held in Witt City where one department does determine who can and cannot access specific pieces of knowledge. Vickville has not always been of this mindset, however. Prior to the current technology director, Vickville employed an IT director who subscribed to the continuum theory rather than the gap. "He shut down access to virtually any of the, YouTube, or MySpace, or any of the sites because he didn't feel it was educationally appropriate the way it was being used" (Dennis Albrecht). Since replacing this director, Vickville has worked its way across the continuum, moving it very close to the gap end of the spectrum.

Participants recognized that their perspective on technology is not always shared across school districts, but just because they understand the continuum side doesn't mean that they agree.

You have a bit of a mentality and the same thing applies to technology, I think: 'Well, our kids just don't need to see that kind of thing. We need to protect them from it.' And I think that is so sad because you aren't protecting anybody from anything. You're just limiting them. And then when they're out on their own, they don't know how to deal with it. (Vivian Flack)

Opponents of the gap theory may not think that believers in this theory are blind to the dangerous or controversial ideas that texts can present, but this is not the case. Rather, gap theorists recognize the hazards, yet feel it can be more harmful if students are not taught how to distance themselves from the text, thus achieving the gap.

I know it brings a catch-22, but I think they have to have access to it. I think that's the only way we're going to reach them and reach the way the world's going. We can't separate ourselves from what they're going to have available when they're out in the work force because that's our goal is to educate them to be ready to go out in the world. They're not going to stay in school forever. We like to keep them in a bubble sometimes. (Claudia Diamond)

For Claudia, the threat of students misusing technology was not enough of a reason to prohibit its use in schools. She said that she thought the educational opportunities technology can provide students and teacher can outweigh this misuse. The district's new technology director, Karl Beamer, agreed. "Give it to them. Give them everything and teach them what's appropriate and what's not. Why have it if you're not going to use it?" Because of this attitude, students can access social networking sites before and after school, as well as certain YouTube sites, which is a departure from the strict control Witt City has on these sites.

Teachers and administrators in Vickville schools appreciate Karl's open approach to allowing access. The contrast between the current school year and past school year's under the direction of the previous director was raised in conversation after conversation. Much of this was due to the belief that to completely deny access to technologies that students use outside of school is unrealistic.

I think that's been a problem with schools already that sometimes our reality is not the reality of the world. When you got phones that take pictures, and you can do all these things with just a phone, I think, you can't separate, particularly when you've got kids that have grown up like they have. (Vivian Flack)

Aside from the inability to separate realities, the need to instruct students how to achieve the gap also weighed heavily on participants' minds. Vickville educators recognized that the new texts associated with technology required a new set of skills that are not currently taught in the present curriculum.

When do we teach kids what's okay to do and what's not okay? What information is okay to put out on the Internet? What's not? When do you need to be concerned about the other person that you're communicating with? At the high school level, I think that's too late. I think little guys are already learning too, but that doesn't fit into math and reading and writing and science and social studies. I think at some point in time it's going to be, it's going to have to be taught in the school systems in a formal setting. And it probably needs to be done well, early in their academic careers. When my nephew was four, he was on the, not that he was on the Internet in chat rooms or anything like that, but his ability to run the computer, was like, 'holy cow!' This is amazing to me. So those little guys, they're going to

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be out there. They're not afraid to search. That's the world they know. They don't know the world we knew, which was, didn't have access to it. That's been a part of his life, and so he's going to look at that very differently than I do. He's going to look at that as the main source of information, not another source of information. So I really think in the future, we're going to see very different learning situations. (Laurie Chandler)

Laurie's view was not a unique. As the principal at the high school, it was easy to see how her views were reflected in her leadership. Teachers looked upon technology as an opportunity to reach their students, as well as an avenue that needed to be explored when learning how to analyze information. The other three administrators I visited with shared this philosophy, as well. This was demonstrated through their openness to seeking out new opportunities to using technology, as well as through their push to train teachers to use what was currently available. Even more telling was their lack of excuses for why they could not integrate these tools. Often times in all three districts, I heard frustration from teachers who felt ill-equipped for instruction with technology. Age often became an obstacle. This was not the case in Vickville. In fact the biggest push for recognizing the change came from Dennis Albrecht and David Hempel, administrators who are in their 60s and 50s, respectively.

I am as you can probably tell, I'm an immigrant into this digital world because of my background, but I absolutely believe that that is the future we live in today and only those people that have the skills and adaptability to maneuver in the new world, those are the people that are going to be successful. And if our job, as schools, is to prepare kids, and really our entire society, to be able to meet the demands of this new world, we have to go that direction. (Dennis Albrecht)

Vickville recognizes that changing direction will not be a simple navigation. In a sense, the district itself believes the gap theory needs to be employed to simply understand the nature of the new literacies. Because the skills needed to read the texts associated with technologies are so different from the skills used in reading traditional texts, educators need to be able to step back and critically examine what needs to take place to successfully integrate these literacies in the classroom. This is not an issue that can be faced by emotion alone.

I don't know whether or not we really know what it is, overall. And I think once the light bulb comes on, I think there'll be a huge change in the way we do things. We'll have to change our frontal delivery style. We'll have to go to facilitating learning versus that of the sage on the stage. Things'll have to change drastically in the classroom, too. (David Hempel)

The technology department will not hinder this change. Karl firmly believes his role as director is to serve teachers in whatever capacity needed that will help implement this change. This change in direction is already taking place as Karl has begun to revise the district's Acceptable Use Policy because "it doesn't allow room for people to make mistakes." This distinctly different attitude is part of what places Vickville directly opposite Witt City (see Figure 5.3).

Figure 5.3: Vickville's Position on the Gap/Continuum Spectrum

<u>Gap</u>   <u>Continuum</u>

Vickville   **Witt City**
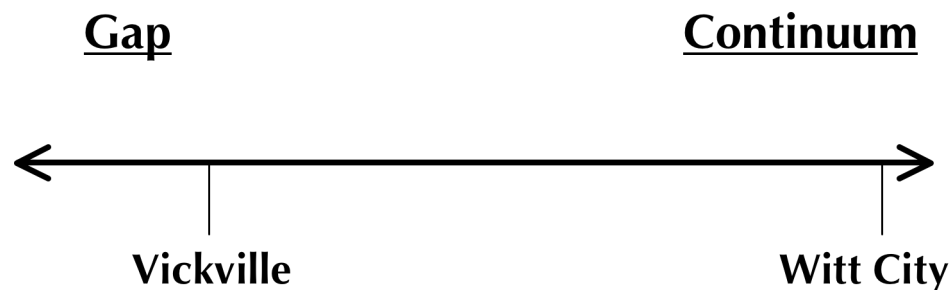
Skillen and the Middle Ground

While Witt City and Vickville found themselves on opposite extremes, Skillen was more moderate in its approach. In many ways, Skillen appeared to teeter back and forth between the continuum and gap as some decisions definitely appeared to be influenced by a fear of how the technologies would affect students' educations and behaviors, yet other attitudes were very open to the possibilities technology provides. This blending of philosophies created a district very different than the other two.

On the surface, Skillen seemed very similar to Witt City. Filters block sites such as Facebook and YouTube; students are prohibited from using cell phones during the day; and gaming is not encouraged. All but one Skillen participant expressed concern

about the ability of students to access inappropriate sites, suggesting once again the fear of the continuum's influence on young minds. Yet, the restrictions are not as tight. Whereas students are prohibited from accessing email in Witt City, Skillen allows students to use email in moderation with the focus on sending and receiving assignments so that they can work on them at home. Another significant difference involved the use of iPods and mp3 players in the classroom. Still, Skillen does not approach the level of access offered in Vickville, and educators in Skillen recognize that the district restricts more accesses than other districts in the state.

> At the previous school I was at, the balance tended to be more the other way. The firewall wasn't as strict, and when we would run across something (a student accessing inappropriate sites), the tech people would let us know and we'd deal with that. Now here, we tend to be a little more on the other side, a little more constrictive because of, I think, maybe, students. This isn't as rural a setting and maybe a little more sophistication, that kind of thing. That's been the biggest challenge, and how to use if for good instead of evil. (Thomas Riley)

Teachers view most of the limits on technology as stemming from the technology department, another similarity shared with Witt City. In Chloe Yeats's opinion, the strict filtering system results from the fear of the technology department.

> The hardest thing is the balance because the tech people, they have their fears, and they don't explain them to me sometimes. So it's really confusing why they shut this or that down. For instance, they're frightened to death of MySpace and Facebook. They don't understand that people today, that's how they communicate with everyone and yeah, there are sexual predators there, but dang it, they're at the mall, too, and they're at the coffee shop, and they're at the public library. (Chloe Yeats)

If these observations are accurate, it would suggest that the technology department subscribes to the continuum theory. Regardless of the accuracy, though, the perception persists that fear drives some of the decision-making processes. This perception can shade how others view the use of or lack of use of technology. Jessica Nokes acknowledges that her department and teachers do not always see technology in the same terms. "There's a fine line, and a lot of times between your technology department and

your teachers there's no understanding of why we have to be strict or why we need that in the classroom. It goes both ways." This lack of understanding of how the limits are established became apparent in my conversation with Bobby Visitor.

> That's a good question. I have no idea. There's probably someone who has a rational explanation, but it doesn't seem ordered or rational. They probably purchased a server blocker, and the server blocker does it's own thing. It probably has a one to five preference rating, and you say I want it to be five, lockdown mode, or I want it to be three, let some things in. I actually don't know how those things work. (Bobby Visitor)

For some members of the Skillen community, the method for locking down sites did not matter. Instead, they were just happy that the filters did exist because of their fear of what students could come into contact with on the Internet. This was a point where Dian Goldberg's view on the purpose of the library differed slightly from Chloe's. "I know as a librarian I'm not supposed to be for having blocked sites, but in a school setting it just has alleviated me having to stand over somebody's shoulder all the time." Roxann Empire also exhibited concerns that coincided with the continuum theory. She was particularly worried about the information students could find on blogs: "I don't [think] that every blogging site is blocked but the majority of them should be." For Brenda Cavett, the issue was a bit more complicated. Her position in the spectrum rested in the middle because she exhibited a desire to restrict access, but at the same time she felt a bit limited by the district's approach.

> I have no problem with the access. I do think in schools, especially in a middle school, they do need to be monitored and controlled like we do it. I think here, in some ways, our systems here at school don't give teachers the ability to monitor. It's done overall, and so if I wanted to allow kids to do research on World War II or D-Day, they might not be able to because the district has it blocked. I would like the ability to choose that's an okay website that they could go to, and it's a hassle here, so sometimes it's just easier not to assign something because of the hassle. (Brenda Cavett)

Like Brenda, much of Skillen's view of technology remained ambivalent, which explains why the district cannot be classified as completely subscribing to either the

continuum or gap theories. Kevin Aiken believes that the district is too restricting, but he respects the technology department's role in the process.

> I think we should allow them more access, but we have an IT department for a reason. I understand all the viruses and different things you can bring in, but it limits us so much in terms of applying it to the real world and what they'll actually be doing. There's some kids who are not going to go to college so in six short years, or even less for some—five if they're 8th graders. They're going to be out in the rest of the world, and they're going to have to know how to work these things, and they're not going to have the access they need to. (Kevin Aiken)

Kevin's concern, paired with Emily Tyler's experiences with teachers outside of Skillen indicate that there is at least some openness to the gap viewpoint. Teachers and administrators in Skillen are not so entrenched in the continuum that they dismiss technology out-of-hand. Rather, like Emily, many are sitting back and watching the dilemma unfold, holding their judgment until more information can be gathered.

> I've heard rumblings about teachers who think we should be teaching students how to do this [work within the new literacies]. We should be setting them up. We should be allowing them to get on there [the Internet and cell phones] because it's a form of writing, and it's the writing that they do. Texting, all of those things. And even our old principal said we have parents that'll spend 200 or 300 dollars on a Blackberry-type phone so that their students can have Internet at their hand, have texting purposes, all of these things, [so] why are we not teaching them how to write and utilize those technologies in our classroom? But then, you hear the argument on the other side, well it's a distraction and students, I don't know, just, is it really appropriate? Is it formal writing? Is it the type of writing we should be teaching them? Are they, just all different types of [writing], and I don't know. I think that's going to be the biggest, as our society continues to progress to this new-age type, all of this, we are either going to have to jump on board and follow it and find a way to equalize, I suppose, or we might be doing our students an injustice. I don't know, and I'm really not quite sure how I feel about it. (Emily Tyler)

Emily's observations are not the only hints that the gap holds at least a little interest within Skillen schools. Dian and Chloe both wondered why teaching students how to properly use the technology at their fingertips did not garner much attention in the curriculum. Their concerns rested not on the actual manipulation of the technology because they both recognized that students now entered middle and high school firmly entrenched in that knowledge. Instead, they felt that students need to be taught how to critically read and write with the new technologies, signaling their belief that the gap could, indeed, be achieved.

> Nowhere in our building do we teach that. We don't teach any kind of Internet safety. You have no idea what's on the other end of what you're involved in, so we don't teach that anywhere. You know, it's mentioned, but it's not really taught formally. (Dian Goldberg)

Of all the participants in Skillen, Bobby argued the most fervently for an adoption of the gap approach. He believes that only through direct instruction will students truly become critical consumers and creators of these new texts. Within his arguments, he recognizes that by its sheer vastness, the Internet can equip its users with more power than most humans experienced before its creation.

> With great power comes great responsibility, and if kids are not taught how to use it correctly then they won't use it correctly. That doesn't mean I'm a proponent of just giving them everything and letting them fight or flight, but you can have a proper time where you can sit down and say, 'I'm going to Google this, and we're going to show you how you can be safe…' If they know that they're going to get in trouble for looking at some porno site, they will do more things to be, and you can do things to be, cautious. You can go to a browser that's more kid friendly— I'm sorry not a browser, a search engine—that's more kid friendly, that's not going to show up [porn]. On your Google, you can say, Google Images has multiple options of security and you can do that, you can make yourself safe so that you don't get in trouble when someone's watching over your shoulder. And they have, the school has told us they can watch us at any time, so we need to be careful, so the same thing with the kids. They should know that they have all power, and they need to be very responsible with that power, or it will get taken

away from them, them, individuals. In my last school, that's what they did. If you were ever caught, even on your email without permission, you got it taken away, and that's great because it's there and available for everybody and all you have to do is say, 'Hey, I'm going to use my email now. I'm going to use it to send myself my paper so that at home I can, because I don't have my flash drive or something' and that just makes sense. (Bobby Visitor)

Like Bobby, Chloe believes that applying this guidance is more beneficial to kids who regularly use the technology at home. She sees the continuum approach as unrealistic and advocates teaching them practices that will benefit them both inside and outside of school.

I think if you teach, rather than say no cell phones in school, teach them appropriateness. Turn your ringer off. Don't text while the teachers [are talking]. If you look down, and it's your mom calling, when you can, excuse yourself, go to the bathroom. Because you wouldn't believe how many times the calls are from parents. The same with the iPods. Take the headphones out of your ears when your teacher's talking. I think it's more about teaching appropriateness in the world. (Chloe Yeats)

For Jane Pendergrass, recognizing the possibilities technology presents, as well as the different culture today's student are immersed in, can provide a different outlook on integrating these new literacies into the classroom.

They're contacting people around the world with questions, projects, ideas. They're connected all the time, and I try to keep that in mind when we ask students to work on your own. Do this by yourself. Be independent. I think there's kind of a whole culture. They're used to collaborating and talking. It might not look like what I would think of it as an adult, but I think that's what's going on for them. So the face of collaboration has changed? I think very much, very much, and [there are] positives and negatives that come along with that. (Jane Pendergrass)

Jane, like many other educators in Skillen sees positives, as well as negatives associated with technology. This ability to look at it from both directions, to see potential uses for the technology in manners that are consistent with the way students use it outside of

school differentiate Skillen from Witt City. While their practices may resemble more of Witt City's, their willingness to explore possible avenues of integration are much more consistent with Vickville's. It's this juxtaposition of practices and ideas that places Skillen toward the middle of the spectrum (see Figure 5.4), a position that I suspect more schools fall much closer to than either end.

Figure 5.4: Skillen's Position on the Gap/Continuum Spectrum

Gap   Continuum

    Vickville   **Skillen**   **Witt City**
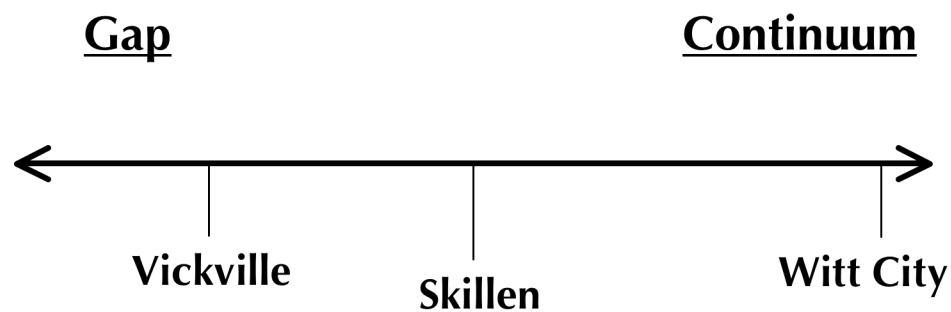
From Guiding Theories to Complicated Realities

Although humans, particularly educational policy makers, tend to like to wrap everything up into neat categories, as teachers who face individual students know, humanity is messy. No matter the sorting method, there will always be individuals who don't quite fit. The same can be said for individuals in this study. As a whole, the open practices of Vickville indicate a philosophy that follows the gap theory, while the restricted atmosphere in Witt City presents more of a continuum argument. Yet, as demonstrated in Skillen, there can exist, within a district, tendencies that subscribe to both ends of the spectrum. In both Witt City and Vickville, there were individual responses that suggested at least an awareness of the other side of the issue. This section explores these inconsistencies.

As a district that is very aware of the impact of technology literacies on students, Vickville is by far the least restrictive of the three districts. That does not mean, however, that they allow students to access whatever they want, whenever they want.

> There have to be limits and controls on everything. We don't grant unlimited
> drivers' privileges; we don't grant unlimited drinking privileges; we don't grant
> unlimited anything, and that's certainly the case with technology. Obviously, we

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need to know more, need to know more about the long-term impact that the use of

technology has on learning and brain development, etc, and at that point we can

make better decisions. (Dennis Albrecht)

For Witt City, limits and controls became the focus of their approach to technology.

Vickville took a different approach to this problem. Recognizing that their local cultures

cannot support unlimited access, Vickville frames their boundaries in a way that allows

students to work with technology in a more monitored setting. "It's a choice of sites and a

choice of monitoring because you are still held accountable for what occurs in the

classroom, and so you want to stay within the ethics boundary" (David Hempel). This

compromise, paired with the district's willingness to stay abreast of current trends,

creates a learning situation that acknowledges the importance of these literacies without

completely ignoring the concerns of the society the school serves. Because the district

does impose some limitations on access, Vickville cannot be considered purely placed on

the gap. Yet, I would conjecture that it's as close to the gap a school can get in today's

society, a society that still wrestles with the mere existence of the new literacies and their

implications.

Likewise, while the restrictions in Witt City suggest a strong continuum

philosophy, not everyone was completely comfortable with this approach. Take Bruce

Levitt, for example. Bruce spent well over an hour discussing the dangers he perceives

technology to present, yet even as he argued against allowing it in school, he

acknowledged that completely sheltering youth from the material on the Internet is not

always the best stance.

You can't wait until a kid's 21 and now, let's expose you to all, let's have you

exposed to all of the evils of life at the age of 21. By the time they're 21, they

may have already tried a lot of the evils of life. I'd rather have them see some of

the evils of life before they get there so they have, by the time they're 21, they're

their own person anyway, whether they live underneath my roof or not, and the

Internet is nothing more than showcasing what's already been out there for eons.

It is just so accessible, and you can't always provide the type of shelter or

structure or timeframe when that stuff gets presented to kids. That's, I think, the

biggest difference. What you would see in a Penthouse magazine, shooo, it's

there, right? So, you can make sure your kids doesn't have access to that, but they might down at Johnny's house at 13. 'Hey! Look at the dirty magazine my dad's got.' That would be the age-old way of getting to that. Now, of course we've got filters set in our house where those websites, they can't get to them. But how many people are doing that? How many people are not? That's the scary stuff. (Bruce Levitt)

Within this snippet of conversation, Bruce's conflicting feelings about technology emerge. On the one hand, he wants to be able to protect his children from accessing inappropriate material, but he also realizes that this is not completely in his control. This lack of control leads to a fear that shades the way he views technology. Similarly, Diane Mather also spoke of her very visible fear of predators on the Internet. Rather than completely eliminating access to technology, however, Diane felt that direct instruction of the Internet's dangers would be more beneficial to students, an approach that would more strongly resemble the gap.

I think that it would be helpful if we had things that we showed kids in class, realities of it, not just the 'oh, better be careful.' One of the news stations in Vann City (pseudonym), sometime in the last two years I think, had a program on on how easy it was to locate your daughter by her MySpace page. And it was things like, we looked at her MySpace page, and it took us 20 minutes to arrive at your front door, and we're here to interview you. And they'd done that for a couple of people, just because of the information that was out there, that she'd allowed out there. I think if kids could see something like that, and actually see what kind of way. Let's look at somebody's web page. How would we, if we wanted to find her? (Diane Mather)

Bruce and Diane's concerns were minimal, however, when one examines the conflict felt by Kathleen Hess. When we first sat down to talk, Kathleen said that she wasn't sure how much she had to offer the study because she is not a frequent user of technology in the classroom. Yet as the conversation progressed, not only did it become clear that part of this lack of inclusion stemmed from the difficulty of accessing technology, but it also became apparent that her lack of use did not prohibit her from examining the issues surrounding technology's use in schools.

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It's tricky. In some ways, as we feel, I'm sure both of us feel, about education as a whole that you're damned if you do, and you're damned if you don't about everything. We are asked to achieve the impossible on a daily basis, and this is more achieving the impossible because if it's our responsibility to teach our kids how to be critical thinkers about technology that's available to them, but if you give them the inch they take the mile. So if those things are available to them, so then they get themselves in trouble, and they're not really being academic, and they're not learning. You know it's a catch-22 on a daily basis with everything we do, including this issue, which is just depressing. (Kathleen Hess)

Despite her frustrations and the absence of technology in the classroom, Kathleen did feel that the issues created by a technological world need to be addressed in schools.

I think with proper guidance that most of the technology we have is important to education. I think they do learn things from it. I think there is good research out there to be had and that that should be available to them, and I think usage of technology is very clearly an integral part of our society and to shelter them from it is ridiculous. (Kathleen Hess)

Key to Kathleen's beliefs about technology is the issue of misinformation. For Kathleen, misinformation is such a major obstacle presented by technology that she feels it is imperative that schools teach students how to become critical thinkers, an integral component of the gap theory. And while she acknowledges that this can be a difficult feat to achieve with younger students, she believes that as learners mature, it becomes more and more possible.

I think we have to be very careful about how we teach kids to understand authenticity and the role of it. I'm not sure we'll get there. I think there are a lot of kids that aren't mature enough to be able to understand how to handle it. But I think as they get older they are more and more capable, and that it's our job. Just as it's our job to teach them how to measure ingredients, you have to teach them how to be cautious of misinformation. (Kathleen Hess)

Teaching students these skills is difficult in the restrictive environment of Witt City because as Kathleen points out, students "have to be sophisticated enough to be able to catch the text clues that lead you to believe this is not real, and they're pretty

sophisticated text clues." Trying to accomplish this without the ability to actually access the sites that contain the misinformation loses the authenticity of the lesson. Students lose the ability to find the clues in context, and must rely on the way the teacher presents the information.

> I think there's a way that you could teach them that, but you would still miss the lesson of here are the text clues, or screen clues I guess, for how you can tell that this is not a good site, like by taking them somewhere like Wikipedia or something like that. I mean I verbally say all the time that Wikipedia is inaccurate, and you can't do that, and of course I could print off articles at home, bring them, but it would be more laborious and a burden. (Kathleen Hess)

These concerns suggest that given the opportunity to work in an environment like that of Vickville, Kathleen might indeed turn more to technology to help her students achieve the gap. For now, however, Kathleen is left to struggle with the issues without an avenue to address them.

While Kathleen sees the issues raised by technology problematic for all students, Paula feels that her particular student population dictate technology's place in the classroom. As discussed earlier, Paula feels that the students who land in the alternative school are unduly influenced by technology and cannot be trusted to act appropriately when using it. This does not mean, though, that she sees all technology as lacking educational merit.

> There is a lot of intellectual development even in all the video games—the Sims and things like that. So many different levels is that a creative process and I can see using video games a lot if I was teaching in a different setting or home-schooling or something like that. (Paula Flynn)

Paula appears to view the gap and continuum theories as contingent on the students themselves. Because she works with students who could not make it in the traditional school setting, she feels that giving them the freedoms associated with technologies invites misbehavior. Yet, there does seem to be a willingness to explore the possibilities if she were presented with a different group of students.

Right now, the possibilities for Paula and others in Witt City are very limited by the district's filters, firewalls and Acceptable Use Policy. Without the ability to even

access the materials on the Internet or integrate personal electronics into the classroom, teachers cannot even begin to tackle the challenges posed by these new literacies. But Jane Nichols sees possibilities should she be allowed to access email or even social networking sites.

> I'm trying to think of how I could use it, but I know I could use those (MySpace and Facebook) as a way to show either what not to do or what to do and what maybe they should be saying on those things and what they shouldn't. Because they just put it all out there, and no one has a conversation with them about what they should be and what they shouldn't be doing online. (Jane Nichols)

And at the top of the administrative chain, Lee Babcock is not completely opposed to the possibility.

> You know, even though this is kind of a cultural phenomenon, the issue of YouTube and the, I guess the instrument of YouTube and the instrument of social network sites, I think eventually, if used properly, could be used as an instructional tool, as well. Right now it's where students go to socialize and entertain themselves, but could educators somehow use those two resources as an educational tool? I think eventually we could. (Lee Babcock)

The willingness of Lee, as well as a handful of others in Witt City to consider the potential of technology illustrates just how complex the issues can be. In fact, as Vickville has demonstrated in their shift from the continuum to the gap in the past year or two, one's position in the spectrum is not static. Key individuals, personal experiences and the cultural atmosphere can influence the approach a district takes. Yet at any specific point in time, it is the current climate, whether it be within the gap, the continuum or somewhere in between, that influences the practices of the teachers in the district, that influences whether or not educators become gatekeeper or facilitators of knowledge.

Schools as Gatekeepers or Facilitators of Knowledge

In an educational environment that has traditionally defined teachers as gatekeepers of information, technology has provided an interesting dilemma. The collaborative nature of technology begs for facilitation, but not all schools are

comfortable with this role. How districts perceive "the seduction of reading" Bogdan (1992a) thus, influences the how districts handle knowledge. In districts such as Witt City that fear technology's influence on student learners, information is tightly controlled through a strong filtering system. This results in schools serving as gatekeepers of information, a phrase that Lee Babcock even used in our conversations. Within the gatekeeper mindset lays a desire to protect students from the undesirable elements that exist within technology. This protection leads to a restriction of all potentially harmful texts, regardless of their potential assets.

Integral to the gatekeeper model are the privileged few who have the power to determine what information can be accessed and what must be blocked. This role can lead to power, and with power can come abuse, as Vickville witnessed with their previous technology director. Dennis Albrecht finds the idea of a "handful of keepers" of information problematic. Instead, he embraces the "transparency that technology is bring to the world." Under Dennis's leadership, the district has adopted a gap perspective on technology, which in practice translates to teachers and administrators adopting a facilitator role rather than that of a gatekeeper. Within the facilitator framework, teachers seek to teach students how to effectively use the tools now available to them. In a sense, they are working to create the gap.

Others schools, like Skillen, feel themselves pulled in both directions. On one end, students clamor for literacy practices that reflect the reading and writing they do during their own time. On the other rests firmly entrenched gatekeeper practices that schools have employed for decades. When these practices pair with the fear of the unknown, districts are left trying to assimilate all the messages coming from both sides. At times, this manifests itself in a silent tug-of-war between educators and students. Sometimes this becomes more vocal, though, as educators with differing viewpoints battle over which approach to take. For these districts, movement to one end of the spectrum or the other may not occur until more information about technology and the new literacies they bring can be gathered.

> Right now, I don't see anyone winning or losing. I think the arguments have been
> made. I think that people are considering; people are looking at that. They're
> taking it into consideration, but yet I think, and maybe we're just uncomfortable

right now, so we're taking it in, I guess, but I don't really see that it's an absolute never. I think that people are starting to realize the importance, but like you and like me, we're just wanting to learn more, wanting to know how is this beneficial. We certainly don't want to spend time doing things that maybe we shouldn't be. (Emily Tyler)

Determining their stance on distributing information, defining their practices as either gatekeepers or facilitators of information (see Figure 5.5), plays a key role in how schools adapt technological evolutions to pedagogical practice. This adaptation process, then, explains why the integration of technology into the curriculum can vary so greatly from school to school.

Figure 5.5: The Adaptation Layer
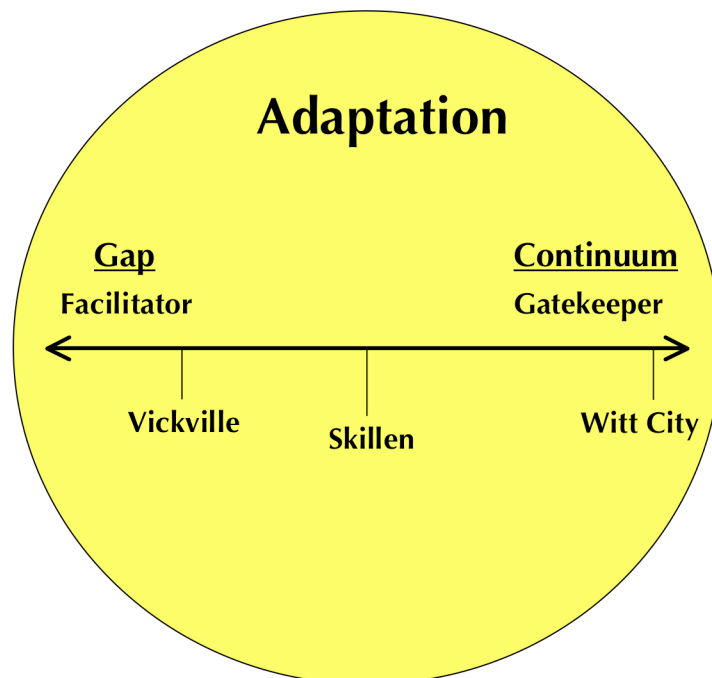
Further Examination of the Themes

In terms of adaptation, the gap and continuum theories help describe the approaches schools take in regards to technology. But what factors influence the gap or continuum perspectives? To answer this question, I revisited the themes that originally emerged during the process of coding the interview transcriptions. The process of

examining these themes through gap and continuum lenses allowed me to have a better understanding of the relationship between the themes. This made axial coding much clearer. Having already worked with the themes to examine the adaptation process, I quickly discovered three categories that encompassed all nine themes: perceptions of student behavior, perceptions of technology, and perceptions of the school's role in society (see Appendix G). While each of the nine themes emerged in all three districts, it quickly became clear that each district's perception of the themes influenced how the district approached the inclusion or exclusion of technology. This section explores how these perceptions help shape a district's adaptation of technology.

Perceptions of Student Behavior

Student behaviors or misbehaviors have always been a focus of concern for educators because the grammar of schooling requires students to conform to a prescribed model of behavior (Jackson, 2004). Yet, youth have always delighted in testing the boundaries imposed on them by adults whether at home or at school. So, it comes to no surprise that three of the themes mentioned by educators fall into this category: distractions, infractions and dependency. While all these themes have been extensively discussed in Chapter 4, it is important to note in light of the gap and continuum theories that individuals do not always perceive these three categories in the same way. For example, Jane Nichols in Witt City viewed technology as a distraction that "takes away from their learning," but in Vickville, Charlie Goodyear questions "are they distractions or are they vital to the content?" Likewise, infractions received similarly diverse reactions. For Tracey Epstein in Vickville, minor infractions are "a minimal problem," yet Emily Bobby of Skillen complained that students "can do things that could potentially be detrimental." Clearly, the perception of how students will utilize the technology, whether it's responsibly or irresponsibly, influences how schools approach the adaptation process.

Perceptions of Technology

While perceptions of student behavior have historical precedence in schools, thus resulting in a factor in this adaptation process, the very newness of technology and its capabilities led to concerns as well. Perhaps it was the unfamiliarity of technology that

explains why this category contained five of the themes: safety, inappropriateness, immediacy, misinformation and funding. Again, the perceptions in each of these categories varied from individual to individual. Diane Mather, for example, spent much of our conversation discussing her fears about the dangers of on-line predators. To Chloe Yeats, this danger is no greater in the virtual world than it is in the real world. Three of these perceptions dealt directly with content available on the Internet. Before the invention of the World Wide Web, access to information was not available at instantaneously and unfiltered. Now, sites that do not discriminate between users can deliver content that can be considered unsafe, inappropriate and misinformed. While not exactly content, the fourth theme of immediacy does relate to this concern because of the speed that information can be accessed and uploaded via technology. Only funding does not have a direct tie to technological content. This might lead one to question whether or not it belongs in a category labeled "Perceptions of Technology." Yet, it was the perception of whether or not students have the access to technology because of funds that led to individuals from each district to question whether or not it was feasible to integrate technology. I term this a perception because this issue was raised during discussions about the poverty experienced by families within the districts. Poverty does not always mean that students do not have access either in the home or somewhere else. However, it is sometimes assumed that lack of financial resources means just that. But as Dennis Albrecht, who resides in the poorest of the three districts, pointed out, technology is advancing so quickly that it has become much more economical, and often it's not a matter of having it, it's just a matter of how new the technology students possess is.

Perceptions of the School's Role in Society

The category of "Perceptions of the School's Role in Society" contains the only remaining theme: change. While it is slightly unusual to convert a theme into a category, the importance placed on this theme by all districts implies that change not only influences how schools adapt technology, but that the perception of a school's role in society also shapes how educators view change. Because this issue was explored at the beginning of this chapter, little space will be devoted to it now. Despite this lack of discussion, though, it's important to remember that the data in this study supports the idea

that educators' reactions to change directly relates to their perception of the school's role. If a school's job is to prepare students for the work world as Claudia suggests in Vickville and that work world revolves around technology, then change will be more readily embraced. However, if a school seeks to maintain the status quo, recognizing only the traditional reading and writing literacies, then change is viewed much more suspiciously. And these perceptions directly influence the adaptation process. This perception, combined with the other two, lead to grounded theory that developed from this study (see Figure 5.6).

Figure 5.6: Final Layer of Grounded Theory
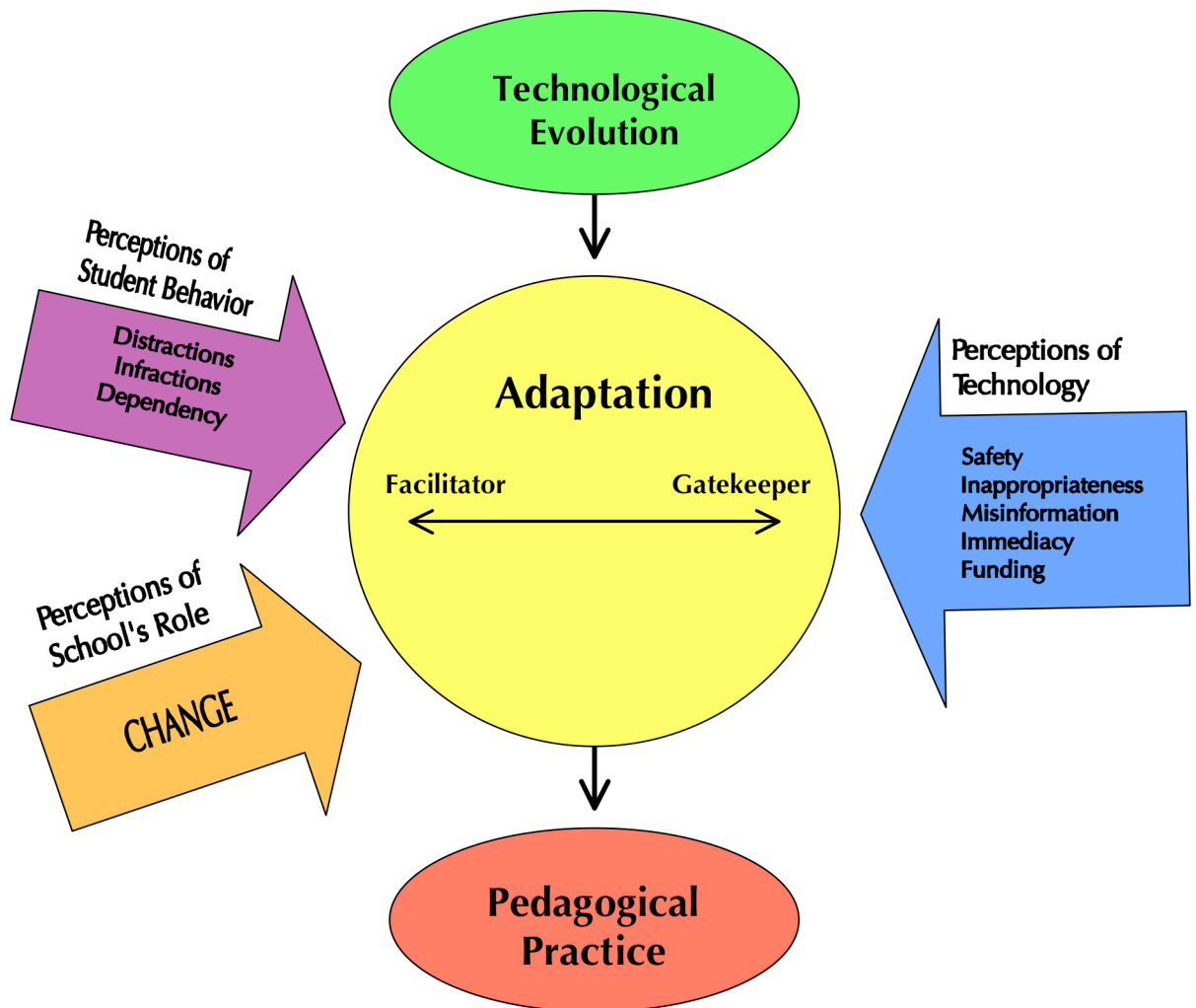
Grounded Theory

As grounded theory requires, the model developed to explain the research questions evolved from the data itself. After interviewing and transcribing, I began coding the first transcript. Based upon my observations and interview responses, I recognized that Witt City was the most restrictive of the three districts. My interest in the boundaries of the new literacies prompted me to begin with this district. After coding two or three transcripts, nine common themes began to emerge: distractions, infractions, dependency, misinformation, safety, inappropriateness, immediacy, funding and change. At this point, I began to apply these codes to the remaining transcripts. It was not surprising that I found these codes throughout the remaining Witt City transcripts. I was curious to discover whether or not they would still apply to Vickville's data because it was evident in my conversations with Vickville educators that this district viewed technology much differently than Witt City. To my surprise, the themes continued to hold in both Vickville and Skillen. The only changes were the perceptions of the themes. From this point, I was able to continue to apply grounded theory, arriving at a model that describes the central phenomenon that explains how educators negotiate the new literacies boundaries.

The rest of this section explains grounded theory as follows:
- Central Phenomenon
- Open Coding
- Axial Coding
- Theme: Gatekeeper versus Facilitator

Central Phenomenon

The central phenomenon according to grounded theory states, "The technological evolution that occurs outside the classroom must be adapted before it makes its way into pedagogical practice." Technological innovations cannot be adopted as is because schools are inclined to resist change: "They have settled into a set of standard routines and relationships that are widely accepted by participants" (Levin, 2001, p. 3). Yet,

technology has become so pervasive in today's society that schools cannot completely ignore it. Therefore, they have no choice but to adapt it in such a way that fits within their pedagogical philosophies.

Open Coding

Through Open Coding, nine themes were identified. These nine themes, which are represented within the arrows on the model of grounded theory, were discussed in great detail in Chapter 4. As Figure 5.6 shows, these themes influenced that adaptation process described in the central phenomenon.

Axial Coding

Upon examining the relationship the nine themes had with the adaptation process, Axial Coding produced three categories: Perceptions of Student Behavior, Perceptions of Technology, and Perceptions of School's Role in Society. It is the perceptions educators have on the nine themes that determine how schools adapt technology. These three overarching categories of perception appear as labels atop each arrow in the model.

Theme: Gatekeeper versus Facilitator

Applying the continuum and gap theories, in addition to grounded theory, allowed me identify the viewpoints that educators possess when regarding technology and learning. Once the viewpoints were identified, the theme of Gatekeeper versus Facilitator developed, explaining more descriptively the adaptation process. In this study, the district that held an opinion about technology most closely aligned with the continuum became gatekeepers of the information, holding technology in tight control. Conversely, the district that followed the gap philosophy approached technology as facilitators, seeking to find ways to implement it within the classroom. The final district, which fluctuated between the gap and continuum, also followed practices that exhibited elements of both the facilitator and gatekeeper.

Summary

This chapter seeks to contextualize the gathered data in a way that allows the reader to understand the central phenomenon of the study. To best accomplish this, the

model has been layered, beginning with the central phenomenon that illustrates that in order for technology to appear in the classroom, schools must adapt the tools developed in the technological evolution in a way that is acceptable for their views of pedagogical practice. Once this basic phenomenon is understood, I then apply the gap and continuum theories to help explain the approaches that schools take in the adaptation process. This adds a second layer to the model. Finally, the original nine themes are reexamined and reorganized into three categories: Perceptions of Student Behavior, Perceptions of Technology, and Perceptions of the School's Role in Society. These categories create the final layer of the model, explaining how these perceptions help shape the adaptation process as they are viewed through the gap and continuum lenses. These lenses, in turn, influence the facilitator versus gatekeeper approaches schools take when employing technology in the classroom.

CHAPTER 6 – Conclusions and Discussion

The study was conducted in the fall of 2008, ten years after Alan Luke (1998) called for literacies for new times. Despite this urging, the interviews conducted throughout August and September indicate that schools still do not have a clear understanding of what this means and, in fact, subscribe to numerous beliefs that prohibit the incorporation of this literacy viewpoint in the classroom. After providing a brief summary of the study and its findings, this chapter will discuss what insights were gained in terms of the research questions. It will also examine the issues raised by new literacies as they relate to the historical shift in literacies, as well as in the context of other research studies. Finally, the chapter will explore the implications this study has on students, teachers, pre-service teachers, communities and future research.

Summary of Study

Ever since the alphabet began to usurp literacy's oral roots, the definition of what it means to be literate has continued to evolve. The new literacies with their foundation in digital technologies are simply latest in this chain. Yet, as Plato demonstrated thousands of years ago, these changes often meet resistance. Humans tend to find comfort in the known and to fear ideas that we do not understand. This is certainly the case with new literacies. As a teacher who found the benefits of integrating the digital world into the language arts classroom limitless, my curiosity was peaked by educators who did not view technology in the same way. It was this curiosity that led me to this study. The purpose of this study was to explore why there is a lack of integration of technology into language arts classrooms, classrooms that are supposed to equip their students with necessary literacy skills. Recognizing that at times this avoidance is teacher driven, I also realized that there are other decision makers within school cultures who influence this, as well. To this end, I wanted to explore what limited the inclusion of technology and its accompanying literacies, as well as how educators worked within these boundaries.

A review of literature showed that there is very little, if any, research on this issue. While many studies have been conducting that examine the qualities and

importance of new literacies themselves, little has been done to examine what prohibits teachers from routinely integrating them in the schools. Conversely, many of the texts associated with the new technologies have received a great amount of hype in the media. Of particular interest have been the use of social networking sites like Facebook and MySpace to bully and lure students into unsafe situations. As the study discovered, while some of these concerns reported by the media do influence teachers, others, such as safety, received relatively few mentions. This indicates that there are other forces at play than the public may realize.

The study took place during the fall of 2008. Throughout the months of August, September and the first week of October, I visited with three distinctly different districts in two midwestern states. To gain a clearer understanding of the literacy practices within the three districts, I spoke to the key decision makers. These included, at the district level, the secondary curriculum directors (in all three districts this equated with the assistant superintendent), the technology directors, and literacy coaches. At the high, middle and alternative schools, I spoke with principals, librarians, lead English teachers and new English teachers. One primary research question and three subsidiary research questions guided this study:

Primary Research Question:

How do secondary schools negotiate the tensions created at the rhetorical boundaries of their local cultures by the content and emerging genres of new literacies pedagogy?

Subsidiary Research Questions:

4. How do secondary schools identify the rhetorical boundaries they must operate within?

5. What attributes of the emerging genres do secondary schools see as beneficial in terms of classroom instruction?

6. How are the rhetorical boundaries influenced by geographic location (i.e. rural, suburban and urban)?

To ensure accuracy, interviews were recorded and then transcribed. Particular attention was paid to the tone of the speakers, as well as the environment within each school to help with the interpretation of the data. After each district was transcribed, I used HyperRESEARCH to assist with the coding of the data. This allowed me to sort responses by theme, as well as by participant, aiding me in determining the importance of each theme within each district. Once themes were identified and tested across all three districts, I analyzed the data by the continuum, gap and grounded theories. Thus, from the data the central phenomenon emerged: "The technological evolution that occurs outside the classroom must be adapted before it makes its way into pedagogical practice." It also became apparent that each district approaches this adaptation process differently based upon their perceptions of the themes that emerged during the coding process. These perceptions fell into the categories of perceptions of student behaviors, perceptions of technology, and perceptions of school's role in society. Depending upon their perceptions within these three categories, schools tend to approach technology from somewhere on the spectrum between gatekeeper and facilitator. Further discussion of these findings follows.

Answering the Research Questions

Although the answers to my research questions have been implied through the exploration of the themes, categories and models, this section will seek to explicitly answer the questions that guided my study.

Primary Research Question: How do secondary schools negotiate the tensions created at the rhetorical boundaries of their local cultures by the content and emerging genres of new literacies pedagogy?

The answer to this question requires examining it from two directions: first, from the simple inclusion or exclusion of the technology of the new literacies in the classroom; second, from the more theoretical viewpoint of what the new literacies actually entail. Whether or not to include or exclude technology in the classroom, while it may not be an easy decision to make, is a simple concept: Schools can either implement the tools their students are using outside of school, or they can choose to go another direction. The consequences of either decision are what make this issue complex.

The first layer of this complexity involves the rhetorical boundaries themselves. No matter what situation humans find themselves in, they are constrained by certain expectations of the culture surrounding the situation (Bitzer, 1968). As Jackson (2004) pointed out almost a half a century ago, no one mistakes a school for anything other than a school. Part of this is due to the rhetorical situation. Traditional curriculum, as well as traditional literacies, dictates teachers as keepers of the knowledge (Lankshear & Knobel, 2003). Because these views of reading, writing, and the teacher's role in the process are so ingrained, curriculum often dictates how new information and technologies are treated. This can be compounded by public expectations. Schools that do experiment with curricular ideas that do not conform to traditional standards can be faced by a public that decries such practices as not fitting into its conception of how schools should operate. Thus, much of the rhetorical boundaries become dictated by practices that have existed since the inception of schooling.

A second layer to the complexity, which is also addressed in the research question, is the local culture the school community serves. Much of the variances that exist within and between schools can be attributed to the local cultures. Frequently, schools become more progressive or more traditional in response to the communities they exist within. Although educators and the public play a big role in the local culture, so do the students themselves. Most students use technology on a weekly, if not daily basis. This means they bring with them an expectation of technology's inclusion in their education. Pair this expectation with that of the job market, and teachers' jobs become much more difficult. Many of the jobs that exist today, and many more that will exist in the future, expect that students will be adept in reading and creating within the new technologies. These global expectations often conflict with the desires of the local culture. It is these conflicting expectations, as well as the rhetorical boundaries schools operate within, that force educators to negotiate the new literacies. This negotiation leads to an adaptation of technology that looks very different in the classroom than it does in the world outside the classroom.

The boundaries schools must negotiate look very different in the three schools because of the perceptions each school hold in terms of student behavior, technology and the school's role in society. While these boundaries will be explored more fully in the

response to the next research question, it is important to note that the perceptions are directly related to *how* teachers negotiate the boundaries. Perceptions play a key role on where schools are placed on the spectrum between the gatekeeper and facilitator, and it is this spectrum that describes educators' negotiations.

Witt City appears to view technology as providing a continuum between the creator of the message, whether it appears on a wiki, blog or social networking site, and the student as the consumer of the message. This continuum creates discomfort, a discomfort that can range from distrust to fear, for the educators within this district, resulting in a stance that attempts to lock out as much of the technology texts they possible can. Conversely, Vickville believes that a gap must be created between the technology and the student that will allow students to become sophisticated consumers of knowledge. To this end, the district allows as much access to technology texts as the local culture finds comfortable. Part of this process, involves training educators who are unfamiliar with the new training, resulting in a teaching base that displayed much less distrust and fear than Witt City. In this environment, educators become facilitators who teach students how to work with the knowledge and who respect the literacies that students participate in outside of school. The third district, Skillen, does not completely trust the new technologies, but at the same time, they recognize that literacy practices are changing. This results in a district that balances in the middle of the spectrum. As Emily Tyler points out, the district appears to be accumulating all the arguments and trying to determine the next course of action. This course will ultimately be influenced by how Skillen chooses to perceive student behavior in terms of technology, the technologies themselves, and the school's role in working with technology.

No matter the position Skillen, or any school, finds itself on the spectrum, in the end, it is the combination of the rhetorical boundaries placed upon the district and the local cultures that determines the adaptation that take place. Once the adaptation occurs, teachers negotiate within an acceptable range of pedagogical approaches that fit within the local culture's expectations. For teachers in Witt City who want to include more technology than is accessible, this may result in actions such as those taken by Diane Mather who has invested her own money in procuring equipment not made available by the district and her own time converting files obtained from sites like YouTube into

formats that she can display in her classroom. More than likely, however, as was indicated by the other teachers and librarian I visited with, the restricted technology will be accepted as not an option for pedagogical practice because as Kathleen Hess stated, "to use it (technology) in my classroom is really a laborious and a pain in the butt."

The actual inclusion of technology is not the only element to consider in terms of the primary research question. To truly negotiate the boundaries of the new literacies pedagogy would be to truly understand what the new literacies actually are. Lankshear and Knobel (2003) argue that part of the problem surrounding schools and new literacies stems from the newcomer/outsider mentality of schools. "Many classroom constructions of literacy involving new technologies are classic instances of outsider understandings of literacy grounded in the familiar physical world (book space) being imported into cyber/virtual/information space" (Lankshear & Knobel, 2003, p. 33). In other words, schools simply see the technologies as a continuation of the traditional literacy practices. But, new literacies go beyond this extension. New literacies represent a whole new approach to literacy, an approach that involves more than the intake of knowledge. Instead, new literacies demand the ability to conceptualize new ways of creating meaning. They demand collaboration. They demand a much more social approach to literacy.

Thus, if we view new literacy pedagogy from this stance, the question of how schools negotiate the boundaries of the emerging genres of the new literacies can only be answered as they don't. In fact, only a few key individuals in Vickville even recognized the true demands of new literacies. Karl Beamer asserted that he believes that he sees no one in schools really using Web 2.0 or even understanding what it does. Based upon my conversations with other educators in other districts, no one seemed to grasp the nuances of Web 2.0. Instead, as Lankshear and Knobel (2003) stated, they viewed technology as a way to extend what they were already doing in the classroom. David Hempel pushed this observation even further:

I think we've missed the whole Information Age already. I mean, it's already passed us by, and we're headed in another era altogether called the Conceptual Age, so we've missed that whole Information Age. Were we prepared for it? We weren't prepared for it, mainly, because the skills were not there between the

digital native and the digital immigrant. The digital immigrant did not have the skills very first to be able to talk the same language.

Subsidiary Research Question #1: How do secondary schools identify the rhetorical boundaries they must operate within?

As the axial coding revealed, boundaries are determined by three categories: perceptions of student behavior, perceptions of technology, and perceptions of school's role in society. Certain themes come into play within each category. The following paragraphs explore these categories.

As discussed in the previous chapter, it comes as no surprise that students do not always make the best choices while at school. For some educators, technology just provides one more avenue for students to follow to misbehavior. This can manifest itself in distractions such as texting during class, the ringing of the phone, or even the temptation to go to sites other than those required for an assignment. Infractions can also occur. Whether academically or behaviorally, for some, technology opens up a whole new world of trouble. Cheating can occur as students take photos of tests, text answers across school or even pull entire papers off the Internet. Other students take a different route. Not surprisingly, students are not always content to stay within the boundaries imposed on them, so frequently students who are technologically savvy will attempt to use proxies or hack the system to obtain access to information and sites that are not made readily available. More alarming than these misdeeds, however, is the new platform students now have for bullying. Technology transmits information instantly, making it desirable for those students who are always looking for new ways to terrorize others. Finally, students' dependency on technology can leak into the school room as they come to expect information that is delivered in the quick bites that characterize the Internet or use the short cuts of instant messaging in their writing. Schools' perception of all of these student behaviors influence where districts set their boundaries. In Witt City, for example, these behaviors were viewed as detrimental to education, therefore, items like cell phones and mp3 players were banned from the schools. Yet, as Tracey Epstein maintained in Vickville, many of the student behaviors that teachers complained about in other districts were, in reality, very minor issues. This may explain why students were trusted to use their cell phones during passing periods and at lunch at Vickville High

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School. And as Chloe reminded me in Skillen, these behaviors persist with or without technology, bolstering her argument that some of the restrictions in Skillen were too stringent.

In terms of perceptions of technology, many educators are still struggling with their stance toward the new tools available to them. There is obvious concern about the safety of students who roam the net because the faceless communication of the web means that anyone can play whatever role desired. Similarly, anyone can post anything on the net, which leads to worry about inappropriate material and misinformation. All of this content is more difficult to monitor because schools cannot simply purchase the material they wish to use on the Net like they can books. Also unlike books, the Internet provides an immediacy of information, which means that students can access material more quickly than adults have the opportunity to preview it. All of these issues exist solely because of technology, which can lead to an ambivalent view of the tools available to them. Funding also falls into this category because whether or not schools perceive students to have access to technology because of family finances can determine the extent technology is integrated into the curriculum. While all five of these issues ranked differently in the three districts, it was clear that they all played a part in each of the districts. At times, these issues were seen as reasons to protect students, thus eliminating access. Other times, the argument was made that students needed to be taught how to work with each of these concerns.

The final perception, that of school's role in society, contained only one theme: change. This theme, however, was discussed the most frequently by the most respondents in each district. In fact, only one person out of 36 did not mention change in one form or another. The prominence of this theme underscores arguments made by curriculum scholars across history and the world: the culture of schooling resists any change that threatens education's well-established structure (Reidl, n.d.; Levin, 2001). Because today's technology looks very different than the technology in place during the majority of teachers' pre-service training, most educators feel ill-equipped to integrate technology into the classroom. Compounding this is a resistance to modify well-established lesson plans or to attend training outside the school day because of the time these activities take or of the uncertainty about what these tools really have to offer. Another integral aspect

of this category stems from the mandates of federal and state governments that work against the new literacies as they continue to emphasize standards and tests that have little, if anything, to do with the skills these literacies require. Schools' reactions to these mandates can dictate how much time teachers actually have to integrate technology in the classroom because these mandates can eat up classroom time as teachers are forced to prep for the tests, as well as consume resources by monopolizing the computers. "Now, the reality of that fact is that the state testing, which is now virtually online, if it isn't you're crazy anymore, almost requires that we have separate dedicated labs just for testing purposes. Well, what a waste of technology" (Dennis Albrecht).

All of these perceptions work together to help determine the boundaries that educators must operate within, but are any single individual's perceptions a bigger influence than others? When examining the three distinctly different stances of each district, there is a suggestion that perhaps there are key decision makers who influence the setting of the boundaries. Consider first the tightly locked down district of Witt City. At the top of the decision making chain sits Lee Babcock, a former high school principal, who shared that he had seen discipline issues resulting from the use of technology. While he is not completely opposed to the future possibility of integrating some of the new literacy texts, he mentioned several times that the lack of the ability to control student behaviors led to many of the restrictions in the district. These restrictions receive his full support: "I think it's appropriate. What that student does outside the school day, you know obviously that's not wanting to control that. We need to have some parameters during the school day."

His technology director, Caroline Caan, has the same philosophy. The ability to control and monitor technology defines much of her approach to allowing technology in the classroom. Frequently, she mentioned concerns for not only student safety, but also network safety. And while she offered instances of the innovative uses of technology in the district, including the use of iPods to record and listen to readings and a Wii for the alternative school's physical education program, all of these are tools that can be closely monitored by teachers. Students are not the only ones to be affected by network restrictions, either. Teacher email is limited to the district-only program, a program that can be unreliable for communication outside the district because Lynn Darby and

Kathleen Hess both mentioned that they do not always received emails from family members who do not work for the district. Caroline also monitors how teachers use the equipment, shutting down video streaming and iChat because she felt that teachers were not using them for educational purposes. Limitations can extend beyond software to hardware, as well. Educators who possess non-school issued equipment are blocked from connecting to the school's server.

> We only allow district supported organizers to connect to our network, so we
> don't allow just anybody off the, you know, any administrator can't bring their
> home phone in and connect it to our email server. It has to be a district-supported
> phone to be able to connect to our exchange server. (Caroline Caan)

All of these restrictions definitely influence the integration of technology into the classroom.

On the other end of the spectrum sits Vickville, but Vickville has not always been immune to the type of control that exists in Witt City. Dennis Albrecht spoke briefly about the district's previous technology director who "shut down access to virtually any of the YouTube, or MySpace, or any of the sites because he didn't feel it was educationally appropriate the way it was being used." Although Dennis did not elaborate on the circumstances of his replacement, comments made by both Dennis and Karl Beamer, the current technology director, indicate that at least part of the decision was made because the former director's philosophy did not match other key decision makers in the district. In fact, Karl spoke of the hours the former director would spend in front of the monitor waiting for students and teachers to mess up.

Again, as the top decision maker, Dennis is very aware of the importance of technology in today's world. He believes that students do not have enough access to technology and envisions a day where the entire community will be wireless so that students can access information even when they are waiting to be picked up after practice. Technology, he asserts, is the direction the world is going, and students need to be equipped with the knowledge that will help them succeed. Karl, who didn't initially apply for the technology job, shares these opinions. I would conjecture that these similar beliefs, paired with his technological knowledge, are what landed Karl his current position. The teachers in Vickville appreciate Karl's approach. Everyone I spoke with at

the high school, as well as David Hempel at the middle school, contrasted the current school year with past school years, expressing their appreciation for the loosened restrictions.

While Witt City and Vickville had like-minded individuals in the roles of assistant superintendents and technology directors, this was not the case in Skillen. I spoke with Lindsay Lawrence, the assistant superintendent, first and left with the impression of an educator who is very aware of student behavior, as well as the importance of emerging technology. She does not feel that schools should let the challenges that technologies pose inhibit their inclusion in schools.

> You know you're always going to have kids with technology the way it is—I guess I'm thinking screwing around in the classroom. You know you walk into the high school class, and you have 30 kids on the computer, and all of a sudden a screen goes blank when you walk by. You know something is going on. We've just got to figure out ways to deal with that because that's the world we live in. I can't think of too much access being a problem or a conflict; we just need to learn how to deal with it. (Lindsay Lawrence)

Jessica Nokes is a bit more hesitant about technology in school. While she does not advocate completely sheltering students from technology because she recognizes that students do need to experience using it, she is very concerned about network security and student safety. She also admitted that there are times that the technology department and teachers do not always see eye to eye on what should be made available to students. She appeared to take a very cautious approach to accessing technology. Perhaps it is these differences between Lindsay and Jessica that explain why the district itself seems to straddle both viewpoints.

In each of these districts, it appears that the stances the assistant superintendents and technology directors take on technology in the classroom are mirrored by the practices of the rest of the district. This suggests that there may be a relationship between these two positions and the boundaries of the new literacies. Teachers take their cues from the administrators leading them, so it makes sense that these individuals who have the more direct influence on curriculum and technology would also influence the district's position on the emerging new literacies.

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Subsidiary Research Question #2: What attributes of the emerging genres do secondary schools see as beneficial in terms of classroom instruction?

As discussed earlier, educators weigh technological benefits in terms of how the tools can aid in what they are already doing in the classroom. Each district viewed technology's attributes in different lights, views that were primarily influenced by their placement on the gatekeeper/facilitator spectrum. In Witt City, benefits were largely limited to students' ability to produce neatly typed papers and to help with student research. Caroline Caan mentioned a few isolated examples of benefits that teachers who had received technology grants had implemented, including sets of iPods in an English classroom and for the ELL program and the Wii at the Alternative School, but these tools were very limited in their scope. Otherwise, content delivery through LCD projectors was the only other benefit assigned to technology. Yet, research and content delivery still received mixed reviews because teachers like Kathleen Hess and Jill James viewed a significant amount of the information on the Internet as inaccurate and much of the technology lacked the reliability needed for teachers to feel secure in including it in their lesson plans.

The other two districts possessed a more optimistic view toward technology, although much of this viewpoint was still shaped by technology's ability to simplify traditional classroom practices. Again, research became a key component, particularly in terms of online databases. The librarians particularly stressed how much easier research can be without the reliance on the complicated and cumbersome Reader's Guides that most teachers grew up using. Emily Tyler agreed with this, pointing out that students now have even more information available to them. Bobby Visitor and Laurie Chandler also emphasized that teachers have more resources at their fingertips, as well.

> I think it's allowing kids to stay stimulated with information because if you're talking about something in class, you can immediately go to the computer, even if it's on the teacher's desk, and you can Google that, or a teacher can. If the kids ask a question, and you're, you know, I'm not sure, they have immediate access to that information. (Laurie Chandler)

To this end, Laurie believes that student engagement and hands-on learning has increased because students have become more actively involved in their learning. No longer does the teacher have all the power in the classroom. Students now have opportunities to gain information on their own.

In addition to creating new avenues for accessing information, David Hempel and Vivian Flack in Vickville believe that technology offers students more opportunities to create products that illustrate what they have learned.

> There's lots of different things that you could do: using multimedia to do historical events like taking a picture and using those digital pictures to create digital stories to writing to music implementation to storyboarding. All those elements are digital, and they're what we call mash-ups. (David Hempel)

Vivian feels that schools often rely too much on the traditional paper format to share information. With a son who is a filmmaker, Vivian sees the potential of integrating video in the classroom, particularly because she sees students already having possession of the tools needed to capture footage: cellphones.

Overall, the benefits educators assign to technology appear to be related to the district's level of access, a finding that is not surprising. Districts that find value with these tools will seek out ways to integrate more technology in the classroom. Witt City views technology suspiciously and assigns no intrinsic value to its tools, therefore, they do not sacrifice anything of instructional value by not including it within the schools. Conversely, Vickville sees a world that is dominated by technological advancements, thus it seeks to discover ways it can be used within the classroom. Although many of these ideas are not yet a reality, the mere existence of them within discussion indicates that they are distinct possibilities.

Subsidiary Research Question #3: How are the rhetorical boundaries influenced by geographic location (i.e. rural, suburban and urban)?

The original intent of the study was to study three districts that fell within the typical definition of rural, suburban, and urban. However, when it came time to select participating sites of study, the three districts were selected precisely because of their complex demographics. Witt City is technically a suburb of a large midwestern city, yet it contains many of the characteristics often associated with urban centers. In fact, it is

difficult to distinguish when you leave the urban city and enter the suburb of Witt City. Skillen is a rural town that feels just like one would expect a small town to feel. Located only 35 short miles from a large suburb, Skillen provides residents with a small town atmosphere, yet easy convenience to the suburban life. Similarly, Vickville would also be classified as rural. Yet, it is very different than Skillen. Isolated with more than 150 miles between Skillen and a major metropolis, the diversity of Skillen's population reflects the diversity possessed by Witt City. Combined, these three districts offer very different insights into the potential influence of demographics.

There is no question that all three sites treat technology very differently. Why this occurs is not so clear. I can only speculate as to what might influence the rhetorical boundaries in these districts based upon my own observations and the conversations with participants. Underlying my speculations rests the fact that the more rural the district, the more technology was accessible. In Witt City, it appears that some of this may stem from the lack of control that exists within the community itself. Within any urban settings people live more compactly with other communities. Cities and suburbs press tightly against each other, so what can happen in a nearby community can directly impact citizens in communities other than their own. This introduces different belief systems and actions that cannot always be predicted based upon one city's population. To compound this, Witt City struggles with the economy as the once thriving town finds itself crumbling with age and fading into a stereotype of a crime-ridden community, a stereotype that crime statistics don't actually support. All of this introduces variables that impact student lives outside of school, variables that cannot be monitored and controlled by schools. This suggests that for Witt City, restricting technology, which contains a myriad of uncontrollable variables like the city of Witt City, may be a response to this lack of control. By limiting student access to technology, Witt City is able to gain control of a small piece of the world.

Rural towns and cities, on the other hand, do not experience the same type of influence from other communities. Because of its proximity to suburbia, Skillen witnesses some of it from afar, but the influence of other communities does not directly impact their day-to-day living. Vickville is far enough removed from other communities that it is able to cement a cultural identity that includes the diversity of the people that

live within the town's limits. The community understands its values and beliefs and doesn't have to worry about the uncontrollable variables that can sneak in from a community next door. And while none of this can be proven, I am not the only one to speculate that exposure to other community's views may influence the rhetorical boundaries. Thomas Riley who moved from a smaller, more rural community than Skillen also sees the proximity of urban and suburban sites as a factor.

> At the previous school I was at, the balance tended to be more the other way. The firewall wasn't as strict, and when we would run across something, the tech people would let us know and we'd deal with that. Now here, we tend to be a little more on the other side, a little more constrictive because of I think, maybe, students, this isn't as rural a setting and maybe a little more sophistication that kind of thing. (Thomas Riley)

With the benefit of not feeling pressured by the beliefs of nearby communities, also comes the cost of not experiencing the ideas of others outside their town. I would argue that this lack of connection is what leads to a better acceptance of the inclusion of technology. Through technology, residents of Vickville can tap into resources that are not physically available to them. They can build communication with others across the state, the United States and even the world. For residents of Witt City, the world seems to be pressing in on them, so it may not be as easy to see that there is much more in the world than what they experience in their daily lives. For Vickville, the world appears in a distance, making tools that can bring it closer appear much more desirable.

Connecting the Study to the Literature

Examining the study in the context of current literature provides further insight into the study's findings. At the root of this study rests two primary issues: reexamining the notion of literacy and the resulting constraints placed upon current literacy practices in lieu of the emergent technologies. To this end, this section will explore how the study relates traditional theory, historical precedence, and new literacy research.

Relating the Study to Theory

Theorists whose work has influenced the ideas and question in this study are numerous. First, consider John Dewey who wrote in 1938 about the increasing gap

between the teacher and the student. "The gap is so great that the required subject-matter, the methods of learning and of behaving are foreign to the existing capacities of the young" (Dewey, 1938, p. 19) One wonders how wide Dewey would view today's gap between teachers and students when one considers how far technology has advanced in the last 70 years. As suggested by the participants' overwhelming concern about change as it relates to integrating technology in the classroom, today's schools are still locked into the "traditional schema" that adults impose upon students (Dewey, 1938, p. 19). Adults, who often do not understand the new technologies, continue to cling to curriculum and literacy definitions they do understand. Dewey would argue that Witt City, Skillen, and even, to an extent, Vickville's lack of integration of technology in the curriculum do a disservice to students because it ignores their natural curiosity, which in today's culture often revolves around technology. "The pupil is actually robbed of native capacities which otherwise would enable him to cope with the circumstances that he meets in the course of his life" (p. 48).

Gaps do not only exist between teachers and students. As Bahktin (1986) asserted, gaps also exist between groups such as generations, classes and professions. This occurs because language is socially situated, so as groups come into contact with individuals from different groups they bring their literacy practices with them. Perhaps this helps explain why the theme of dependency concerned respondents in the three districts. Students' tendencies to rely on sites like Wikipedia, to expect information to be delivered in quick bites, and to allow their instant messaging language into their formal writing can aggravate educators. Dependency would not be the only theme that ties into this gap. The other two themes within the category of perceptions of student behavior, distractions and infractions, can also be explained through Bakhtin's assertion. It could, perhaps, be argued that the technology itself does not create the distractions and infractions, but rather the gap and misunderstanding of the technology that produces these concerns. When schools create rules designed to circumvent a student's routine literacy practices, the student may spend more time trying to navigate around the rules than actually attending to the lesson in the classroom. This can manifest itself into distractions similar to what Jill James described:

> Some of them will sit and wait until the teacher's not looking just to type their
> message, so the whole class, even though it's one message, or two messages,
> they're trying to wait for that moment, so they never hear a word that you're
> saying.

It can also develop into a challenge for students who are particularly adept with using technology. As more than one person in the study pointed out, students are often much more adept in their use of technology than the adults who attempt to block sites. This means that infractions such as attempts to hack into the system result directly from the restrictions placed upon student usage. Adults who do not share the literacy practices of their students shape all of these perceptions of student behavior. Yet, these are all part of the literacy practices of youth, so students' desires to integrate these literacies into their school literacies is a natural part of their literacy development.

Vygotsky's (1978) work also supports the idea that by including these new literacy practices into their work, students are naturally extending their understanding of literacy because reading and writing practices grow out of the culture within one is raised. Restricting access to the tools students use in their daily language practices, particularly as stringently as in Witt City, only serves to widen the gaps in education. This is not done maliciously or even, necessarily, knowingly. Instead, it is a result of educators, as a group, not understanding the social constructs of the literacies practiced by youth. Participant responses in all three districts underscore this misunderstanding because even in Vickville teachers expressed frustration about their lack of knowledge when working with technology.

Further complicating the situation is the failure of teachers to recognize the texts students construct using the new literacies as legitimate genres. Bahktin (1986) illustrated through his speech genre theory that humans are capable of creating limitless forms of communication, yet their value is often disregarded in schools. Teachers who do recognize the legitimacy of these communication forms can find themselves in situations where they are unable to address a particular genre because of school policy. This issue provides just such a challenge for Jane Nichols in Witt City.

> I actually wish they (students) had access to some kind of email, outside. Because
> what I'd love to do is when these kids get a job they're going to have to email

bosses, co-workers like we do, and I think it would be really good for them to know how to write an email, because I think that's more pertinent to today's time than writing a letter. People don't write letters anymore. And I see emails that fly here, and I'm like, they didn't even proofread that before [they] clicked send. So it'd be really nice to be able to kind of set something up like that where we could do something. (Jane Nichols)

As discussed in previous chapters, Bitzer's work with the rhetorical situation particularly helps define the findings of this study. Within every rhetorical situation, including the transfer of knowledge that occurs in schools, participants hold certain expectations. Julie Pine's observation, "They can do it at home in all hours of the day and night. They don't need to do it at school," illustrates the expectations many educators have toward the new literacies and school. Within the local culture of schooling, there appears to be a belief that the rhetorical situation of the classroom does not have room for the technology literacies students encounter within rhetorical situations outside of school. Thus, schools exhibit constraint toward these tools. Even within the most liberal of the three districts, Vickville, there is recognition of this constraint. "There have to be limits and controls on everything" (Dennis Albrecht). Despite Vickville's efforts to include many of the new technologies in schools, including the use of cell phones during passing periods and access to social networking sites before and after school, the district recognizes that the audience, which includes all stakeholders in the district, does not expect these tools to be freely accessible during the school day. Thus, Vickville has negotiated the boundaries set for them by the rhetorical situation, establishing key periods during the day when using these tools will not cause discomfort for the audience. On the other hand, Witt City's interpretation of their audience's expectations has resulted in an almost complete exclusion of these technological tools.

Relating the Study to Historical Precedent

As discussed in Chapter 2, the situation that schools currently find themselves in is not a new one. Just as Plato distrusted the educational value of poetry and its impact on oral literacy, so do today's educators question the legitimacy of electronic texts (Bogdan, 1992b; McLuhan, 1964). Witt City's response to these texts mirrors the actions of Plato

who ultimately forbade the inclusion of poetry within the Republic (Bogdan, 1992b). The idea of gaining misinformation through a reliance on the Internet troubled educators in all three districts. Because the Internet allows all users to construct knowledge through postings, educators feel that the web has become, in Kathleen Hess's words, "misinformation central." Printed texts rely on editors to check information prior to distribution. Information on the Net cannot be as stringently policed, leading to the perception Kathleen described. Similarly, Plato viewed written language as a distortion of the truth because rather than relying on the sages who had studied and passed on knowledge through the oral tradition, people could turn to words written on paper, words, Plato asserted, that did not have the same reliability as the knowledge passed down by scholars of that time: "You give your disciples not truth, but only the semblance of truth; they will be hearers of many things and will have learned nothing" (Plato, cited in McLuhan, 1964, p. 25).

Despite Plato's efforts, however, the progression of technological improvements and the resulting impact on technology could not be halted. From the written manuscripts made possible by the invention of the alphabet, soon emerged a desire to reach a large audience (McLuhan, 1964). Manuscripts took considerable time to create, so educators still relied on the oral tradition as they read aloud to their students. The invention of the printing press once again changed the tradition of education. This meant that while the public could now much more easily access knowledge, educators felt powerless in their control of the knowledge. Again, this powerless feeling frustrates teachers today. Educators cling to the very books that teachers hundreds of years ago fought against because they are a medium that schools understand. Books, while primarily a written literacy, still allow for the oral literacy valued by Plato because as schools are structured today teachers are often deemed the interpreters of books. There is control of the dissemination of information because educators select the books students will learn from. Without the placement of firewalls, educators cannot control the Internet in the same way. And as teachers are learning, even in Witt City, the firewalls can often hinder as much as they can help because they block access to information that teachers view as legitimate.

Yet the desire to protect our nation's youth has been long engrained in our educational system. Although Milton (1929) argued that removing the objects of lust do not remove the lusts themselves, schools, nonetheless, continue to approach this issue in this manner. The censorship movement that became prominent in the 60s and 70s, continues to dog schools today as concerned citizens seek to remove all questionable material from shelves within schools. Technology texts only complicate this mission, resulting in legislation attempts to block student access to certain sites (McCullagh, 2006). The three districts in this study recognize all these issues. In fact, these issues provide the rationale for Witt City to lock down their system as Caroline Caan continually reminded me that student safety prompts her response to technology. Yet, as David Hempel reminded me and as I illustrated earlier in the study, even the most liberal districts are not unaware of the challenges that can come as a result of the desire to protect students. "It's a choice of sites, and a choice of monitoring because you are still held accountable for what occurs in the classroom and so you want to stay within the ethics boundary" (David Hempel).

So when one considers the protective climate that has existed in this country for more than 50 years, as well as the reactions of educators to technology across centuries of literacy instruction, it comes as no surprise that the participants in this study shared the concerns they did. Rather, it would have gone against every historical example if schools had quickly embraced technology and began to implement it within the classroom in its purest form. As history illustrates, teachers, beginning with Plato, are initially suspicious of the effects technology will have on literacy practices. The first reaction is to attempt to block access, just as England in Milton's time, attempted to license and restrict the availability of books (Milton, 1929). At some point, however, the technological changes begin to permeate the local culture in such as way that technology can no longer be ignored, leaving schools with the dilemma of how to accommodate the changes in technology. For Vickville, this led to a loosening of restrictions and more forgiving attitude about technology in general. But even Witt City has had to budge in a few small areas as Bruce Levitt explained when he discussed cell phones. While the schools remain strict in their rules about using cell phones within the school building, Bruce said the restrictions regarding school grounds have been lifted. No longer do students find

themselves in the principal's office for using a phone at a football game or calling for a ride. A few years ago, this might not have been the case, as teachers and administrators attempted to eliminate their use anywhere on district grounds. This prompts me to wonder if the same restrictions will exist in a few short years. How long can schools continue to resist these technologies before new technologies take their place on the continuum?

Relating the Study to New Literacies Research

While new literacy research has begun to garner attention in the field of literacy research, most of it revolves around defining the skills the new literacies require and why expanding the definition of literacy is vital to today's world. Research on exactly why schools are not embracing the new literacies is just emerging. What does exist, however, is literature that explores public reactions to change. As Jones (2002) points out, those who are vested in a particular system find change to be threatening, thus they react by attempting to control the change. This assertion is certainly supported by the findings in this study. All three districts struggle with a literacy platform that does not conform to the traditional literacy practices within schools. This leads to an attempt to control the technological evolution taking place outside the classroom. For Vickville, a district that views technology from the facilitator standpoint, the adaptation process recognizes the potential of the new literacies and works to create a compromise between recognizing the literacy practices of today's youth and integrating these practices within the traditional system. Yet for Witt City, the need to control these changing technologies only allows for their integration in a very diluted form. Very little similarities exist between how their students use their technology literacies outside of school and how they are used within the classroom.

Much of this can be explained by Bruce's (1997) research on how educators view technology. Again, his research supports many of the findings within this study: technology is often viewed as a tool rather than a text itself. From Nina Jones's assertion that technology would "be a nice time saver" to Lynn Darby's observation that students in Witt City primarily use technology for keyboarding, it is evident that technology is only seen as a tool by most of the educators in this study. Again, only a few key

individuals in Vickville (Dennis Albrecht, Karl Beamer and David Hempel) even seemed to recognize the value of the texts proffered by technology. This discrepancy of viewpoints, the tendency to view technology as a tool rather than a source of new texts, leads to the disadvantage that Lankshear and Knobel (2003) discuss in their work: schools, even Vickville, which is much more open toward technology, still focus on the delivery of content rather than procedure and how knowledge is created, a focus that provides a disservice to students in today's digital world. This focus on content is underscored by the reality all three districts discussed with frustration: today's high stakes tests demand that the majority of technology resources be allocated to test prep. With so much time devoted to the traditional literacies assessed by the state tests, schools find themselves with little time left over to work on skills such as new and media literacies (A. Luke, 2002), a reality that Dennis Albrecht decries as "what a waste of technology."

Respected new literacies researcher Alan Luke points out that many teachers claim that the increased use of technology by students has led to a decrease in social interaction (2002). The theme of dependency discovered within this study supports this assertion. Kathleen Hess claimed that the increased reliance on technology "takes more time away from thought," an idea that reflects Luke's observation that many teachers feel that students' use of these technologies steals from time that could be devoted to traditional reading and writing practices. Further distressing to teachers like Jane Nichols is the merging of the new literacy practices like instant messaging language with academic papers. Yet, not all educators feel this way. Vivian Flack in Vickville could see technology as offering new avenues for sharing knowledge. While Luke recognized that these teachers do exist in schools, he also asserted that the lack of professional development and resources can be just as restricting to teachers who are willing to look for new ways to expand the definition of literacy (2002). Again, this was also supported by the responses in the study. As Claudia Diamond shared, teachers who are not trained in how to correctly incorporate the new technologies within the classroom can often use it incorrectly, which can perpetuate the perception that Bruce found problematic.

I would like to learn more. [I'm] afraid that we will not use it as a tool and use it like we do everything else. Everything can be misused and unless you add it to

your repertoire, if it becomes just a way of teaching within itself because it's technology that's not going to be good either. [We need to] use it to enhance and as a tool, rather than as a catch-all.

To help combat this, Dennis Albrecht feels it's essential to keep up with the changing times. By allowing his teachers to attend conferences that share new ways to incorporate technology, Dennis feels that the district will have a better chance of incorporating the texts necessary for instruction in the future. "If you don't have some dreamers and schemers out there going to conferences trade shows, etc, that can come back with the newest and the greatest, I guess, sometimes you don't even know you have things" (Dennis Albrecht).

Implications for Students

While students were not directly interviewed for this study, several implications can still be drawn in regards to students. Much of this is due to the literacy practices students engage in outside of school, which shape their expectations in terms of literacy at school. As discussed in Chapter 5, educators' perceptions of student behavior, technology, and the role of school influence the adaptation processes schools use to change technology into acceptable pedagogical practice. Of these three categories, students are directly involved in the three themes encompassed by perceptions of student behavior (distractions, infractions and dependency) and directly or indirectly affected by perceptions of technology (safety, inappropriateness, immediacy, misinformation and funding). Thus, teacher perceptions directly impact students' literacy experiences in the classroom.

When examining the perceptions of student behavior, Vickville appears to offer insight into how to begin to mediate the use of new literacies in the classroom. While some educators like Bruce Levitt used the distractions of technology, particularly of cell phones, as a reason to prohibit student use in school, Vickville chose a compromise that allows students to use their phones during passing periods, lunch and before and after school, as well as social networking sites before and after school. Laurie Chandler said that this recognition of student literacies has led to an increased student acceptance of the limitations the district does enforce: "It's been our experience that if we let kids access at

least sometimes, then they'll be more welcoming of those restrictions that we do place."
And while Bruce Levitt expressed fear of the increased problems this access would create in school, Tracey Epstein said that problems such as texting during class were "minimal." Vickville's approach indicates that it's possible to overcome some of the distractions posed by technology. Human nature suggests that the forbidden often becomes more distracting than the accepted, which implies that Vickville's compromise might be more effective than the complete control fear can often inspire.

Infractions, another theme within the perceptions of student behavior category, might also be affected by a compromise like Vickville's. Minor infractions such as surfing sites unrelated to the subject of study may diminish if students feel that technology is accepted rather than a taboo. In fact, it would be interesting to follow up in all three districts to examine the number of discipline referrals that involve technology. Are there more or less of these referrals in districts like Witt City who maintain tight control versus districts like Vickville that allow moderate use? One aspect of infractions, though, that probably is not impacted by the compromise would be the issue of cyberbullying. Bullying among youth is prevalent wherever a social pecking order occurs. Where once this was limited to a physical space like hallways and classrooms, now students have a new platform for establishing dominance: cyberspace. Schools recognize the bullying problem and attempt to combat its effects through anti-bullying programs. Yet, most of the focus of these programs is on physical bullying. When discussing technology, respondents sometimes listed the ability of students to bully via the Internet as a reason to not allow free access at school, as if this solves the problem. Rather, perhaps a more effective approach would be to acknowledge that cyberbullying exists despite school restrictions and to incorporate more education about cyberbullying into school programs.

Finally, in terms of perceptions of student behavior, the theme of dependency can also be addressed in schools through a compromise similar to that of Vickville's. As discussed in the previous section, work by Bakhtin (1986) and Vygotsky (1978) demonstrates that what educators view as a dependency on technology is really just a natural extension of students' literacy practices. Because students ground much of their reading and writing in technology, it is unrealistic to expect students to completely

abandon these practices when they enter the classroom. As Vivian Flack suggests, technology offers teachers many more avenues for students to express their understanding of content than the simple essay. If schools embrace these possibilities, they can tap into students' natural literacy practices, making the content more relevant to students and the skills they will need beyond the classroom walls.

While perceptions of student behavior have obvious implications for students in the classroom, perceptions of technology is also important because these perceptions are often shaped by how educators view technology's influence on students. Again, the ability to access sites that are deemed unsafe or possessing inappropriate or inaccurate information often topped the list as why schools restrict technology within schools. Yet, as Diane Mather pointed out, schools may be doing a disservice to students by completely blocking access. Instead, the ability to access social networking sites can allow educators to demonstrate to students how unsafe some of their Internet practices can be. Similarly, by allowing students to visit sites that contain inaccurate information, teachers are better equipped to show students how to recognize miscues and other evidence of faulty information. Simply talking about misinformation or unsafe Internet behaviors cannot have the same impact that actually working with the material does. Thus, by lessening restrictions on student access schools may have a better chance of conquering the fears technology brings.

Implications for Teachers

Ultimately, the implications this study has for students also effects teachers because educators are the ones who must consider the compromises needed to aid students in their literacy development. Perhaps the greatest impact this study has on in-service teachers, however, is the clarification it provides teachers as to what they specifically fear about the advances in technology. In a sense, the study helps define the unknown. Because the majority of teachers in the field today are digital immigrants, a term used both in the literature and in frequent references in Vickville, they cannot fathom how the digital literacies work in comparison and in conjunction with traditional literacies. When paired with the media hype surrounding social networking sites and other youth-driven technologies, this lack of knowledge often leads to resistance toward

incorporating technology into the classroom. This is certainly the case in Witt City, and to a slightly lesser degree, in Skillen. Even Vickville, a district that is beginning to understand the significance of the new literacies, realizes that it does not completely grasp the nuances that technology has introduced into literacy.

This study can help encourage conversations about what specifically impedes the inclusion of technologies in school. More than once, participants confessed that our conversations helped clarify for them exactly what bothered them about technology in schools. Often, we react to change negatively just because it's different and never stop to analyze the specific aspects of the change that we find troublesome. Through extensive conversation, this study has uncovered nine themes that worry educators, providing a baseline teachers can use to explore their own fears. While I cannot generalize the study's findings across all school districts, it is evident by the three different approaches to technology unearthed in this study that all school districts do not view digital literacies in the same way. Thus, giving schools the opportunities to see how other schools work within the nine identified themes can provide guidance for districts when making the decisions about how to negotiate the boundaries imposed on the new literacies.

Once these conversations have taken place, educators will have a better idea of what kinds of training they need to incorporate digital technologies into the classroom. As discussed previously, the biggest concern educators had about technology was the notion of change. Despite tremendous effort, technology cannot be simply put into a box that has been defined by decades of schooling. This frustrates educators who admit that they do not have the knowledge or training needed to begin to work with technology. As grounded theory uncovered, school communities must adapt technologies that develop from the technological evolution before introducing them into pedagogical practice. Witt City demonstrates that the less these technologies are understood and the more they are feared the adaptation emerges as a gatekeeper approach. Yet, training and, thus, a better understanding of the new technologies can result in schools taking on the facilitator role. It was evident that this process had begun in Vickville as respondent after respondent repeated the same terminology when discussing the inclusion of technology of in the classroom. The ideas of digital immigrant and digital native, in particular, dominated many conversations in Vickville, indicating that the district had devoted quite a bit of in-

servicing and training to aid their teachers in understanding exactly how technology has impacted student learning.

This study can prompt similar training by providing names to educators' fears. Once schools understand these fears, they can begin to work toward overcoming the fears and identifying technological tools that they can comfortably incorporate into the classroom. Change cannot happen over night, but once educators begin to take small steps toward including technology, it will become easier to continue exploring other avenues and to abandon some of the fears that currently dictate what is and is not allowed in the classroom.

Implications for Pre-Service Teachers

The implications this study has for pre-service teachers are very different because although the majority of the current educational workforce consists of digital immigrants, most pre-service teachers are digital natives. Despite this distinction, however, the issues are not clear-cut because the swiftness of the technology evolution means that even one year can make a big difference. Yet, for most pre-service teachers, particularly those currently entering higher education, the digital literacies are part of their every day literacy practices. This can pose challenges for pre-service teachers who expect to continue using the technology literacies, but are faced with a more traditional view of literacy when they enter the classroom.

To provide insight into how pre-service teachers might perceive the nine themes identified in the study, I looked closely at the responses given by the English teachers who are newer to the field. Although I expected them all to chafe under the literacy restrictions, I was surprised to find that this was not always the case. First, I examined the responses given by Jane Nichols and Jill James in Witt City. I was surprised to find that their responses were very similar to the rest of the educators in the district. In fact, Diane Mather who is in her 50s seemed more receptive to the inclusion of technology than either of these new teachers who are in their 20s. Perhaps this can be explained by their natural inclinations toward technology. It could be that both teachers found districts that matched their philosophies. However, based upon some of their comments, Jill's frustration about the lack of access to YouTube and Jane's acknowledgement that social

networking sites could probably be utilized in the classroom, I would venture to guess that more than likely their attitudes are a reflection of the environment of the district, itself. Although both teachers are relatively new to the classroom, Jill is in her second year of teaching for Witt City and Jane is in her third. The rigidity of the framework of schooling is such that new teachers often dismiss their own views and training in an effort to survive the first stressful years of teaching. Because Witt City has adopted the gatekeeper stance so thoroughly, it makes sense that new teachers will abandon their own literacy practices to conform to the literacy practices and expectations of the district.

Unfortunately, the contrasting district of Vickville does not have any new English teachers to compare with Witt City. I did have the chance to speak with two brand new English teachers in Skillen, though. Roxann Empire is not the typical new teacher because she entered the field in her late 30s. This might explain her more conservative view of technology. She, like others in the school, is a digital immigrant, so she does not have the first-hand knowledge of what new literacies entail. Bobby Visitor, on the other hand, is a first year teacher in his 20s, and his responses mirrored those I expected from a new teacher. Because I interviewed Bobby in late August, he was just beginning to encounter the restrictions that Skillen placed on technology in the classroom. As a young teacher highly skilled in technology, Bobby finds many of the limitations frustrating. He has grown used to having technology at his fingertips and sees many advantages to incorporating it into the classroom.

> My first district had all video sites blocked, as a student teacher. And my second district had nothing blocked, and I did amazing lessons with YouTube where we did persuasive techniques to video, you know commercials, and I was able to just get them right up, without any trouble because I didn't have to go first and use some sort of program to download the YouTube videos and then put them on the thing, whatever. I didn't have to do that at home, because I can't even do that here. (Bobby Visitor)

As a digital native who understands technology's position on the literacy spectrum, he is frustrated by the fears that restrict access in the classroom. For Bobby, there is nothing scary about technology, and he feels that those who let fear dictate accessibility fail to see the benefits of incorporating technology into the classroom.

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I would speculate that Bobby's position is very similar to that of many new teachers who are very comfortable with digital literacies. It is a position that will become more and more prevalent as new teachers enter the field. Thus, it is also a position that provides insight into the study's implications for pre-service teachers. If schools are going to begin to move toward a definition of literacy that encompasses the new literacies, pre-service teachers are going to become vital to this shift. Pre-service teachers will provide the pool of new teachers who possess the knowledge and skills to successfully and naturally incorporate the digital world into the school world. Yet, as Jill and Jane demonstrate, the powerful structure of schooling can prevent teachers from bringing this change, particularly when new teachers enter the field without the knowledge of the forces that prohibit the inclusion of technology. When this happens, new teachers can either quietly succumb to the traditional literacy practices of the district or become frustrated as they fight to incorporate the technologies they are familiar with. If, however, pre-service teachers are educated about the fears schools possess toward digital literacies, they might be better equipped to enter the field as change agents. Once again, this study provides an insight into the roots of some of the specific concerns schools have in regards to technology. Providing pre-service teachers with this information gives them the opportunity to explore possible approaches to counter these fears once they enter the classroom.

Implications for Communities

Because all the stakeholders influence rhetorical situations, I would be remiss not to mention the implications this study has for the communities the districts serve. Schools do not make all their curricular decisions in a vacuum. Rather, public expectations yield great influence over what occurs in the classroom. If this were not the case, the frustration expressed by teachers about the amount of testing required by the government would not exist. Clearly, if teachers had their way, more time would be spent using the computers for activities other than on-line testing. It is precisely because the public has certain expectations about what education means that policy makers mandate high-stakes testing. Similarly, teachers are not alone in their fears about incorporating technology into the classroom. Like the majority of teachers, most of the public making decisions about

school curriculum are digital immigrants. More than likely, this means the public shares similar fears. This means that until the public has a better understanding of how the digital evolution has impacted literacy, there is little chance that necessary changes will be made in the classroom. To this end, this study can encourage similar conversations among members of school communities. Once again, a better understanding of the fears that drive decision-making can increase the chances of communities to reach a compromise that acknowledges technology's place in the literacy spectrum.

Further Considerations and Implications for Further Research

As is always the case with research, this study raised almost as many questions as it did answers. Furthermore, as is the case in all qualitative studies, the findings of the study cannot be generalized across all school districts. I have, however, made every attempt to make the study as transferable as possible through the selection of three very diverse sites in two Midwestern states. The emergence of the same themes across all three districts suggests that there are qualities of this study that can be built upon by districts other than those featured in this study. This assertion alone, however, demands repetition of the study in various districts in various states. If repeated, would the same themes emerge in states outside the Midwest? Or is there something about the Midwest that prompts the concerns expressed in this study?

Repeating the study would also provide more data to the existing pool, which could then be analyzed through a lens other than the grounded and gap/continuum theories. Applying the change theory to the existing data, as well as any additional data, would provide a new perspective that could help explain how schools select the adaptation process they use when working with technology. As discussed throughout this study, schools have historically resisted change no matter what form it comes in. Applying research that analyzes the nature of this resistance to change could aid in overcoming the resistance.

Other questions raised in the study also require further investigations. First, while local cultures of schools consist of stakeholders beyond employees of the district, this study only focused on educators. This was done for a couple of reasons. Manageability of the study played a large role. Because I wanted to get a clear understanding of how

educators negotiate their boundaries, I interviewed a total of 34 individuals, creating hours of data that needed to be analyzed. Adding parents, students and other community members would have complicated the analysis, adding irrelevant information that did not answer the question of how secondary schools negotiate the boundaries of new literacies. I felt that the root of the issue rested within the schools themselves. Regardless of the subject matter, schools operate within rhetorical situations, so of most interest to me was how educators perceive their responsibility to their students when working within the boundaries placed upon the new literacies. Now that I have a clearer understanding of educators' perceptions of new literacies, it would be interesting to discover whether or not other stakeholders share these perceptions. Do parents and other community members have the same concerns about youth and technology? Conducting the same study with parents and community members in the same three districts would allow me to discover whether or not the schools' views of technology match that of the public they serve. Do parents agree with the limitations placed upon their students or would they prefer to see a greater integration of technology and the literacy skills required of these texts? Another interesting angle would be to interview secondary students themselves. What do they perceive to be the reasons they are not allowed to use technology in schools in the same manner as they do at home, and how do they feel about these restrictions? Do students themselves have ideas that can help schools alleviate their fears about integrating technology?

While these questions would broaden the picture emerging from this study, other areas of interest arose during the course of the study, as well. As mentioned earlier in this chapter, exploring the consequences of the gatekeeper versus facilitator approaches would also help educators determine the best way to approach technology. Examining discipline referrals that specifically deal with technology infractions and then following up with interviews with the students, principals and teachers involved would shed light onto whether or not tighter restrictions actually help schools control the issues raised in this study. Do schools that approach technology through the gatekeeper mindset have more or less discipline problems than those that take the facilitator approach? Furthermore, what is the exact nature of the discipline problems? Are schools that maintain tighter control more or less sensitive to issues that involve technology? Are

schools that take a more relaxed approach toward technology more or less forgiving of student slip-ups?

The study also raised questions as to whether or not teachers actually understand what new literacies entail. Administrators in Vickville do not believe that most teachers actually grasp how technology has changed literacy practices. Instead, they believe, and the responses of this study support these beliefs, that most teachers simply view technology as tools that allow them to approach the same curriculum in a slightly more efficient way. To further explore this issue, it would be interesting to survey teachers to discover exactly which of the new literacy technologies are being used in the classroom. Once particular uses of technologies like blogs, wikis, social networking sites, text messaging, etc. are discovered, further analysis could be done of the assignments that require the use of these technologies. Do the assignments reflect the skills and literacy practices that these technologies demand outside of the classroom? Or, do they impose traditional classroom expectations on the new technologies? In grading, is there room for language such as IM slang to be incorporated into the assignment or are students penalized if they slip into these languages? Through analyses such as these, researchers would have a different perspective on how schools negotiate the boundaries imposed upon the new literacies.

A survey such as this could also lead to the identification of teachers who do implement the new literacies in the manner that reflects their practice in the work world. Having worked with exceptional teachers, I have no doubt that there are teachers who regularly work to instill new literacy skills into their students' literacy toolboxes. The challenge is simply finding these teachers. A survey provides a route to unearthing such teachers. This would then present an interesting opportunity to create case studies that could help inform schools of effective ways to teach with technology that respects the boundaries imposed upon schools. Such case studies could also show schools that lean more toward the gatekeeper approach that it is possible to implement digital literacies into the classroom in ways that do not threaten the school environment.

While all these approaches examine individual teachers and communities, as discussed in the section on the implications for teachers, if schools are ever to regularly incorporate the new literacies into the classroom, it's important to instigate conversations

about fears about technology and the resulting limitations places upon technological tools across communities. Information gathered in this study can be developed into resources for literacy educators, but other studies can also be created to encourage this conversation. One way to approach this would be to generate focus groups comprised of individuals from various districts. Focus groups are an effective way for participants to reflect upon the questions asked of them because they allow participants to hear other responses, adding to their own responses as issues are brought up that may not have been initially considered (Patton, 1990). Because focus groups can further explore how educators negotiate the boundaries imposed on new literacies, data collected from this study can help identify Internet sites of varying degrees of acceptance by school communities. Of particular interest would be four different sites that demonstrate the emerging genres of Web 2.0, genres such as blogs, wikis, and social networking sites. Conversations could begin with a discussion of a site such as Wikipedia, which is generally considered fairly benign by educators and the community. Questions would explore the educational merit of the site, concerns educators and their local cultures might have, and how educators can reconcile the learning opportunities with these issues of concern. After discussing the potential merits and pitfalls of the site, three additional sites could be shared, each progressively more controversial in nature. By increasing the degree of discomfort introduced by the sites, conversation can emerge that directly addresses the nine themes discovered in my original study, prompting an opportunity to discuss how to specifically address these issues with students. Just as Kathleen Hess and Diane Mather complained that it's difficult to address problems of misinformation and safety with students through abstract discussion, discussing solutions to these problems is also problematic without specific examples to work from. This study would provide the material needed to prompt necessary discussions.

Finally, in addition to further questions raised about the exploration of the boundaries, the study also prompted questions about the boundaries themselves. What specifically exists within the digital texts that cause concern? To approach this question, textual analyses that are similar to the methods used on traditional texts would be insightful. For example, misinformation caused concern for several educators in this study. While Wikipedia was one source of discussion, Vivian Flack also raised the

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question of how emails containing urban legends add to this problem. Textual analysis of these emails could provide clues as to what makes these legends believable, building a better understanding of how misinformation continues to permeate certain Internet texts. This understanding will aid teachers in helping students learn to identify text clues that can be misleading. Similar textual examinations of sites that possess qualities of the other themes can be used in the same way. What textual practices are deemed unsafe? How can students avoid participating in these practices? As Bakhtin (1986) asserted, the possibilities of new genres are "boundless," and decades later we are witnessing just how true his belief was as technology continues to introduce new twists on familiar genres. For researchers, this means possible studies are also boundless as we continue to explore the impact each genre has on literacy, and textual analysis allows us to do just that.

Summary

Upon completion of the interviews, careful analysis of the data through the use of grounded theory discovered nine codes and three axial codes that help explain the concerns educators have when incorporating technology into the classroom. Further exploration of the data using the gap and continuum theories helped clarify how the three districts view the influence of technology on students. Although all three districts shared the same nine concerns, each district's perception of these concerns influences how the districts adapt the technology they include in the classroom.

Despite the literature that indicates that students' literacy needs are changing to reflect the texts introduced by the digital evolution, schools continue to resist incorporating the technology students compose and read outside the classroom. If one considers literacy from a historical perspective, this is not surprising. Beginning with Plato's resistance of the alphabet and countless examples since that time, society tends to view technologies that change literacy practices with suspicion. Yet this suspicion will not halt the constantly changing technological evolution. Therefore, understanding and discussing the specific issues that shape these reservations can help shape the adaptation process that must ultimately occur before introducing these digital tools into the classroom. Through these conversations, schools can begin to alter the definition of

literacy, incorporating the new literacy skills students will need for a future we can only begin to imagine.

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Appendix A - Alphabetical Listing of All Participants

Name	Position	District & Building
Kevin Aiken	Principal	Skillen Middle School
Dennis Albrecht	Assistant Superintendent for Secondary Education	Vickville District Office
Lee Babcock	Executive Director of Secondary Education	Witt City District Office
Karl Beamer	Technology Director	Vickville District Office
Caroline Caan	Technology Director	Witt City District Office
Brenda Cavett	Lead 8th Grade English Teacher	Skillen Middle School
Laurie Chandler	Principal	Vickville High School
Lynn Darby	Communication Arts Instructional Coach	Witt City District Office
Claudia Diamond	Instructional Coach	Vickville District Office
Grace Eliot	Principal	Witt City Alternative School
Roxann Empire	First-Year English Teacher	Skillen Middle School
Tracey Epstein	Veteran English Teacher	Vickville High School
Vivian Flack	Librarian	Vickville High School
Paula Flynn	Teacher	Witt City Alternative School
Walt Garland	Principal	Witt City High School
Diane Goldberg	Librarian	Skillen Middle School
Charlie Goodyear	Principal	Vickville Alternative School
David Hempel	Principal	Vickville Middle School
Kathleen Hess	English Department Chair	Witt City High School

Name	Position	District & Building
Lynn Isaacs	English Teacher	Vickville Middle School
Jill James	Second-Year English Teacher	Witt City High School
Nina Jones	English Teacher	Vickville Middle School
Amy King	Librarian	Witt City High School
Lindsay Lawrence	Assistant Superintendent for Curriculum and Instruction	Skillen District Office
Bruce Levitt	Principal	Witt City Middle School
Diane Mather	English Department Chair	Witt City Middle School
Jane Nichols	Third-Year English Teacher	Witt City Middle School
Jessica Nokes	Technology Coordinator	Skillen District Office
Jane Pendergrass	Instructional Literacy Coach	Skillen District Office
Julie Pine	Librarian	Witt City Middle School
Thomas Riley	Principal	Skillen High School
Emily Tyler	English Department Head	Skillen High School
Bobby Visitor	First-Year English Teacher	Skillen High School
Chloe Yeats	Librarian	Skillen High School

Appendix B - Letter of IRB Approval

K·STATE
Kansas State University

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Fax: 785-532-3278
http://www.ksu.edu/research/comply

TO: Todd Goodson   Proposal Number: 4785
        Secondary Education
        349 Bluemont

FROM: Rick Scheidt, Chair
        Committee on Research Involving Human Subjects

DATE: July 21, 2008

RE: Proposal Entitled, "Why Can't We Color Outside the Lines? Educators Negotiating Boundaries When Working with New Literacies"

The Institutional Review Board (IRB) for Kansas State University has reviewed the proposal identified above and has determined that it is exempt from further review.

This exemption applies only to the proposal currently on file with the IRB. Any change affecting human subjects must be approved by the IRB prior to implementation and may disqualify the proposal from exemption.

Exemption from review does not release the investigator from statutory responsibility for obtaining the informed consent of subjects or their authorized representatives, as appropriate, either orally or in writing, prior to involving the subjects in research. The general requirements for informed consent and for its documentation are set forth in the Federal Policy for the Protection of Human Subjects, 45 CFR 46.116-117, copies of which are available in the University Research Compliance Office and online at http://ohrp.osophs.dhhs.gov/humansubjects/guidance/45cfr46.htm#46.116. In cases of remote oral data collection, as in telephone interviews, oral consent is sufficient and the researcher is required to provide the respondent with a copy of the consent statement only if the respondent requests one. The researcher must, however, ask the respondent whether he or she wishes to have a copy. The initiative in requesting a copy must not be left to the respondent. Regardless of whether the informed consent is written or oral, the investigator must keep a written record of the informed consent statement, not merely of the fact that it was presented, and must save this documentation for 3 years after completing the research.

The identification of a human subject in any publication constitutes an invasion of privacy and requires a separate informed consent.

Injuries or any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Committee on Research Involving Human Subjects, the University Research Compliance Office, and if the subjects are KSU students, to the Director of the Student Health Center.

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Appendix C - Interview Protocol

Research Question: How do secondary schools negotiate the tensions created at the rhetorical boundaries of their local cultures by the content and emerging genres of new literacies pedagogy?

Time of interview:

Date:

Place:

Interviewer:

Interviewee:

Position of interviewee:

Age Range: 20-29   30-39   40-49   50-59   60 or older

Questions:

1. How has technology changed in the course of your teaching career?

2. As a result of the increase in technology and the collaborative nature of Web 2.0, what do you think students are learning today that they weren't before?

3. How has technology made your job more challenging?

4. What types of conflict have you seen as a result of new technologies?

5. Can you think of a situation when too much access has caused problems?

6. Which of the following do your students have access to at school?
   Gmail/other email accounts?

   Blogging sites?

   Wikis?

   Social networking sites (i.e. MySpace, Facebook, Bebo, etc)?

   Social service sites (i.e. Flickr, Twitter, Dodgeball, del.i.cious, etc)?

YouTube?

Instant Messaging?

Cell phones/text messaging?

Personal Organizers (i.e. Palm Pilots, Blackberries, etc)?

Gaming Stations (Wii, PS2, Nintendo, Portable gaming, including DDR for P.E.)?

Online Gaming?

iPods/mp3 players?

7. Of the technology students have access to, why do you think student are allowed access in school?

8. What are your thoughts about allowing this access?

9. Of the technology students do not have access to, why do you think student are not allowed access in school?

10. What are your thoughts about not allowing this access?

11. Are there things you don't have access to in school that you wish you could?

    If so, what benefits do you see to having this access?

12. If you were to have a wish list of accessible technology in schools, what would be on it?

13. What battles do you see teachers fighting in regards to technology? Do teachers seem to be winning or losing the battle? Please explain.

14. What kinds of things are you afraid of in terms of technology?

Appendix D -   hyperResearch Screen Shot

Appendix E - Definitions of the Identified Themes

Change: The notion that technology requires different knowledge than previous classroom practice. For educators, change can mean adopting a different mindset about educational purpose, classroom practice and student expectations. Change can also mean the need for additional training to understand these mindsets.

Dependency: The belief that, either positively or negatively, students and/or teachers have begun to rely more on the use of technology.

Distractions: The potential of technology to disrupt normal classroom procedures.

Funding: The ability of schools and students to purchase technology.

Inappropriateness: The question of whether or not content created with or found on technology should be seen by students.

Infractions: The ability to break school rules through the use of technology, including, but not limited to, cheating, hacking the system and cyberbullying (using technology to harass and intimidate others).

Immediacy: The ability to compose and access information via technology very quickly.

Misinformation: The question of whether or not information found on technology, particularly the Internet, is reliable.

Appendix F -   Glossary of Technology Terms

Safety: The potential for students to participate in risky behavior using technology, particularly due to on-line predators.

Bebo: A social networking site, which allows users to create a profile, leave messages for friends, post original works of writing and music, and use other social applications.

Blogging: The act of posting personal opinions and thoughts in an online forum called a blog. New entries are posted in reverse chronological order. Readers of the blog may leave comments about the ideas presented in the blogs.

Del.i.cious: This site uses a process known as social bookmarking because it allows users to bookmark web sites of interest, tag the sites according to commonalities, and share their lists with others on the Net.

DDR: DDR, or Dance Dance Revolution, is a game that requires users to watch the screen for visual cues for foot placement on the mat that serves as the users stage. Players choose songs, as well as levels of difficulty, and attempt to hit each command at the exact timing required by the game.

E-mail: Electronic mail that allows users to type messages and send them over the Internet.

Facebook: A social networking site, which allows users to create a profile, leave messages for friends, upload photos and videos, and post status updates to alert friends of what is going on in their lives.

Flickr: A site that allows users to post images, particularly photos, to be shared with friends on the Internet.

Gmail: A popular form of e-mail that automatically organizes messages by related threads.

Instant Messaging: A form of electronic communication that differs from email in that there is an instantaneous exchange of information between two or more users. It is characterized by abbreviated language that allows users to send messages more quickly.

iPod: A personal digital music player developed by Apple that also allows users to store information in a manner similar to a portable hard drive.

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mp3 player: A personal music player that plays songs that have been digitally compressed into small files.

MySpace: A social networking site, which allows users to create a profile, leave messages for friends, and use other social applications.

Nintendo: A video game manufacturer that has developed a series of game consoles, including the personal game system known as the NintendoDS.

PS2: A video gaming console created by Sony.

Social networking: Web sites designed around the idea that users' friends can become friends of friends to help establish a larger network of friends. These sites give users the ability to determine who is allowed on their particular pages.

Text messaging: Electronic messaging between cell phones. It is similar to instant messaging, using abbreviations to speed up the communication process.

Twitter: A social networking site that allows user to post quick messages to their followers. Messages are limited to 140 characters, and unlike most social networking sites, anyone can follow a user's postings.

Wii: A video game console created by Nintendo characterized by games that require players to simulate the movements of real situations.

Wiki: An collaboratively built web site that allows members of the site to add, edit and delete information.

YouTube: A website that allows users to upload, share, and view other video clips.

Appendix G - Axial Coding

Category	Themes
Perceptions of Student Behavior	**Dependency**
	Distractions
	Infractions
Perceptions of Technology	**Funding**
	Immediacy
	Inappropriateness
	Misinformation
	Safety
Perceptions of School's Role	**Change**