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Edublogging: Instruction for the Digital Age Learner

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Education
in
Educational Leadership

by
Jeffrey P. Felix

Committee in charge:

University of California, San Diego
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California State University San Marcos
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The Dissertation of Jeffrey P. Felix is approved, and it is acceptable in quality and form for publication on microfilm:

Chair

University of California, San Diego
California State University, San Marcos
San Diego State University
2007
DEDICATIONS

To Debbie— you have been my friend, lover, soul mate, and wife for the past 31 years. You realized long ago that my dream was to be a teacher and then you made it happen. You started this process and then continued to encourage me all along the way. Without you I have no dreams, no reason to wake from sleep, no desire to start the day. You are the beat of my heart, the breath of my being. Thank you for making this dream come true and holding me up every step of the way.

To Mom and Dad— your personalities and individual characteristics are all jumbled up within me to make me who I am today. I am proud to be a third generation Italian– the first of the family of Philip and Theresa Felix– to become educated to such a degree. The De Felicibus family journeyed from Collecorvino, to Ashtabula, and finally to Escondido to bring my siblings and me success. Thank you for your optimism and perseverance. I am proud to be your son.

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They make the average teacher a better instructor and the children we all serve are
better equipped for life because of their work.
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ABSTRACT OF THE DISSERTATION

Edublogging: Instruction for the Digital Age Learner

by

Jeffrey P. Felix

Doctor of Education in Educational Leadership

University of California, San Diego, 2007
California State University San Marcos, 2007
San Diego State University, 2007

Professor Janet Chrispeels, Chair
Professor James Levin
Professor Katherine Hayden

The heart of education beats with a teacher’s perception of instructional effectiveness with students. Research suggests that differentiated instruction, using multiple modes of presentation, will positively increase a student’s opportunity for learning. Communicating efficiently, using various communication methods, will enhance a teacher’s instructional effectiveness and a student’s ability to understand. This study begins by examining selected modes of communication available to educators and poses questions of the validity of these modes within schools. It
explores theories of the changing expectations of how people want to be given information or want to have information available via electronic means and how this could change the way educators communicate to students individually and collectively.

Seen for many years as something special, the Internet and related electronic tools were available only to techno-wizards and data-loving geeks. They have now become part of everyday life. People routinely integrate them into the ways they communicate with each other, moving between phone, computer, and face to face encounters without deliberation.

Blogs are one of those tools. Blogging appears to offer multiple opportunities for teacher and student use. Writing in a blog by both student and teacher may strengthen their relationship while also providing a unique means of communicating instruction more effectively. Through electronic surveys and virtual interviews of blogging K-12 teachers, as well as document analysis of their blogs, this study examines blogging in classrooms within the United States to determine how blogging is used for communication and instruction. This study also considers the teacher’s perception of how blogging has changed their instructional practice. This examination of blogging educators, or edubloggers, charts new territory and informs the educational community on the potential of blogging to support classroom communication and promote increased learning for the Digital Age student.
CHAPTER 1
INTRODUCTION

Effectively communicating with students, the community they serve, and with one another will be a great challenge for educators in the 21st century (Kozma & Schank, 1998, p. 28). Technology has changed almost every part of our society, including our methods of communication (Barton, 2001; Garvey & Griffith, 1972). There is a powerful force driving the need for research on effective communication techniques in schools. That force is the rapidly changing modes of communication devices and methods that individuals and families are selecting to communicate with each other (Ethier & Gold, 1996; Ferrandino, 2001; Fuller, 1996; Gates, 2000).

The new century brings us a fascinating world of technology that educators can use for an exchange of ideas. Mankind is on the verge of creating additional technologies and innovations that will continue to change the way we think, act, and communicate. Traditionally, schools tell stakeholders in one-way conversations what needs exist for students or the school (Epstein, 1986). School communication is commonly performed via letters, reports, flyers, or face to face (FTF) in conferences or assemblies. The use of instant and personal communication, such as e-mail or an electronic diary (Web-based log or blog), suggests that school conversation can now be two-way. Allowing the students to have such a continuous flow of conversation may require a serious rethinking by educators on how they communicate with and instruct students. Students involved in this participatory culture may benefit through peer-to-peer learning, an appreciation of intellectual property, a diversified cultural
expression, developing modern workplace skills, and an empowered concept of
citizenship both locally and globally (Jenkins et al., 2006). I hypothesize that if a
teacher uses a blog as a mode of communicating instruction, they will perceive their
instruction is more effective and that student learning opportunities have improved.

**Statement of the Problem**

Popular books on communication automation and instant access to information
by the masses feature research as well as prognostication (Gates, 2000; Gates &
Hemingway, 1999; November, 2001; Tapscott, 1998). The majority of the literature
represents the personal opinions of the author(s) or, in some cases, syntheses of other
authors. Research on the use of digital technology in schools is sparse, but growing.
Quantitative surveys from the American Educational Research Association, Pew
Internet & American Life Project, National Center for Education Statistics, and others
show an explosive use of various technological tools by consumers.

Authors such as Cuban (1986), Fuller (1996), and Siemens (2004) have shown
that educators collectively have a gap in their perception of computer usage, both by
themselves and with the community they serve. This gap suggests that school
employees may not be using computers competently in their communications with
stakeholders. Much of the research that informs the educational field about how
computer mediated communication (CMC) might play a role in school reform and the
building of relations among stakeholders has been controversial. Early implementation
of computers in classrooms was an addition to the experience rather than an
integration creating a distance between core instruction and technology. Other
resistance to technology integration springs from the sense that the school day is bursting at its seams and teachers cannot cram in any new tasks (Jenkins et al., 2006).

Because of the rapidly changing societal norms suggested by the “push-pull” theory (Hagel & Brown, 2005) and a high consumption of information (Hewitt, 2005), a serious gap may widen between the communication expectations of the family and the current methods used in most schools. The objective of effective teacher communication is to build a trusting relationship while imparting important information with students in order to create collaboration and understanding, thereby increasing student learning and instructional efficiency. I propose that teachers might achieve this objective by creating a blog for the purpose of communicating lessons and assignments, providing additional instruction through online assistance, providing more feedback on student work, and improving classroom collaboration.

Education has historically lagged behind commerce and industry when it comes to implementing new tools and ideas for schools (Cuban, 1986; David, 1991; Gates, 2000; Paige & Patrick, 2004). Technology alone cannot transform the system, nor can it change public opinion, but it may contribute to educators overcoming communication barriers that may exist internally and externally. Because of the changes in personal communication systems, school administrators and teachers require additional research in order to make informed decisions about the most effective ways to communicate and support instruction using technological tools as part of their instructional practice (Fuller, 1996; Vaden-Kiernan, 2005).
Research Context

Multitasking Using Digital Devices

The tools we use to educate the 21st century child should be unique, developed just for this generation. Research findings seem to suggest that the overall results of technology on student outcomes may be greater than previously thought (Waxman et al., 2003). This same research suggests that teaching and technology processes may directly impact student outcomes or may interact with technology features and indirectly impact outcomes.

Researchers are just beginning to assess the impact of children using multitasking devices. Mentally dividing a student’s attention into ever-changing priorities does not appear to be conducive to the typical classroom setting. And it is not just dividing their attention into separate parts that is the most troubling. The Kaiser Family Foundation (Roberts et al., 2005) noted that even though children ages eight to 18 were not spending more time with electronic media, they were packing more media exposure into that time. Of the 6.5 hours that they spent with the devices, media multitasking allowed them to absorb 8.5 hours of listening, watching, talking, and text messaging.

The quality of one’s output and depth of thought erodes as multitasking proliferates. Researchers have found that not even the millennial generation students are immune to the errors that occur when multitasking goes overboard. When trying to perform two or more tasks, people succumb to errors and a slowdown in mental processing and physical implementation occurs. Some jobs may be completed quicker
if they were performed sequentially (Wallis, 2006). David Meyer, director of the 
Brain, Cognition, and Action Laboratory at the University of Michigan believes it is a 
myth that students can accurately complete school assignments when electronic media 
exists in the same proximity. He has shown in many studies that the brain has inherent 
limitations for processing information during multitasking. Media change is affecting 
every aspect of our contemporary experience, and as a consequence, every school 
discipline needs to take responsibility for helping students to master the skills and 
knowledge they need to function in a participatory culture (Jenkins et al., 2006). 

Ubiquitous Communication

Teachers orally answer many questions each day and attempt to answer other 
questions via the written word. As chief communicators for a child’s academic 
education, most educators have necessarily “pushed” information at children and 
families, primarily through direct teacher centered instruction in the classroom and by 
paper flyers, banners, or word of mouth with students’ families. Epstein’s study (1986) 
shows that schools offer little encouragement for parents to communicate back to the 
schools, even to the point of exclusion. Web-based communications have changed 
how people receive information, in that readers are now able, and even prefer, to 
“pull” the knowledge they want in the sequence most relevant to them (Hagel & 
Brown, 2005). Pull communication models supply people on the sideline with the 
tools and resources to connect with information on demand, and with other similar 
people. It gives them an opportunity to creatively address opportunities instantly and 
virtually.
People now expect access to information anytime and anywhere; they expect information to be delivered to them as soon as it is available (Hagel & Brown, 2005; Prahalad & Ramaswamy, 2004). Hagel and Brown (2005) believe the most basic change has been a shift in the role of humans from isolated to connected, from unaware to informed, and from passive to active. They point to the ease of information access through the Internet, the global view consumers have for purchasing, networking among humans through electronic devices, and the ease people have to experiment with such devices to develop their own unique use (Kozma & Schank, 1998). However, data from schools indicate they are ill equipped to participate in this new network (Cuban, 1986; Paige & Patrick, 2004). This research suggests the need for automation of connectivity through computer mediated communication and electronic devices that could assist educators with community communication expectations.

**Assisting with Instruction, Not Replacing**

Research examining the impact that technology has on student performance began to grow in the 1980s when theoretical foundations of educational technology research were not analyzed closely using theoretical principles (R. E. Clark, 1983). Most of the research evaluated computer-based applications and products. As an acclaimed critic of media comparison studies, Clark claimed that the uses of such technologies are “mere vehicles that deliver instruction but do not influence student achievement” (p. 445). In addition, Clark argued that the critical factor in determining
student achievement is the instructional method and not the media such as the computer or instructor (Cain, 2005).

Refuting Clark’s theory, Kozma (1994) states that technology should be viewed as a media that assists with instruction, rather than to take the place of traditional teaching methods. Ehrmann (1995) calls for a new research agenda that takes into account Clark’s and Kozma’s theoretical viewpoint stating that both the design and delivery methods should be taken into account. Cain (2005) states technology use should not be viewed as replacing discipline, but enhancing instruction, and as a result, more accurate reflections of learning will occur.

**Blogging as Two-Way Communication**

Although little research has been done on the act of blogging, this form of communication appears to complement the idea of “push-pull” (Hagel & Brown, 2005) and the changing information acquisition habits of modern society (Hewitt, 2005). Blogging also appears to satisfy Hattie’s notion (1992) that the most powerful single moderator that enhances achievement is feedback. He says that the simplest prescription for improving education must be "dollops of feedback" – providing information on how and why the child understands and misunderstands, and what directions the student must take to improve. As well as feedback on the task, Hattie believes that students can get feedback on the processes they have used to complete the task, and on their ability to self-regulate their own learning. These all have the capacity to increase achievement. He goes on to say that the most fundamental component of teaching is imparting information to students, assessing and evaluating
the students understanding of this information, and then matching the next teaching act to the present understandings of the student. Since blogging with students can be performed immediately (synchronous) or at a time more convenient for either party (asynchronous), it could deliver more feedback and therefore improve student achievement.

To be able to address some of these issues in future studies, it is essential to explore what is currently known about CMC in general and blogging in particular. The literature review to follow will discuss how computers are changing the way we communicate. It will describe the collective use of technology, automated communication, and current methods of communication. It will end with a discussion of blogging and how various forms of pedagogical theory relate to its use in the classroom.

**Research Questions**

With the increased implementation of technology in conventional classrooms, there is a need to know if the use of technology resources and communication tools support increased student engagement in learning activities. Governments have placed increased pressure on schools to radically increase performance for all students (Russell, 2006). Schools cannot afford to waste precious resources on instructional techniques that are not proven to be effective. The advances in technology and changes in the organizational infrastructure put an increased emphasis on teamwork within the workforce. Workers need to be able to think creatively, solve problems, and make decisions as a team. Therefore, a primary goal of technology in education may
be to contribute to the development and enhancement of critical-thinking skills through collaborative learning.

The use of blogging by teachers with their students seems to be a viable mode of communication. It appears to have the potential to increase collaboration between the teacher and the student and among the class as a whole. Teachers using blogging as an instructional practice give the impression that it has been a success. The overarching question this study will explore is: In what ways do teachers use blogs in the classroom? The sub-questions for this study are: (a) how do teachers use blogs to communicate general information to students, (b) how do teachers use blogs to deliver specific instruction, and (c) how do teachers perceive the use of blogs has influenced communication and instruction.

This study is qualitative with a phenomenological philosophy using interpretive research as the foundation. Some tools of ethnography will also be employed. Interviews, surveys, and document analysis will serve as the primary methods of data collection. All data collection will be performed virtually via the Internet. Participant teachers will be selected based upon their regular weekly use of the blog as a primary instructional tool as indicated by the teacher and observed by student postings. All participants will be K-12 certificated teachers working in the United States. Limited demographic data have been amassed on each participant. No students were interviewed, but some data publicly available from the blogs produced by students may be used to explore the nature of the work in which students are engaged and how the blog seems to connect students and teachers.
Significance of the Study

Though there has been tremendous growth in the use of web-based technologies to manage and teach traditional courses, it is uncertain how such methods increase learning performance. The literature review presents some of the current research available on communication in general and particularly in schools, stakeholder collaboration with schools, collective intelligence, social networking, and the act of blogging as a communication tool and an effective instructional practice.

While studying this phenomenon over the past three years, I have observed many changes in blogging. Blogs are now much easier to produce, they are graphically more robust, and their use as a classroom tool has increased. Since I began my search for information on classroom use of blogging, two books have been written specifically on the subject. Will Richardson wrote *Blogs, Wikis, Podcasts and Other Powerful Web Tools for the Classroom* (2006) after two years of using these tools in his New Jersey classroom. David Warlick penned *Classroom Blogging: A Teacher's Guide to the Blogosphere* (2005) after a decade of teaching history and then seeing the power of blogging by others. That book apparently sold well because in 2007 Warlick published the book in a 2nd edition (Warlick, 2007). Through his company November Learning, Alan November has developed a powerful blog specifically for teacher use, similar to one developed by David Warlick. November was named one of the nation’s fifteen most influential thinkers of the decade by Classroom Computer Learning Magazine and was named one of eight educators to provide leadership into the future by the Eisenhower National Clearinghouse.
With this added attention by reputable educators, the idea of teachers using blogs as an instructional tool must have potential. Composing a blog daily or weekly certainly has the potential for being a powerful communication medium for the teacher. Because of the newness of this technology, little research has been conducted on its use in the classroom or as an instructional method. The purpose of my study is to examine publicly available classroom blogs, to analyze their content in order to understand the ways teachers are using blogs to communicate with students, and to discover how teachers perceive blogging as an effective part of their instructional practice.

This study is one of the first to bring research light on this subject in order to provide teachers with insights on how blogs might be useful for increasing effective communication, improving collaboration with the teacher and with other students, and potentially enhancing student performance through increased feedback.
Definition of Terms

**Aggregator**: An aggregator collects and organizes the content generated via the RSS feed.

**Collaborative Learning**: an approach to learning that stresses, in general, the importance of such factors as teamwork, interdependence, and interaction among students (R. T. Johnson & Johnson, 1986).

**Computer-Mediated Communication (CMC)**: Communication across distances by the use of a computer, phone line, modem, and in some instances, computer networks. CMC can be broadly defined as human communication via computer. It involves interaction between humans using computers to connect to each other and generally refers to any communication pattern mediated through the computer. Communication takes place through a computer between human beings instead of to an already determined computer system. CMC may incorporate audio and visual input into text (Barnes, 1994; Fuller, 1996).

**Constructivist Theory**: A major theme in the theoretical framework is that learning is an active process in which learners construct new ideas or concepts based upon their current or past knowledge. The learner selects and changes information, constructs theories, and makes decisions, relying on a cognitive structure to do so. Cognitive formation provides meaning and organization to experiences and allows the individual to "go beyond the information given" (Brooks & Brooks, 1999).
**Blog**: A blog is a website where entries are made chronologically in journal style. Blogs often provide commentary or news on a particular subject, such as politics or news; some function as more personal online diaries. The term "blog" is a contraction of "Web-log." Blog can also be used as a verb, meaning to maintain or add content to a blog.

**Edublogger**: There are group blogs, family blogs, community blogs, and corporate blogs, and then there are blogs defined by their content; e.g., 'WarBlogs' (a product of the Iraq War), 'LibLogs' (library blogs), and 'EduBlogs', a new type of blog that has begun to emerge in educational circles. An edublogger is one who writes a blog with a stake in education (Williams & Jacobs, 2004). This word may have been first coined by Australian James Farmer in 2004.

**E-mail**: Electronic mail that enables learners to send messages over the Internet or an intranet.

**Face to Face communication (FtF)**: In face to face conversation, there are many subtle cues provided by body language and vocal intonation that let those communicating know how what they are saying is affecting the other person. These visual and verbal cues are completely absent in online communication.

**Forums**: An Internet forum is a web application for holding discussions and posting user generated content. Internet forums are also commonly referred to as web forums, message boards, discussion boards, threaded discussion groups, discussion forums, bulletin boards, or simply forums.
Read/Write Web: First envisioned by World Wide Web developer Tim Berners-Lee in 1989. He believed that the Internet was “a collaborative medium, a place where we all meet and read and write.” (Berners-Lee, 2005)

RSS (Rich Site Summary or Really Simple Syndication): RSS is a technology that allows educators to subscribe to content that is created on the Internet, whether it is written in a blog or not. The technology then “feeds” the links to those articles to the subscriber automatically.

Stakeholders: References to stakeholders in a school include community members, families, students, and all employees of the school and district.

Student Learning Outcomes: The knowledge, skills, and abilities that a student has attained at the end (or as a result) of his or her engagement in a particular set of higher education experiences (Kuh, 2001).

Student Learning Engagement: The extent to which students engage in good educational practices, such as time on task, active/collaborative learning, and quality interaction with faculty (Kuh, 2001, 2003).

Website: A set of interconnected web pages, usually including one or more pages located on the web, generally located on the same server, maintained as a collection of information by an organization.

Web-enhanced: Any activity such as academic courses that provide web-based information or testing as a supplement to learning activities in the classroom. Students attend their traditional classrooms and log on to the Internet outside of regular class times.
Limitations of the Study

The study examined an emerging element of technology and one not examined extensively in previous research. This research has some limitations, and the findings should be interpreted with that in mind.

First, this study used only 168 participants for Survey 1, 51 participants for Survey 2, and 12 interviewees and their respective blogs for examination out of possibly thousands available. As a result, this study is limited to the common interests, behaviors, and rules of conduct of these participants and their blog sites. The society and culture formed by teachers blogging in other classrooms may differ.

Second, four months will be used for the study, a limitation when longitudinal data are desired. This time period was selected in order to finish the study before traditional school ends for most teachers. It is possible that a longer period of time could generate different results. Third, qualitative research is exploratory and descriptive. The teachers and the blogs studied, although random samples to some degree, were selected from a sample of teachers who appear to be serious consistent users of blogs and may or may not be representative of the overall typical teacher blog. The norms and rules of conduct of these blogs studied may or may not reflect those of other educational blog sites. The research does not attempt generalizations about blog behavior, but may provide an opportunity for conceptual generalizations. A larger sample and longer data collection period could enhance generalizability, but in an understudied area this study represents an important beginning to document how teachers and students are using blogs and how they contribute to classroom
instruction. Finally, online data collection is still an emerging form of research and thus should be considered a limitation. There are important differences in online data collection as compared to more traditional collection methods (Merriam, 1998). For example there are questions of equity for those who do not have computers at home or for those teachers who work for schools who do not place an emphasis on technology. Since Yin (2003) considers interviews to be “verbal reports” it is possible that the collection of data via a virtual interview that is text based could be limiting.

Despite these limitations, however, the study examined an emerging element of technology in the classroom that has not been previously examined. This study is an important first step in the effort to understand the influence of blogging in the classroom as an instructional practice. Through the use of interviews and document analysis, the study may offer a better understanding of why and how these teachers are using blogs with their students, and why they believe it has or has not influenced communication and instruction.
CHAPTER 2
REVIEW OF THE LITERATURE

This chapter includes a synthesis of the literature as it was used to help guide and develop this study. A key component of this chapter will include an exploration of the growth and use of technology in education, the use of computer mediated tools and computer assisted instruction as it works within the classroom. The theory of constructivism, and previous research conducted in this area as it relates to learning outcomes, are brought together with the less educationally related theories of connectivism (Siemens, 2004, 2005) and collectivism (Pór, 1995; Rheingold, 2002). It is important to show the connection of how these theories build the case for a new type of learner that is entering the classroom, learners who expect the instructor to use different modes of instruction, such as blogging.

The Use of Modern Communication in Schools

Educators with technology leadership attributes will make a difference in the success of Computer-Mediated Communication (CMC). A nationwide survey of more than 800 schools examined technology leadership characteristics and their influence on indicators of technology outcomes (Becker et al., 1999). This study found that teachers who are the most technically knowledgeable about computers are the ones most likely to have students use computers in varied and complicated ways. Anderson and Dexter (2005) conclude that, although technology infrastructure is significant, technology leadership is even more necessary for effective utilization of technology in education. Their empirical investigation confirmed that technology leadership played a
pivotal role in technology-related outcomes. The findings also revealed considerable
diversity in technology leadership and organizational support systems.

A federal government report (Paige & Patrick, 2004) sees schools as lagging
behind much of the rest of society in using technology. This occurred because schools
purchased computers with little thought about necessary professional development for
teachers, appropriate instructional applications for students, or adequate access for
communication with families (Oppenheimer, 2003). Today the market provides not
only computers, but a multitude of electronic communication enhancing devices that
are in the hands of most households, opening up the possibility of communicating with
stakeholders in new ways. However, existing research suggests school staff may not
be prepared to use them (Collier, 2001). This ready access to and proliferation of
technology creates a need for research on the most effective methods and tools to
communicate within the classroom, school, and broader community.

*Computer-Mediated Communication (CMC)*

CMC broadly frames the topic of communication between two or more
individual people who interrelate with each other via separate computers through the
Internet or a network connection using software. It does not include interactions
between two computers and is only peripherally concerned with any common work
product created (Barnes, 1994; Gorard & Selwyn, 2002).

Research has suggested that CMC is not neutral; it can cause many changes in
the way people communicate with one another, and it can influence communication
patterns and shape social networks (Fulk & Collins-Jarvis, 2001; Gorard & Selwyn,
According to Rice and Gattiker (2001), CMC differs from face to face communication (FtF) because it limits the level of synchronized interaction, causing less interactivity. This would seem to refute the idea of using CMC to break down the barriers in a teacher’s relationship with stakeholders. However, this report was completed prior to the explosive use of e-mail and the use of blogging. Hancock (2004) found that in FtF, instant messaging, or telephone conversations, people lie more often because most lies are unplanned. In a less synchronous medium, such as e-mail, the opportunity for spontaneous lying is much less, thus lies occur less often in e-mail. One could extrapolate this to pertain to blogging as well and the use of blogging as a device for creating trust and building relationships based on honesty and trust.

The presence of new technological devices represents a drastic change to those expected to use these devices (Barton, 2001). However, change is not always warmly welcomed. Deploying CMC in a school represents a structural change in the organization that will have ramifications in many dimensions of school life. CMC can potentially impact the structural, human resource, political, and symbolic dimensions of school life. Leaders deploying CMC must carefully think of employee attitudes and feelings with active use, modeling, and rewarding those who infuse technology into their job in order to nurture a technology culture (Baylor & Ritchie, 2002). The findings of Baylor and Ritchie (2002) suggest the need to explore how using CMC might hinder as well as facilitate relationships between the teacher and students.
Introducing new technology to a fundamental system, such as an elementary school, will lead to adaptive challenges for school staff, which will develop a certain tension between pressures for standardization that are implicit in CMC, and the flexible specialization characteristically demanded in teaching. Fuller (1996) believes political challenges within both school and community will likely occur as a result of this implementation. He goes on to say that a CMC network embodies particular functionality, and is better suited to some communication tasks than to others. Organizations will decide for themselves what boundaries are appropriate within their domains and between themselves and their environment.

**Current Communication Methods**

Although the development of new technologies changes the list of communication devices rapidly, there are some tools that seem relevant and appropriate for schools. Murray’s study (1988) identified e-mail, e-messages, bulletin boards, listserves, and forums as the five main varieties of computerized communication. But 1988, in technological terms, is generations ago, and her list does not include many of the more popular modes of CMC in use today or on the verge of becoming widespread in use. This paper will focus primarily on broadband Internet use, electronic mail (e-mail), and blogging. I have intentionally neglected instant messaging and telephony due to their poor reputation with elementary educators and student abuse. I have also eliminated podcasting due to its newness and lack of research.
Broadband Internet

Using the Internet, the scientific community’s base of knowledge has exploded with new data because of shared research through communication technology (Crawford et al., 1996). The World Wide Web has dramatically changed the way people live, work, and play (Gates & Hemingway, 1999). In 1995, just 14% of Americans were identified as online users. When the Pew Internet and American Life Project first started measuring Internet usage in March 2000, 46% of American adults had logged on to access the Web or to send and receive e-mail. Today, two out of three Americans spend time online (Madden & Rainie, 2003).

The number of Americans with access to high-speed (broadband) Internet connections either at home or work is growing. As of March 1, 2005, the Pew Internet and American Life Project (Horrigan, 2004) found that 68 million adult Americans log on to the Internet via broadband either at home or work. 48 million adult Americans have broadband connections at home. Broadband in the home is increasingly the norm for the wealthier and better educated in America, as well as long-time Internet users. As William Gibson reminds us, “. . . the future is already here, it is just not very evenly distributed” (Gladstone, 1999). But there is evidence that relatively novice Internet users are moving from dial-up to broadband more rapidly than before. Knowing the demographics of the community, as it pertains to technology use, will be a key factor for developing a need for CMC in schools and using the mode of communication that will most likely be readily received.
E-mail

The most common form of electronic communication continues to be e-mail. This form of messaging has revolutionized home to school communication (Oppenheimer, 2003). According to an ongoing Pew survey, on any given day 82 million American adults use the Internet and 52% of American adults report they have sent an e-mail yesterday (Rainie & Horrigan, 2005). Some schools now prefer conducting their usual home surveys through e-mail instead of postal mail or student handouts (Freytag, 2001).

Some educators are prolific telecommunications users. They exchange information with colleagues around the world, engage their students in online projects with other students, and problem-solve electronically with other professionals (Forde, 2002). However, as administrators have found, many educators face formidable barriers in attempting to use today's network communications technology. Ethier and Gold (1996) found that educators face great obstacles attempting to use CMC to build and sustain online professional communities adding to the communication barrier instead of assisting. These obstacles to building an online community include: (a) access to hardware and software, (b) lack of time, (c) lack of training/support, and (d) recruiting the right people for employment.

This same attempt at building a relationship with teachers through better communication techniques has also been researched as a tool for bridging the achievement gap, especially among low socio-economic groups (Jesse et al., 2004; Snyder & Angus, 2000). Researchers have found that, when teachers work at building
a relationship with a student, the student’s attitude toward school increases positively. When this transpires, the likelihood of academic success is greater (Duttweiler & Madden, 2001; Thernstrom & Thernstrom, 2003). This same thinking applies to success when parent-teacher relationships are encouraged (Payne & Kaba, 2001). Yet teachers often struggle with the time and tools needed to develop this relationship.

E-mail offers another unique quality to educators, especially to those who complain of the numbers of parents or students affected by communication modes. As the size of a person’s social network (or class size or school size) increases, it becomes more difficult for people to contact a large percentage of network members. The one exception to this statement is e-mail. As the size of people’s social network increases, the percentage of one’s social network contacted weekly by e-mail does not decline but remains about the same (Boase et al., 2006).

Several qualities of e-mail help us to make sense of these findings. E-mail enables people to maintain more relationships easily because of its convenience as a communication tool and the control it gives in managing communication. E-mail’s asynchronous nature - the ability for people to carry on conversations at different times and at their leisure - makes it possible for a quick note to an associate, whether it is about important news or seeking advice on an important decision. Moreover, it is almost as easy to e-mail a message to many people as it is to e-mail to only one (Boase et al., 2006).
Forums

There are other venues for providing this push-pull communication with students and parents. Forums, electronic mailing lists, threaded discussion groups, newsgroups, wikis, message boards, bulletin boards, chat rooms, and instant messaging all offer a type of communication that could provide additional effectiveness for educators. The most popular forms of these types of communication seem to be electronic forums or threaded discussion groups and mailing lists using either e-mail or listserves. The significant difference between forums and electronic mailing lists is that mailing lists automatically deliver new messages to the subscriber, while forums require the member to visit the website and check for new posts. Because members may miss replies in threads they are interested in, many modern forums offer an "e-mail notification" feature, whereby members can choose to be notified of new posts in a thread. They can also offer RSS feeds that allow members to see a summary of the new posts using aggregator software (Wikipedia, 2007).

An Internet forum is a web application for holding discussions and posting user generated content. Internet forums are also commonly referred to as web forums, message boards, discussion boards, discussion groups, discussion forums, bulletin boards, or simply forums. The terms "forum" and "board" may refer to the entire community or to a specific sub-forum dealing with a distinct topic. Messages within these sub-forums are then displayed either in chronological order or as threaded discussions. Forums differ from chat rooms and instant messaging in that forum participants do not have to be online at the same time; forums also usually deal with
one topic and personal exchanges are typically discouraged. Messages posted to a forum or Usenet are publicly available for some time, which is uncommon in chat rooms, with only few exceptions.

Registered members of a forum, who are identified by unique usernames, may have additional privileges, such as the ability to edit their previous posts, start new topics, and control their individual settings and profiles. The profiles tend to include graphical avatars and signature blocks which are appended to their future posts, sometimes consisting of elaborate shoutboxes (areas that allow people to quickly leave messages). Members also have the ability to send personal messages to each other. In certain cases, members have been given the ability to close their own topics, edit previously posted comments, or delete posts in topics they have started.

Wikis, unlike conventional forums, typically allow all users to edit all content, including each other's messages. This level of content manipulation is reserved for moderators or administrators on most forums. Wikis also allow the creation of other content outside of the talk pages. On the other hand, weblogs and generic content management systems tend to be locked down to the point where only a few select users can post blog entries, although many allow other users to comment upon them.

Forums seem to be evolving into a more blog-like appearance. While forums organize discussions into topics and subtopics, a good blog is more personality driven allowing visitors to post comments to the blog in a more social way. It is this evolution of forums that takes this paper to a study of blogging.
Blogs

Social networking has gone from a specialized activity into a phenomenon that engages tens of millions of Internet users. Social networking is an online place where a user can create a profile and build a personal network that connects him or her to other users. According to a national survey of teenagers conducted by the Pew Internet & American Life Project (Lenhart & Madden, 2007), more than half (55%) of all online American youths ages 12-17 use online social networking sites. A popular activity of social networkers is weblogging or blogging.

Weblogs are a relatively new knowledge-sharing technology. They enable people to record their thoughts in diary form and publish those diaries as web pages, without programming or HTML coding. The name "blog" is a truncated form of "web log" according to Rebecca Blood (2000). Blog is used to refer to websites that can best be described as mini sites or mini directories, populated with the website owner's personal opinions. Blogs are very popular for journalists and business people as well and are becoming more popular with educators. Blogging is similar to writing in a diary, although diaries are not normally published for the whole world to view. Although blogging has not yet received much attention from researchers, writing in a diary has been studied since the beginning of the 20th century.

One of the forms of first-person documents available to researchers is the journal or diary (Allport, 1942). Writing in a diary has been proven in many studies (Berman, 1996; Conway & Briner, 2002; Cullen, 1985; Jay & Brooks, 2004; Miller, 1997; Pennebaker, 1990) to be pedagogically beneficial as well as personally
enriching (Allport, 1942; Esterling, 1999). Diaries are also considered a legitimate tool for qualitatively documenting certain phenomena (Merriam, 1998; Yin, 2003). Daily diaries are seen as being ideally suited to investigating phenomena that take the form of events happening over time at the “intra-individual” (Conway & Briner, 2002) or “within-person” level (Bolger et al., 1989; DeLongis et al., 1992; Reis & Wheeler, 1991). These diaries are arguably more appropriate to studying the psychological communication process as they permit access to ongoing everyday behavior in a relatively discreet manner by gathering reports of events, experiences, and feelings close to the time of occurrence.

The psychological use of personal documents is traced from its beginnings at the turn of the century to its emergence in the last 20 years as a method in its own right (Bodur et al., 2000). Its uses in teaching, in suggesting new items for questionnaires, in inductive studies with the construction of typologies, and in social psychology continue to be examined. The forms of personal documents are reducible to autobiographies, questionnaire responses, verbatim recordings, diaries, letters, or expressive and projective productions. The evaluation of personal documents may be superior to actuarial methods by themselves in achieving the scientific goals of understanding, prediction, and control.

Noted psychologist Gordon Allport (1955) strongly believed that psychology should use research methods that study the individual rather than groups. Traditional psychology relies on nomothetic science, which seeks general laws from a study of groups of people, but Allport used idiographic or morphogenic procedures that study
the single case. Unlike many psychologists, Allport was willing to accept self-reports, such as diaries, at face value (Loftus et al., 1998).

In the late 1930's, Allport and his wife became acquainted with diaries written by a woman they called Marion Taylor. These diaries—along with descriptions of Marion Taylor by her mother, younger sister, favorite teacher, friends, and a neighbor—provided the Allports with a large quantity of material that could be studied using morphogenic methods. The Allports never published this material, however Gordon Allport did publish a second case study about Jenny Gove Masterson (1965). Jenny had written a series of 301 letters to Gordon and Ada Allport, whose son had been a roommate of Jenny's son. Two of Gordon Allport's students, Alfred Baldwin and Jeffrey Paige used a personal structure analysis and factor analysis respectively, while Allport used a commonsense approach to discern Jenny's personality structure as revealed by her letters. All three approaches yielded similar results, which suggest that morphogenic studies can be reliable (Allport, 1965; Loftus et al., 1998).

Although the research performed for this study of blogging teachers will include multiple subjects, Allport’s research with diaries provides validity to the use of diaries as a tool for providing data for study. The act of writing in a diary can sometimes enable individuals to bring together the many facets of complicated events in their life. Once people can distill these complex experiences into more understandable packages, they can begin to move beyond the current event into more meaningful experiences (Berman, 1996; Pennebaker, 1990). Allowing students and teachers to write to one another in such a setting may allow understanding of one
another to reach new levels, encouraging relationships and trust for increased school success (Jesse et al., 2004). Blogs may be a vehicle for moving students beyond rote learning. By creating smaller, more understandable lessons via blog instruction, students may be able to gain greater context and application of learning into meaningful experiences.

People write in diaries for self-expression, personal record keeping, exhibitionism, desire for order or personal perspective, tension relief, therapy, monetary gain, fulfilling an assignment, social re-incorporation, scientific interest, literary delight, hope for public service or reform, and in the hope for literary recognition. It is normally a personal document (Allport, 1942), but not so with today’s online version called a blog. The entire world has the capability of not only reading your online diary, but also making comment and giving opinion.

Recently blogs have become incredibly popular. Blog readership shot up 58% in 2004, but 62% of online Americans still do not know what a blog is (Rainie, 2005). Though blogs lack the equal-power relationship of most CMC, the exchange of Real Simple Syndication (RSS) data has better enabled users to each become their own publisher of sorts. RSS also allows for readers to have their information aggregated and held for them to read at a later date. Blogs frequently include philosophical reflections, opinions and views on social issues, and a list of the author's favorite Web links (Hewitt, 2005). Blogs are usually presented in a journal style with a new entry each day by the author who is known as a blogger. This can also apply to websites
dedicated to a particular topic and being updated with the latest news, views, and trends (Project for Excellence in Journalism, 2005).

Corporations have begun to embrace this technology, even at the higher levels of administration (Associated Press, 2005). One school superintendent found blogging to be a valuable communication tool. Clayton Wilcox, Superintendent of Pinellas County Schools in Florida, in cooperation with a public forum sponsored and maintained by the St. Petersburg Times, has created an entire website (Wilcox, 2006) dedicated to his desire to communicate via blogging with the community at http://blogs.tampabay.com/classroom/. Wilcox is joined by three other fellow administrators who say they will post “frequently” and that participation is “strongly encouraged.”

Research on blogs has focused either on the technology of how to use it or qualitative, anecdotal accounts of blogs and their impact. Recently a quantitative empirical study (Du & Wagner, 2005) was published investigating the impact of weblog use on individual learning in a university environment. The research sought to empirically determine whether the keeping of on-going (web-based) learning logs throughout a semester would result in better overall student performance. The researchers hypothesized that web-based learning logs appear to promote constructivist learning, provide reinforcement, and increase accountability (non-anonymous idea sharing). Results from an information systems undergraduate course with 31 students were used in the study.
The report showed that blogs were a more appropriate predictor of student performance than traditional coursework. Placing student and teacher work under public scrutiny seems to increase overall course performance. Weblogs appear to have the highest predictive power for high and low performing students, but much less predictive value for medium performers.

Results also suggest that there is a learning outcome for weblog authoring. These same results were suggested using a diary by Allport (1942) and Pennebaker (1990) and by others just recently (Cain, 2005; Cole, 2004). Allport (1942) believed that diaries can be an anchor in the analysis of human experience and meet the three criteria of understanding, prediction, and control for scientists to understand human behavior. He suggested that the influence on human learning was significant adding to the need for more research on the effectiveness of blogging in education. Pennebaker believes the act of writing in a diary is mentally therapeutic, especially during times of trauma or insecurity, and relates this to a technique an educator could use to promote higher level thinking and increased motivation towards learning by students (1990).

A telephone survey of a nationally-representative sample of bloggers by the Pew Internet & American Life Project (Lenhart & Fox, 2006) found that blogging is inspiring a new group of writers. Some 54% of bloggers say that they have never published their writing or media creations anywhere else; 44% say they have published elsewhere. While generally youthful, these writers otherwise represent a broad demographic spectrum of people who cite a variety of topics and motives for their blogging.
While 8% of Internet users, or about 12 million American adults, keep a blog, over 39% of Internet users, or about 57 million American adults, read blogs—a significant increase since the fall of 2005. The most distinguishing characteristic of bloggers is their youth. More than half (54%) of bloggers are under the age of 30. Like the Internet population in general, however, bloggers are evenly divided between men and women, and more than half live in the suburbs. Another third live in urban areas and a scant 13% live in rural regions (Lenhart & Fox, 2006).

**The History of School Communication**

One of the first types of classes to be taught using a new media mode can be traced to the 1880s when instruction was delivered to students in higher education via correspondence through the mail (Lundin, 1996). The advances in technology during the 1960s and 1970s led the second generation of technology media. In the past 20 years, microcomputers have shrunk in size and cost so that today tiny microprocessors are embedded in almost every electrical device. The worlds of science, medicine, and business have changed in tremendous ways. Education, however, seems to be lagging behind. Even though teachers may use computers and other modern technologies, it is questionable whether they provide genuine change in teaching and learning methods. McCain and Jukes (2001) asked, “Is technology really changing our lives in fundamental ways, or is it merely being used to speed up old and outdated ways of doing things?” (p. 8). The following review attempts to connect the emergence of communication technology in schools with not only the changing learning process, but
also the changing learner, especially as it relates to modes of increasing collaboration through effective communication.

*Individual Pathways to Learning*

The demands for school reform, current learning theories, and technological developments have intersected at an appropriate time. Educators interested in making real changes in teaching and learning will utilize the technologies available to schools today. Use of the Internet is already making textbooks secondary sources of information that are obsolete before they are printed. Multimedia projects by students and interactive software programs have created an exciting new environment for students and teachers.


1. Receptive- information acquisition
2. Directive- response strengthening
3. Guided Discovery- knowledge construction

The receptive technique emphasizes acquiring information and involves building instructional modules that open avenues to greater amounts of information while limiting application and experimentation. In contrast to this, the directive technique emphasizes frequent responses from learners with immediate feedback from the instructor. Finally, guided discovery places the instructor in the role of expert who leads students toward solving real-life challenges and identifying the appropriate data
to support student knowledge acquisition. Blogging is a simple technology that can be used to construct learning environments that fulfill these three instructional techniques.

Chamberlain (2004) studied the Henrico County Public Schools (HCPS) deployment of laptop computers to over 23,000 middle and high school students in the division. The purpose of his study was to determine the perceptions of students about the influence that this initiative has had on their classroom experiences. He found that middle school students’ educational experiences changed during the time they used the laptops. Some elements of constructivist classrooms were supported by this laptop use, but not collaborative work. Benefits of the laptops appeared to go beyond the classroom. Because of their Internet connectivity student learning was enhanced through communication with the world outside the school.

Beyond the classroom, where authentic work can take place…Technology provides a venue for students to work as adults on real-life problems, using the Internet to gather and manipulate information and conduct extended investigations through collaborations. Essentially, technology allows them to find individual pathways to learning (M. Johnston & Cooley, 2001).

Popular Education is an educational technique designed to raise group consciousness and become aware of how an individual's personal experiences are connected to larger societal problems. It is sometimes thought of as the area between politics and pedagogy. The theory was articulated by Paulo Freire in the *Pedagogy of the Oppressed* (Freire, 1993). He developed important pedagogy in Brazil to teach
"the oppressed" (illiterate adults) to read. Freire believed that teaching was a conversational exchange of information between the teacher and the student. He put forward questions and problems to his students that caused them to take what they already knew and connect it to their literacy goals, namely reading and writing. Freire used the knowledge students already possessed as a bridge to new learning.

Freire distinguishes his approach to education from the traditional approach where participants are treated as empty containers that must be filled with information. The underlying inference of the traditional approach is that students are "uneducated" and in need of knowledge that can come only from teachers or experts. Freire's method encourages participants to see themselves as a source of information and knowledge about the real world.

More challenging, however, is Freire's loathing of the separation between the teacher and the student. Freire suggests that the relationship between a teacher and a student be a mutual exchange of trust and respect. Freire believes we should consider that mutual relationship as a teacher who learns and a learner who teaches as the basis for classroom participation.

This type of instruction appears to be catching on at the state level. New Hampshire’s Department of Education released a document (Tracy, 2007) in June 2007 intended to develop "a new high school delivery model," in which learning is tailored around students' interests and teachers mentor instead of instruct. The changes allowed for high schools to maintain a school year of hours instead of days and a
mandate that students must have the option to earn credits by demonstrating mastery of a subject instead of taking a course in that subject.

Following is a list of six "guiding principles" for redesigning New Hampshire high schools as outlined in the 56 page document:

- Students should feel a personal connection to their high school experience. School guidance programs are important, as are internships and lessons customized to each student's learning style.
- All students should be held to high academic and personal standards.
- Students must believe that what they learn is relevant to their lives; students should be able to personalize their learning.
- Teachers should be facilitators, mentors, and coaches.
- Each student's learning should be monitored and documented.
- Data about that learning should be used to tweak the system to make it better.

Although not mentioned in the document (Tracy, 2007), blogging appears to offer something pertaining to all of these principles. In particular blogging in the classroom could allow for personalization of learning, teachers as facilitators, and documentation of student learning. The document does strongly encourage the use of online courses (p.19).

The potential of promoting learning through more active engagement among learners and learners building on prior knowledge to construct new knowledge was recognized by three scholars before the information age. Their work, however, is
critical for understanding how the use of blogs may promote student learning. In this next section I explore constructivism, especially social constructivism of knowledge, and the three constructivist scholars.

Social Constructivism

Constructivism goes beyond the study of how the brain stores and retrieves information to examine the ways in which learners make meaning from experience. Rather than the transmission of knowledge, learning is an internal process of interpretation.

Learners do not transfer knowledge from the external world into their memories; rather, they create interpretations of the world based upon their past experiences and their interactions in the world. How someone construes the world, their existing metaphors, is at least as powerful a factor influencing what is learned as any characteristic of that world (Cunningham, 1992, p. 36).

Constructivism is a philosophy whereby each of us generates our own "rules" and "mental models," which we use to make sense of our experiences. Learning, therefore, is simply the process of adjusting our mental models to accommodate new experiences (Lambert et al., 2002). Unlike traditional thought, it is believed that knowledge exists within the learner. Because the social nature of learning is emphasized, shared inquiry is a central activity. Learners are encouraged to obtain multiple outcomes with assessment being integral to the process. Blogging encourages the learner to share information with others and allows for multiple outcomes in a non-threatening way. Like the World Wide Web, blogs are interconnected, creating a
webbed archive of a person’s observations and thoughts. Blogs are multidimensional in an information environment, always accepting of a new conversation, making it ideal for shared inquiry in social learning.

While constructivism does not necessarily deny the existence of an objective reality, it does deny the existence of an objective knowledge since "there are many ways to structure the world, and there are many meanings or perspectives for any event or concept." Thus, "there is not a correct meaning that we are striving for" (Duffy & Jonassen, 1992). It is this rejection of absolutism that characterizes constructivist approaches to learning, and it is a radical philosophical departure from other pedagogical theories such as behaviorism or cognitive theory (McMahon, 1997).

The formal theory of constructivism is generally attributed to Jean Piaget (1896-1980), who explained methods by which knowledge is internalized by learners. He suggested that through processes of accommodation and assimilation, individuals construct new knowledge from their experiences. John Dewey (1859-1952) like Lev Vygotsky (1896-1934) viewed the mind and its formation as communal process. They felt the individual is only a meaningful concept when regarded as an inextricable part of his or her society, and the society has no meaning apart from its realization in the lives of its individual members, thus contributing to the idea of electronic collaboration as a useful instructional practice. It is important to note that constructivism itself does not suggest a particular pedagogy. Rather constructivism describes how learning should happen, regardless of whether the learner is leveraging their experiences to understand something. All three theorists seem to suggest that
learners construct knowledge in a way similar to bloggers building upon the ideas of others to form their own or a group’s conclusion.

Jean Piaget. Piaget was very interested in knowledge and how children come to know their world. Piaget believed that children's spontaneous comments provided valuable clues to understanding their thinking. After many years of observation, Piaget concluded that intellectual development is the result of the interaction of hereditary and environmental factors. As the child develops and constantly interacts with the world around him, knowledge is invented and reinvented (Piaget, 1971; Singer & Revenson, 1978).

A main component of Piaget's theory of learning and thinking is that both involve the participation of the learner. Knowledge is not merely transmitted verbally but must be constructed and reconstructed by the learner. Piaget asserts that for a child to know and construct knowledge of the world, the child must act on objects and it is this action which provides knowledge of those objects (Piaget, 1971; Sigel & Cocking, 1977); the mind organizes reality and acts upon it. The learner must be active; he is not a vessel to be filled with facts. Piaget's approach to learning is a readiness approach. Readiness approaches in developmental psychology emphasize that children cannot learn something until maturation gives them certain prerequisites (Brainerd, 1978; Piaget, 1971). The ability to learn any cognitive content is always related to their stage of intellectual development. Children who are at a certain stage cannot be taught the concepts of a higher stage. I believe this scaffolding result of learning can be used directly in the classroom by the blogging teacher. As the blogs evolve and
teacher and students become adept and comfortable with sharing information, stages
of learning will be accelerated because of the ease of use and high motivation to use
blogs by students. Students utilize peer teaching as they work together on projects or
assignments. They become active participants instead of passive and the teacher truly
takes on the role of facilitator as he/she gives them guidance in their creations.

*John Dewey.* Dewey (1938) was one of the first to suggest education was an
internal process in which the learner uses prior knowledge and experience to shape
meaning and to construct new knowledge. This challenge of prevailing views reflects
the same struggle educators share today to find a single way that students learn and
schools teach. Almost 70 years after Dewey first published his constructivism theory,
technology now offers the promise of allowing learners to finally connect with one
another and to a seemingly endless flow of knowledge via the Internet.

Dewey was a believer in what he called "the audacity of imagination," and was
one of the first national figures in education policy. He rejected the notion that schools
should focus on repetitive, rote memorization. Instead he proposed a method of
"directed living" in which students would engage in real-world, practical workshops in
which they would demonstrate their knowledge through creativity and collaboration. It
is imperative that students be provided with opportunities to think for themselves and
articulate their thoughts (Carvin, 2006). As Dewey writes in his landmark *Democracy
and Education*:

> Processes of instruction are unified in the degree in which they center in the
production of good habits of thinking. While we may speak, without error, of
the method of thought, the important thing is that thinking is the method of an educative experience. The essentials of method are therefore identical with the essentials of reflection. They are first that the pupil have a genuine situation of experience – that there be a continuous activity in which he is interested for its own sake; secondly, that a genuine problem develop within this situation as a stimulus to thought; third, that he possess the information and make the observations needed to deal with it; fourth, that suggested solutions occur to him which he shall be responsible for developing in an orderly way; fifth, that he have opportunity and occasion to test his ideas by application, to make their meaning clear and to discover for himself their validity (Dewey, 1916, p. 157).

Lev Vygotsky. Vygotsky (1978) pioneered research in learning sciences and made a strong argument for the need for students to demonstrate their knowledge by creating explanations and interpreting their work for others. Vygotsky believed that teachers served as mediators who coached and encouraged students to formulate their own level of understanding. Each student has a base level of knowledge, but they can increase it by practicing what they know well and adding onto it. The social interaction between the student, teacher, and other students reinforces their increase of knowledge (Carvin, 2006; Gallimore & Tharp, 1990). This increase of knowledge and the practice of adding onto it is the very core of blogging. As students tap into the collective knowledge residing within a blog and then subsequently add to that knowledge they become able to express their knowledge as Vygotsky states on their own level of understanding. This level of understanding has the potential to be
increased as others add again to the blog and to the learner’s collective knowledge. The cycle could be never-ending and the knowledge exponentially increased. Since a blog has theoretically no end, the potential for continued information gathering knows no bounds and similarly Vygotsky believed that this potential for learning had no boundary (McMahon, 1997).

Most social constructivist models stress the need for collaboration among learners, in direct contradiction to traditional competitive approaches. Vygotsky's (1978) notion of zone of proximal development (ZPD) is the gap between a learner's current or actual level of development determined by independent problem-solving and the learner's emerging or potential level of development. Vygotsky's definition of zone of proximal development presents it as the set of knowledge that the learner has the ability to learn currently, but does not yet understand things that are "just out of reach.” ZPD theory implies that a person’s capability to learn has no upper boundary and what one learns with the aid of others today can be done independently tomorrow. ZPD has also been expressed as the area in which students are challenged to learn, but learning is not too difficult nor too easy (Gallimore & Tharp, 1990).

Piaget, Dewey, and Vygotsky laid the groundwork for 21st century educators to be ready for the type of learner now entering our classrooms. Today’s communication tools have the potential to reshape learning through interactive simulations, “question management” systems that combine automated and human responses, and powerful continuous assessments. New communication tools such as blogging should enable learners to collaborate in complex projects and ask for help
from teachers and experts from around the world (Lock, 2002). Learning systems could adapt to differences in student interests, backgrounds, learning styles, and aptitudes (Kelly, 2005). This strategy models for students that learning is integral to all aspects of life— not just schooling— and that people adept at learning are fluent in using many types of information tools scattered throughout our everyday context (Dede, 1998).

In many respects the Internet is an ideal forum for constructivist learning, and despite its limitations, blogging does offer some interesting opportunities. Blogs usually contain a combination of free-flowing text and hyperlinks. These links allow movement quickly in a document or on the Internet and connect to different locations or corresponding websites. Hyperlinks are usually contained within normal blue and/or underlined text. Hypertext links work by association rather than indexing, and it could be argued that this "free association" can be disorientating. Yet, the counter argument that it operates in the same manner that humans think (Gygi, 1990) suggests intriguing possibilities for the meaningful linking of data required for the information processing within a cognitive framework. The potential of the Internet to present a variety of information sources may help to stimulate the cognitive conflict required within an approach similar to the theories of Piaget (McMahon, 1997).

It is here that social constructivism may offer some grounding to blogging as a valid instructional tool. It argues for the importance of culture and context in forming understanding. Learning is not a purely internal process, nor is it a passive shaping of
behaviors. Vygotsky favored a concept of learning as a social construct which is mediated by language via social discourse.

Social Constructivism and Contextual Learning. While Piaget did account for the social transmission of knowledge (Langford, 1989), "the interplay between social life and cognitive development processes was not a core concern." Piaget focused instead on "the formal properties of action without regard for the situatedness of actions in a socio-historically articulated web of meanings" (Saxe, 1991, p. 6). Traditional behaviorist approaches strive for context independence, whereas a social constructivist paradigm views the context in which the learning occurs as central to the learning itself.

Underlying the notion of the learner as an active processor is "the assumption that there is no one set of generalized learning laws with each law applying to all domains" (Di Vesta, 1987, p. 208). Decontextualized knowledge does not give us the skills to apply our understandings to authentic tasks because "we are not working with the concept in the complex environment, experiencing (exploring, evaluating) the complex interrelationships in that environment that determine how and when the concept is used" (Duffy & Jonassen, 1992). One social constructivist notion is that of authentic or "situated learning," where the student takes part in activities which are directly relevant to the application of learning and which take place within a culture similar to the applied setting (Brown et al., 1989).

Reeves claims that "most existing examples of Web Based Instruction employ academic tasks, but this instruction can be designed to focus on authentic tasks
relevant to learners" (Reeves & Reeves, 1997). But in a highly concrete knowledge domain, the lack of real versus virtual involvement poses a very real problem. A trade such as carpentry, for example, requires skills which involve enactment on a physical environment. The difficulty the Internet has in creating such authentic simulations appears to limit its capacity to accommodate this. Even more ill-structured academic areas such as social studies require a level of context, even if that context is the academic one requiring the implementation of a culturally specific methodology and use of language. It is here, perhaps, that a social constructivist approach may be particularly useful. It could be argued that the use of blogging is best suited to that of a communications medium for collaborative approaches to learning rather than as a "24 hour a day glorified whiteboard" (Archee & Duin, 1995). Such a use would involve a high level of social rather than physical interaction; an aspect well supported by blogging and integral to a social constructivist approach.

This has significant implications for blogging as a communications medium. While it may not be highly interactive in a physical sense, the blogging has strong potential for social interactivity. The goal of this type of approach is the achievement of 'virtual communities' of learners on the Internet working in small collaborative groups to achieve a common goal (Traum & Dillenbourg, 1998). While it would appear that care is necessary in the formation of such groups, it has been proposed that heterogeneous grouping can assist in the creation of zones of proximal development (Walker & Lambert, 1996). Traditional Internet communication tools such as e-mail, instant messages, and blogs with broadband offer both the rapid synchronous
communication of normal speech as well as asynchronous interaction. This may help to promote a more reflective metacognitive approach while providing the functionality required for real-time communication and collaborative learning.

_Distributed Learning_

Technology assists people with appropriate resources when needed. Papert (1980) predicted that computer use would gradually return the power of education to the individual, that education would become more of a private activity. This idea of redistributing resources so that learning can occur privately fuels the fire for those that see distributed learning as the wave of the future (Dede, 1998). Distributed learning is an instructional model that allows instructor, students, and content to be located in different, non-centralized locations so that instruction and learning occur independent of time and place (Oblinger & Maruyama, 1996; Saltzberg & Polyson, 1995). The distributed learning model can be used in combination with traditional classroom-based courses, with traditional distance learning courses, or it can be used to create wholly virtual classrooms.

_Changing Learners_

To increase the effectiveness of their instructional practice, instructors may be required to change not only their philosophy of instruction, but also their idea of who the student is and in what way that student learns best. Children in schools today have grown up naturally with technology and use it freely (Richardson, 2006) while their teachers may struggle with simply finding the power button. The National Technology Plan (2004) admitted these students are well ahead of their teachers when it comes to
computer literacy. These “digital natives” (Prensky, 2001) are at ease with using electronic devices and communicating with online communities, while the “digital immigrants” try in vain keep up. This generation was born with technology and they assimilate it with ease. Adults must accommodate a different and much more difficult learning process (Tapscott, 1998).

Dede (1998) echoes these concerns by pointing to his own research in virtual reality at George Mason University. He observes that students using virtual reality software are completely immersed in their learning in a rich, multisensory manner. Students found their “voice” (Kushman, 1997) in class and seemed to contribute more of themselves to the class overall. The students found that their learning was richer and more profound than in comparable conventional classes (Dede & Kremer, 1999). He concludes the article by suggesting that in the future refusal by a university professor to use multiple interactive media will be considered malpractice. All of this points to the need for teachers to re-examine their instructional practices and begin to employ tools that will capture the attention of the 21st century learner and allow that learner to be an active and participatory part of the learning process.

Connectivism

Connectivism is the integration of principles explored by chaos, network, complexity, and self-organization theories. It is driven by the understanding that decisions are based on rapidly altering knowledge foundations. New information is continually being acquired. Schools should begin preparing individuals for the new
demands of a post-industrial information society, which requires people to work with information (Logan, 2002).

Students sitting in classrooms today expect the learning process to not just be delivered to them (Vaill, 1996). They expect to be a part of the ongoing attitude and actions of the learning process; they expect their education to be a way of being. Vaill’s idea of the student being a part of the learning process bridges the theory behind “connectivism” (Siemens, 2004). This new type of learner faces a challenge as school organizations deploy perceived antiquated instructional techniques and communication methods. Schools may need to consider using these same digital tools to reinvent the way they work, teach, and communicate (Gates & Hemingway, 1999).

Collectivism—Community Use of Technology

The idea of a connected society contributing individually seems to naturally evolve toward the idea of collective intelligence. Collective intelligence overcomes individual cognitive bias and encourages the cooperation of a large number of people to engage in a single goal (Wikipedia, 2005). Although the richest in multi-sensory signals, face to face meetings may be a less effective mode of communication when ongoing, many-to-many communication is required, or when speed of action is important and the community needs to process and evaluate simultaneous input from multiple internal and external sources (Pór, 1995). To meet these challenges, the communication subsystem has to include the virtual space of conference calls, video conferences, listserves, or blogs. Many people believe in this principle and share it among themselves as a collective intelligence (Rheingold, 2002). These modes of
communication are being adapted by the commercial world, but seem to be less prevalent in schools. Therefore, it is important to investigate how some teachers may be using new forms of connectivity with students to create collective knowledge.

According to Rheingold (2002), “smart mobs” are an indication of the evolving communication technologies that will empower the people. A smart mob is a group that, contrary to the usual connotations of a mob, behaves intelligently or efficiently because of its exponentially increasing network links. This network enables people to connect to information and others, allowing a form of social coordination. Rheingold believes that educators must first acknowledge that students are continuing to embrace this view through their use of electronic communication, and secondly find ways to use this same technology in the classroom for instruction to the students or communication home to the parents. This may increase the opportunities for teachers to become a part of that community in a communicative sense and use this collective intelligence as an opportunity to increase their instructional effectiveness. Blogging provides this collective sense by allowing all participants to become a part of the information posting. When one blogs they are usually blogging to someone who shares the same interests or passions and the interest in this collaboration is high. A teacher who allows students to blog as a part of the class assignment taps into this motivation and could possibly see an increase in assignment completion rates as well as detail to the task.
Social Networking

A recent study by the Pew Internet & American Life Project (Boase et al., 2006) calls into question fears that social relationships and a sense of community are fading away in America. But instead of disappearing, communities are transforming. The traditional neighborhood and town-like groups are moving towards communities that are oriented around dispersed social networks, free of geographic bounds. People communicate freely in these networks rather than being held to one local community. Yet networks of people continue to have substantial numbers of relatives and neighbors—the traditional bases of community—as well as friends and peers at work (Freeman, 2004). It is not difficult to conjecture that this phenomenon is also occurring within the school as well as the community.

Social networking also refers to a category of Internet applications to help connect friends, business partners, or other individuals together using a variety of tools. These applications, known as online social networks, are becoming increasingly popular.

The first social networking website was Classmates.com, which began in 1995. Other sites followed, but it was not until 2001 that websites using the Circle of Friends online social networks started appearing. This form of social networking, widely used in virtual communities, became particularly popular in 2002 and flourished with the advent of a website called Friendster. The popularity of these sites rapidly grew, and by 2005, MySpace was getting more page views than Google. All of these spaces
employ blogging as a primary source of interactive communication. As the popularity of these Internet sites grows, so will the use of blogging.

*Convergence toward Individual Empowerment.* Even in higher education, calls have been made to faculty to replace the instructional models that have long been ingrained for models that better engage students in learner-centered applications. Reports on the learning and behavioral tendencies of this so-called Network Generation (Tapscott, 1998) or Millennials (Oblinger, 2003), emphasize that these are students who have grown up in the information age with technology and developed skills, aptitude and attitudes different from many of those active in instruction. These students look to the Internet for information and are comfortable interacting online with their peers; they work collaboratively and thrive on interactivity; and they have an expectation of immediacy not just in problem-solving and knowledge acquisition but from their instructors as well (Betts & Glogoff, 2004).

J. Allard, Corporate Vice President of Microsoft, call this generation the “ReMix generation,” (2005) because they access, select, and capture content, and then remix the content to suit their needs. This is a generation who wants control over the information and to use it to accomplish their goals. Blogging is one expression of this idea (Warlick, 2005).

The “ReMix generation” student entering our classrooms today is extremely different from past generations (James, 2001; Kozma & Schank, 1998). This child uses a very different way of processing information. The level of multitasking interpersonal connectivity this child displays is commonplace; it is difficult for adults
to remember when it was not around. These same adults as teachers have difficulty understanding the child’s motivation and methodology toward learning. When 87% of all 12 to 19 year old children are online (Lenhart et al., 2005), it is important for all educators to be aware of this trend. This study will explore how a few educators are taking notice of this phenomenon and are using blogging with their students.

Read/Write Web

Changes are constantly taking place on the Internet to make it easier to both read and write to websites. This “Read/Write Web” has transformed the way people communicate and learn (Richardson, 2006). Since 55% of all adult Internet users (34% of all adult Americans) have access to high-speed Internet connections either at home or on the job (Horrigan, 2004), this trend of change does not appear to be a passing fad. The Internet helps maintain people's social networks, and connects them to members of their social network when they need help. Sixty million Americans have turned to the Internet for help with major life decisions (Horrigan, 2006). The number of teenagers using the Internet has grown 24% in the past four years and 87% of those between the ages of 12 and 17 are online (Lenhart et al., 2005). The Read/Write Web has rewritten the historical paradigms of communication and changed the very essence of how we relate to technology (Richardson, 2006). Changing the paradigm of instruction to correlate with that relational change appears to be the next link in the chain. Blogging is easy to use and incorporates all of the strengths of Internet communication techniques into one package. Using a blog in the classroom students
will be able to voice their thoughts, concerns, and knowledge with each other and the teacher.

In *Look Who’s Talking Now* (Kushman, 1997), the researchers indicated that student voice was often overlooked by most studies. “Rare was the school that requested feedback to learn more about what students thought” (p. 101). However, from their study, student insights were valuable. “We learned that students, even at younger ages, are far more articulate and perceptive about curriculum, instruction, and their own personal learning than we thought” (p. 100). Student voice therefore, should be appreciated and respected as a viable part of the learning process (Chamberlain, 2004), especially with the changes taking place in students themselves. Quicke (2003) argues that instead of seeing the student as a problem to be dealt with, we should be embracing them as learners that must be educated on how to learn. He feels we must first understand how the learner sees themselves and then decide on whether or not they are ready for a more inclusive type of instruction. He continues with the argument that the ideal view of learning from an inclusionary viewpoint is through interaction. Blogging offers this interaction at whatever level of inclusion is most comfortable for the student or teacher.

*Collaboration as Part of Instructional Practice*

The term "collaborative learning" refers to an instructional method in which students at various performance levels work together in small groups toward a common goal. The students are responsible for one another's learning as well as their own. Thus, the success of one student helps other students to be successful. The
concept of collaborative learning and the grouping and pairing of students for the purpose of achieving an academic goal has been widely researched and advocated throughout professional literature.

Proponents of collaborative learning claim that the active exchange of ideas within small groups not only increases interest among the participants but also promotes critical thinking. According to Johnson and Johnson (1986), there is persuasive evidence that cooperative teams achieve at higher levels of thought and retain information longer than students who work quietly as individuals. The shared learning gives students an opportunity to engage in discussion, take responsibility for their own learning, and thus become critical thinkers (Totten et al., 1991).

Brookfield and Preskill (1999) see classroom collaboration as a commitment to one’s training for democratic participation in society. The authors argue that helping students learn how to converse with each other and engage in critical discussion is "inseparable" from training them to engage in the democratic process. This view forms their own rationale for collaboration, the philosophical view they bring, and much of the method they take. They believe good discussion must rely on working with students to achieve the necessary dispositions for open-minded participation.

Blogging has taken the idea of classroom collaboration to a new level. Blogging allows the students to aspire to a new environment where they can observe, reflect, and share. The reader has the ability to decide if the information is of use or if they want to change or add to it. The obvious relationship to blogging and literacy lends itself well to classroom use when teachers allow students to collaborate on
assignments, evaluate each other’s writing, and evaluate blog-based information within the context of the curriculum. As the audience and popularity of blogging increases, the collaborative spirit that exists at the heart of blogging should enable teachers to do a more effective job of teaching literacy in the traditional sense as well as in the context of an emerging new definition of literacy in a digital age (Warlick, 2005).

Online Collaboration. There are those who wonder if Internet connectivity takes away from face to face contact or possibly adds to it. Others wonder if the Internet is splitting people into two separate worlds—online and offline. Research is showing that the Internet is not destroying relationships or causing people to be anti-social (Boase & Wellman, 2005; Katz & Rice, 2002). The Internet is actually enabling people to maintain existing ties, often to strengthen them, and at times to forge new ties. The time that most people spend online reduces the time they spend on the relatively unsocial activities of watching TV and sleeping (Boase et al., 2006).

Moreover, the relationships maintained through online communication only rarely are with an entirely new set of individuals who live far away. Instead, a large amount of the communication that takes place online is with the same set of friends and family who are also contacted in person and by phone. This is especially true for socially close relationships— the more close friends and family are seen in person, the more they are contacted by e-mail (Boase et al., 2006). Surmising that the same could be said of the classroom, relationships with teachers and students could be
strengthened and even expanded through the use of an online application such as a blog.

Online collaboration promotes an entirely different type of classroom culture. No one must sit and raise their hand, waiting impatiently to speak to a topic of discussion. A blogger inputs whenever and wherever they choose, writing down their ideas with casualness or with deep thought using the tools of a word processor to perfect their verbiage. In a blog all students have equal voice, equal right, and equal opportunity to share their ideas. This also promotes critical thinking skills that cause the student to also question the authority behind the information. Teachers must be aware that online collaboration will force them to change not only what they teach, but also how they teach their students. With a proliferation of information being written collaboratively, students will no longer assume the authority of the information they encounter, but will instead find the necessity to prove the authority (Warlick, 2005).

**The History of Blogs in Education**

The early pioneers of the Internet watched in excitement as the network grew, with each new page a celebration, and they wanted to keep people informed about this growth. The 1980’s saw the rise of electronic bulletin boards followed by the dominance of CompuServe, the first major commercial online service in the United States. In 1992, Internet pioneer Tim Berners-Lee created the first What’s New page; later, another pioneer, Marc Andreesen, put up a similar page. Each had hotlinks to the new pages springing up on the new “Net” (Paquet, 2003; Zuiker, 2004). Meanwhile
chat rooms became popular and two graduate students started the first online search engine offering advertising and named it *Yahoo!* forever changing the Internet.

As the Internet grew and the World Wide Web came about, other programmers created hand-coded pages with their recommendations for surfing the Internet— they “filtered” the Internet. Justin Hall started his filter log in 1994. In 1998, Jorn Barger coined the term “weblog” (Blood, 2002; Paquet, 2003; Zuiker, 2004).

Weblogger and author Rebecca Blood (2002) said that these “link-driven sites” were very popular, and webloggers became a community. Each weblog included a list of similar filter sites (Zuiker, 2004). Blood describes blogs as something that is frequently updated, with dated entries, with the newer entries at the top. She felt that what drew the early bloggers together was not their shared format, but their love of the World Wide Web, and the desire to share the things they found.

The blog began to take shape as a special type of personal web page, basically an online journal, which allows instant updating of personal commentary, and contains hyperlinks that point elsewhere (Hissey, 2001). For example, hyperlinks may lead to on-site or off-site articles, journals, referenced sources, pictures, poetry, or other blog sites. These short, but frequently updated postings are normally displayed in chronological order, the latest update listed first. In 1999, websites Blogger and Pitas (Blood, 2000; Zuiker, 2004) began to offer a simpler way to create a weblog. These hosted services allowed any person to easily sign up, create a blog, and write numerous postings, all without having to know HTML (Paquet, 2003; Zuiker, 2004).
Since then, millions of weblogs have been created (Lenhart & Fox, 2006; Rainie, 2005; Richardson, 2006). The term was pronounced web-log or we-blog, or finally shortened to blog. The Pew Internet Project (2006) blogger survey finds that the American blogosphere is dominated by those who use their blogs as personal journals, not by educators.

**Blogging Educators**

It is unclear how many teachers are blogging. In an unscientific study (Copeland, 2005) 30,079 blog readers responded to an online survey. Educators were almost 15% of the respondents. Only one in five readers of a blog actually contribute to a blog, which could lead to the conclusion that there are many more out there who are on the verge of beginning some form of blogging.

At Mabry Middle School in Cobb County Public Schools in Georgia, Principal Tim Tyson took the idea of blogging to greater heights (Tyson, 2006). Historically, community dissatisfaction with school communication has remained unchanged despite Mabry's best efforts. However, in one year, with the advent of blogging, that level of dissatisfaction has been cut in half. Tyson demanded of all teachers at Mabry that each develop a blog in order to better communicate. Tyson says that parents were overwhelmingly pleased with the additional communication and that paper costs for the school were substantially less. The teachers were also pleased feeling that they were communicating more effectively with not only the parents, but also the students. Tyson reported that parents felt more informed and in control of their child’s learning by reading the blogs.
Higher education administrators have also taken notice of blogging. Faculty members at the University of Arizona integrated blogging in their courses in 2003. The courses were offered either online or as hybrid instruction with students meeting in a traditional classroom environment, but other coursework and communication occurred virtually. Blogs were used with other technology tools such as a learning management system, threaded discussion forums, e-mail, and chat rooms. Students completed surveys at the end of the course to assess their use of blogs for skills acquisition as well as their general acceptance of this technology. The professors found that the strengths of the blogs as used in their courses outweighed the limitations observed (Betts & Glogoff, 2004).

Warlick (2005) believes that blogging is simply an extension of literacy; literacy is about communicating with reading and writing and blogging is about communicating with reading and writing. The main difference is that blogging takes place within the context of how communication takes place in today’s digital world. Students should be blogging in their classrooms because blogging mimics the style of communication the students are most likely already doing. The teacher then uses a communication technique that is highly familiar and highly motivating to students. With proper control of the crafted information, teachers can produce rich content in a collaborative manner.

Learner-centered blogging acknowledges the importance of learners as individuals and learners as a group. Glogoff (2005) has used blogging as a learner-centered instructional tool. A professor at the University of Arizona's School
of Information Resources and Library Science, Glogoff gives positive feedback to
students on their comments in blog entries and by adding comments to discussion
threads involving two or more students. He believes that many online students miss
the face-to-face contact realized in a traditional classroom, and that blogging offers
particularly useful opportunities for learner-centered feedback and dialogue (Glogoff,
2005).

The idea that blogging encourages two-way communication also supports
community-centered instruction by utilizing the social component of learning central
to Vygotsky's (1978) notions of social cognition; Lipman's (1991) concept of a
community of inquiry; and Wenger, McDermott, and Snyder's (2002) ideas of
community practice. Blogging can become the focus of a learning community through
social and peer interaction. Teachers can use blogs to lead students through that
discipline in order to contextualize real-world experiences. Students are able to
promote their own ideas and experiences in what they post to their blogs. Fellow
students read and appraise their classmate’s blog entries, commenting on the relevance
of the post to their own experiences. Embedded links on these quasi web pages are
appropriate and convenient, and they make it easy for other students to access new
resources quickly. Blogging provides opportunities for students to interact in
meaningful ways that extend instruction in the virtual classroom (Glogoff, 2005).

**Summary of the Literature Review**

This literature review included an examination of the escalation and use of
technology in education, the use of computer mediated tools such as e-mail and the
Internet, and blogging as instruction within the classroom. Allowing students and teachers to blog with one another may allow better understanding of each other, encouraging their relationship and developing a foundation of trust for increased school success (Jesse et al., 2004). Constructivism and varied learning outcomes were linked to the theories of connectivism (Siemens, 2004, 2005) and collectivism (Pór, 1995; Rheingold, 2002) to show the correlation of how these theories foster the belief that a new type of learner is entering the classroom. These learners seem to expect the instructor to use different modes of instruction, such as blogging. This study will now focus on how blogging is being used by certificated teachers in the K-12 classroom as an instructional practice and as a communication device.
CHAPTER 3

METHODOLOGY

My purposes for gaining a doctorate are varied and contain many levels of understanding. However, one purpose has always been clear—improving my practice in education, in particular improving the district I am currently under employ, was a chief goal. My interest is in research that creates usable knowledge that informs not only other researchers, but the practitioner in the field. Improving education requires creating a bridge to the action-knowledge gap—the gap between current understandings of best practice and actual practice. One strategy is to cultivate research-based pedagogical craft while adjusting the context to support change (Dede et al., 2005). Instead of adding to the instructional load, I hope I have added value and relevance of technology skills to different aspects of the existing curriculum.

Creating a qualitative action research project was always my first choice. Elliott (1991) states that producing knowledge is subordinate to improving practice with any action research. Improving the quality of learning by improving instructional practice is a noble goal, and one I took literally throughout the research.

This chapter presents the methodology selected for this embedded multiple case study analysis. Six stages in the methods are discussed: (1) Research design, (2) research context, (3) researcher’s role, (4) data collection methods, (5) data management, and (6) data analysis. The final section of this chapter will include a summary of the methods followed by the appendices which will contain consent forms, participant questionnaire, and interview questions.
Research Design

Purpose of the Study

The purpose of this study was to explore the potential impact of blogs as a tool for teachers to use in the classroom to communicate with students. This study examines the ways a teacher blogs with their students. The study examines the teacher’s perception as to the effectiveness of the blog as a tool for communicating lessons, assignments, additional instructional information, and critique of student work. The overarching question this study explores is: In what ways do teachers use blogs in the classroom? The sub-questions for this study are: (a) how do teachers use blogs to communicate general information to students, and (b) how do teachers use blogs to deliver specific instruction, (c) how do teachers perceive the use of blogs has influenced communication and instruction.

Qualitative Study

A qualitative approach provides a way of analyzing the discursive construction of everyday events, examining the nature of learning within events, and exploring the historical nature of life within the blogs and their subsequent blog group or classroom. This research provides me with insight into the “inside” of the classroom, allowing for a rich, “thick” description of the phenomenon (Merriam, 1998). The knowledge needed to understand the social situation within the classroom cannot be gained by casual infrequent observations of the classroom. I believe different “voices” (Dede & Kremer, 1999; Kushman, 1997) are heard through the blogs and careful study was needed to understand whose voice is represented and in what ways or for what
purpose that voice adds to the teacher’s instructional practice and communication process. A qualitative study provides grounded understanding of the phenomena of teachers and students blogging. This look at how blogging is consequential for classroom members and other educators adds to academic knowledge and societal resources because of its local construct and the actions of practicing teachers (Putney et al., 1999).

Qualitative research methods are designed to help researchers understand people and the social and cultural contexts within which they live. Kaplan and Maxwell (1994) argue that the goal of understanding a phenomenon, from the point of view of the participants and its particular social and institutional context, is largely lost when textual data are quantified. Philosophically, this study takes an interpretive stand with the assumption that access to reality is only through social constructions such as language, consciousness, and shared meanings (Myers, 1997). One of the philosophical bases of interpretive research is phenomenology (Boland, 1991). Interpretive studies generally attempt to understand phenomena through the meanings that people assign to them and these methods are "aimed at producing an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context" (Walsham, 1993, p. 4). Interpretive research does not predefine dependent and independent variables, but focuses on the full complexity of human sense-making as the situation emerges (Kaplan & Maxwell, 1994).
Phenomenology

Phenomenology is a 20th century philosophical movement dedicated to describing the structures of experience as they present themselves to consciousness, without recourse to theory, deduction, or assumptions from other disciplines such as the natural sciences. The purpose of phenomenology as both a philosophy and a research method is to describe experiences as they are lived or to capture the "lived experience" of study participants (Marcelle, 2006; Myers, 1997). To answer the question of the meaning of one’s lived experience, one must turn to the only reliable source of information to answer this question— the person living that experience. Understanding human behavior or experience requires the person to interpret the action or experience for the researcher, and then the researcher must interpret the explanation provided by the person (Marcelle, 2006). Therefore to study the effectiveness of teachers who utilize blogging as an instructional tool, I must first ask their perception of its effectiveness. The most effective means of doing this was through surveys, interviews, and document analysis of the actual blogs of the participants.

Holistic Nonprobabilistic Multiple Case Study Design

At this phase in the development of blogging teachers, it was useful to draw on phenomenological concepts and conduct a study that used a qualitative multiple case study design holistic in nature with only one unit of analysis (Yin, 2003). The study explored the ways teachers are using blogging in their classrooms, the kinds of work students post, and teacher perceptions of how their communication and instruction is
affected by blogging. The data was not pooled, thus making it a multiple case study consisting of multiple holistic cases. If similar results were found, it would be a literal replication. I gained common conclusions from the cases, thus expanding the external generalizability of the findings.

The study was also “purposeful” (Patton, 1990) in its sampling strategy. Since my desire was to “discover, understand, and gain insight” (Merriam, 1998) into the use of blogging as an instructional tool, the most appropriate sampling strategy was nonprobabilistic. Since there are hundreds of teachers across the world currently using blogs, I limited this study by geography, culture, and criteria developed by this researcher. I created a study that is “information-rich” (Patton, 1990) so that educators can learn a great deal about the central importance of this research, thus forming the purposeful sampling.

Because blogging as an instructional practice is relatively new to education, I was selective and used a form of convenience sample or non random sampling as a way of choosing participants. I wanted to view this practice as it is being used by teachers who meet the determined criteria. Those teachers were likely to be using it in a more purposefully pedagogical way. They provided evidence that blogs are being used to deliver specific instruction as well as providing general information communication. I realize these sampling methods may not be as accepted by researchers as valid tests as are other methods of sampling. However, I believe the method served my chief purpose of providing a means of improving instructional practice with action research while also providing a foundation for future research. I
also realize that this selection method is not representative of the blogging population in general, or even of those few in education. I believe this is a start, a foundation for others to build upon, and that by beginning with this purposeful selection, further studies of blogging will be easier for other researchers.

Virtual Ethnography

Educational evaluations must be capable of focusing on the program as it really functions (J. H. Johnston, 1983). Conventional measures of reliability in evaluations call for inter-subjective agreement. Ethnography, however, focuses on another form of reliability called "confirmability" where there is agreement from a number of information sources that a certain phenomenon has occurred. Ethnography is central to understanding classrooms as cultures (E. Collins & Green, 1992). In anthropology, sociology, and education, ethnography is the study of culture. Ethnography makes visible the often invisible patterns and practices of life (Dixon et al., 1999). It helps researchers understand who has access to knowledge of these patterns and practices and identifies the consequences for particular members of knowing and understanding these patterns. Ethnography is both a way of seeing and also observing life in particular social groups. It is a way of recording, analyzing, and representing this life. Ethnographers achieve their goal of learning from people through these actions (Dixon et al., 1999; Green & Bloome, 1997; Heath, 1982; Spradley, 1980).

Virtual ethnography is a recent development in the area of anthropology, science & technology studies, and Internet research (Beaulieu, 2004; Hine, 2005;
Mason, 1996). It extends the notions of field and ethnographic observation from the exclusive study of co-present and face to face interactions, to a focus on mediated and distributed interactions (Hine, 2005). Virtual ethnography tries to create virtual counterparts of the basic ethnographic concepts and interrogates whether they can be applied to mediated interaction. It also aims to change the idea of fieldwork from a localized space into a network of interlinked settings. Virtual ethnography maintains a number of principles of accepted ethnographic work. This makes virtual ethnography distinct from website content analysis, although it may make use of the same qualitative and quantitative techniques to locate networks and websites (Scharnhorst, 2003), or to understand media forms. Converged research will establish which aspects of ethnographic research are challenged particularly in the shift from face to face interaction to mediated digitized interaction.

Simply put, a virtual ethnography is an ethnography that treats cyberspace as the ethnographic reality (Mason, 1996). The virtual ethnography researcher must ask a key question: How can ethnography be pursued in technologically mediated settings? Researchers have attempted to create virtual counterparts for many of the basic ethnographic concepts but whether they can appropriately be applied to technologically mediated interaction is still an open question (Howard, 2002). For example, if a researcher simply reads some e-mails or participates in blogs, does this represent ethnography? Can the researcher still be said to have immersed themselves in the life of the community? I did not conduct a full ethnography. Instead I used the ethnographic tools of repeat observations of selected teachers websites and interviews
of teachers managing those sites. Also by examining the work generated by teachers and students, I was able to examine the work of this classroom community.

**Research Context– Case Study Participants**

I will now describe the boundaries maintained for this study in terms of teacher participants and their use of blogging as an instructional tool. I will also set criteria for the teacher blog including format, purpose, regular weekly use, lesson context, and information richness. It was my intent to sample those teachers who appeared to be using their blog as a primary instructional strategy, and who were encouraging their students to blog as well.

*Criteria for a Participant’s Blog*

As blogging becomes more popular among educators, different types of blogging teachers and blogs will become more evident. This study considered teachers who appeared to be using a blog as an instructional strategy and as a way to engage the learner in conversation and deeper thought. This form of “criterion-based selection” (LeCompte et al., 1993) permitted a purposeful sampling of those high-end users who were best exemplifying the use of blogging as an instructional tool. This “unique” sampling (Merriam, 1998) of atypical blogs are of interest to this researcher because they define a possible instructional use that can immediately inform practicing teachers and administrators. Teachers who are using blogs to a full extent as defined in the list below are meeting certain criterion that suggests the blog is being used as a primary form of instruction, thus making it of use immediately to current practitioners as a possible new tool for use with students.
A participant’s blog should include most of these conditions, but will not be limited to the following criterion (Warlick, 2006):

- Establish productive communication between the classroom and home by providing ongoing information about instructional goals, expectations, policies, and requests for support.
- Provide students with information that will help them be successful learners.
- Weekly reports on what will be taught during the upcoming week and how it will be taught and why.
- Background information on topics currently being taught in the classroom, creating a context for students and for parents.
- Classroom assignments both assessable and non-assessable, homework assignments both short term and long term, and writing assignments for pleasure, personal insight, relationship building, or writing instruction.
- Descriptions of projects, including procedures, expectations, suggested parent involvement, assessment rubrics and links to last year’s projects.

**Participant Selection**

All participants are certificated teachers within K-12 public schools in the United States. Contacts with participants were performed virtually via electronic survey, e-mail, and blogging. Initial contact with possible participants will be achieved by viewing their classroom blogs as any other person with an Internet connection could via the World Wide Web. Participants were carefully selected after study of their classroom blogs, using the criteria presented previously. Teachers were chosen
based on their blogs being used as a recurring, prominent classroom tool. Only
teachers whose blogs are being updated at least once a week and that allow students to
post or publish their thoughts or assignments to the blog were considered.

Participation by the teacher was voluntary. Participants were asked for normal
demographic data such as age, gender, race, years of teaching experience, number of
years teaching at this grade level, and perceived level of technology experience. These
same demographic data are collected by all states once a year and made public via
district publications, such as California’s School Accountability Report Card. There
were 165 participants in the first survey, 51 participants in the second survey and 12
teachers were interviewed.

This study took place in the spring of 2007 before most states schedule
standardized testing (late April/early May). Most teachers had been blogging with
their students for at least six months during the current school year. Because of this,
teachers had an opinion on the practice of blogging with their students and were able
to complete both the surveys and the interview questions with some ease and
completeness.

Researcher’s Role

Online use of participant observation is merely an extension of the
anthropological definition of participant observation. By observing a teacher’s use of a
blog and the students’ responses to assignments, questions, and peer work, I gained a
“first-hand” inside perspective into the classroom. Because I studied those blogs that
were used weekly as an important instructional strategy, I came to understand their purpose and function in the classroom, just as any field researcher would.

My focus was not merely on online content. I studied the practice engaged by the individuals to a detailed level. Kendall (1999) called for all research to include components of participant-observation, done “in hopes of countering tendencies in the new and growing field of on-line research to ignore important social contexts of on-line communication and interaction.” I did just that, paying close attention to the real or virtual social context that actually gave rise to the online content. I made every attempt to become a part of the classroom community through close scrutiny of content and relationships and ongoing “virtual conversations’ with the teachers.

I also drew upon my own experience as an educator with degrees in communication and computer science. My extensive educational experience with technology since 1986 assisted me in understanding the issues involved in delivering the technical product of a blog as well as the instructional issues of producing academic and social results for students with that technology.

**Data Collection**

I employed three methods of data collection: (1) electronic surveys of blogging teachers who met the criteria for participation, (2) open-ended virtual interviews with participants who appeared to be using the blog most extensively for instruction, and (3) document analysis of the participants’ blogs for evidence of instructional strategy and student participation of those participants interviewed. The surveys could be considered another type of interview (Yin, 2003) producing quantitative data as part of
the case study evidence. The surveys were also used to determine if the teacher met
the blog criterion as established earlier in this section. If the criterion was not met to
the satisfaction of this researcher, the teacher was not selected as a participant. In
addition, the surveys were used as a determinant of those to interview further and
whose blogs will be studied in greater depth through document analysis.

*Electronic Surveys*

The first type of data collection was an electronic survey that provided
snapshots of attitudes and thoughts of the teachers. While electronic surveys can
provide information on the attitudes and thoughts of the members of the community,
Mason (1996) also points out that they are prone to a split between active participants
and “lurkers” (those who do not actively participate). The survey was useful in order
to gauge participants’ knowledge of technology, communication, Internet use, website
design, and blogging. The survey also examined attitudes towards teacher/student
relationships, teacher/student collaboration, and computer mediated communication. I
sent out a link to the survey out to teachers across the United States who were found
through various means of Internet searching and “snowball” sampling (Merriam,
1998) to be blogging with their students and producing blogs that appear to meet most
of the criteria. I also asked commercial blog vendors to send an e-mail blast (mass
mailing) requesting that any blogging teachers could follow the Internet link noted in
order to take the electronic survey. District technology directors were also used in a
similar fashion with teachers in their district. The potential number of teachers that
knew of this survey could be over 10,000.
There were many factors to consider when designing the survey questions. It was important for me to design these questions very carefully. A poorly designed questionnaire renders meaningless results. I used the following pointers from Babbie (1973):

- Make items clear
- Avoid double-barreled questions
- Respondent must be competent to answer
- Questions should be relevant
- Short items are best so that they may be read, understood, and answered quickly
- Avoid negative items
- Avoid biased items and terms

Survey Monkey (http://www.surveymonkey.com) is a common electronic tool that allows surveys to be easily formed online, quickly sent and completed, and automatically returned and disaggregated. Its primary strength is its intuitive Web interface, which makes it easy to create surveys and export collected data. It has advanced features, like the ability to branch questions based on response and exporting to different formats, including HTML, CVS, and SQL. Survey Monkey offers two levels of service subscription—basic and professional. Basic subscribers are limited to a total of 10 questions and 100 responses for each survey, while the professional subscription I purchased allows an unlimited number of questions in each survey with up to 1,000 responses per month for an extra charge.
Survey Monkey allows researchers to choose from a dozen or more question types, such as single answer, multiple answers, or a matrix of answers, and results can be viewed on line or downloaded for analysis in a spreadsheet or statistical program. Survey Monkey also guides people to the survey. Researchers can create e-mail lists with custom invitations for an unlimited amount of users.

**Participant Interviews**

Rossman and Rallis (2003, p. 180) stated that, “interviewing is the hallmark of qualitative research” and asked the question “why interview.” Their answer consisted of six answers: “To understand individual perspectives; to probe for clarity; to deepen understanding; to generate rich, descriptive data; to gather insights into participants’ thinking; and to learn more about the context.” It is for these reasons and others that this researcher selected interviewing as an appropriate method of data collection.

Seidman (1998) recommends in-depth interviewing. The goal of this type of interview is to have the participant reconstruct his/her experience with the topic through a series of open-ended questions that enable the interviewer to build upon and explore the answers to each question. The model Seidman recommends is straightforward. The interviewer has a series of three interviews with each participant. Each of the three interviews has a different purpose. The first establishes a context for the participant’s experiences; the second allows participants to reconstruct the details of the experience, and the third encourages the participant to reflect on the meaning of his/her experience.
Interviews conducted electronically with participants during the course of the study (Kvale, 1996; Schonlau et al., 2001) were less formal as described by Yin (2003) using a more open-ended style. The complex issue will be analyzing the data in relation to other sources of evidence. Some generalizability took place as a matter of course, but the gauging of the subject’s perception was necessarily guided by evidence collected over a longer period of time using the surveys, the interviews, and the written blogs.

Mason (1996) points out that e-mail interviews have the danger of leading to information overload due to the number of e-mail messages being received. He recommends that, if a researcher uses this approach, he/she should, after receiving an informant’s consent to be interviewed, send an e-mail message with three or four short questions and wait for a response before sending the next set. This procedure would allow the interviewer to set up a semi-structured interview that can then be manipulated according to the answers received to each set of questions.

In these interviews, I contacted teachers via e-mail and asked them to answer the essay questions. This technique of collection could be considered flawed because I was involved in so many blog conversations at one time and because of the lack of proximity in a virtual setting. I also found that individuals tended to be at ease with the nature of the relationship and forgot that I was performing research. This could have been because of the informality of blogging; they are accustomed to being transparent, and they have no problem seeing their words in print.
In this study, I used a modified version of in-depth interviewing to take into account the specific requirements of virtual research. This asynchronous interview was conducted virtually and was focused on blogging as instructional practice. In the interview document structure, each question built upon the preceding question.

The interview took approximately one hour for each participant to complete, although they were not required to answer the questions in one setting. Their responses were done at any time that was convenient for them over a four week period. I examined their blogs after the interview responses were received in order to compare the ways what they said with the way they are actually using it with their students. No student names were used; however student responses were used in their entirety provided they offered no clue to the student or the teacher’s true identity. In order to minimize the risk of breaching confidentiality, I extracted those student responses I wished to use and put them into a separate data set without any identifying information.

The actual content of student work was not studied. I searched for depth of thought as measured by Bloom's Taxonomy. I searched for actual postings or the lack of postings in cases where the teacher did not allow students to post. I looked for conversation that developed a relationship with the teacher or fellow students versus simplified or technical answers. The work I expected to see was writing assignments from prompts, messages to the teacher asking for clarification, or critique of other student writing.
Information was obtained confidentially, recorded confidentially, and later made anonymous. I saved the e-mails from each interview, but after the study is complete, I will remove all identifiers from the e-mail. Then the content, with no identifiers will be saved. The original e-mails and all notes with identifiers will then be destroyed. In the case of the electronic survey, the participants' identities are known through a master list retained by me so that the strongest responses can be equated to the same individual. After the final selection and acceptance by participants is completed, the master list will be destroyed thus making the data anonymous. The destruction of the master list and e-mails will be performed after the content is studied in order to make the data anonymous when it is no longer needed to conduct long term follow up or ensure participants' well being.

The following questions for the interviews were adapted from a study on laptop use by middle school students in Henrico County Public Schools (Chamberlain, 2004):

Interview Questions

1. Please state your name and tell me your favorite thing about teaching in ten words or less.

2. What do you like about blogging?

3. Think back to when you did not use a blog in your classroom. Would you say that your instructional practice has changed as a result of using blogs? If so, how has it changed? If not, how has it not changed? Please provide examples.

4. This next question is about roles. Students sometimes perform different roles in the classroom. They can be passive, work in groups collaboratively, or even be experts and/or leaders in the class.
a. First, how has your students’ role changed since you began using the blog in your instructional strategy? Can you give examples?

b. Second, how has your role with your students changed since you began using the blog in your instructional strategy? Can you give examples?

c. Do you feel quoting a student’s posting in your summary of other discussion adds to the student’s self-esteem? How often do you do this?

5. Has the way you give or get information in class changed? For example are there differences in the number of completed assignments, has the level of student writing improved, has your relationship with all students (especially minority students) improved.

6. Do you feel that blogging with your students causes you to lose control of the information that leaves the classroom?

7. Are you increasing or decreasing the use of blogs since you began?

8. Are the students improving academically with the use of blogging?

9. Time: How much time does it take to monitor a class discussion in a blog versus a live class discussion? If the blog takes longer, how do you justify the added expense of time to your actual workday?

10. Pre-Instruction: In what way do you model blogging to your students before you begin the practice?

11. Helping students develop critical thinking and metacognition: In what ways do you allow students to reflect on their own learning and contributions of their peers? Have you observed students weaving (relating discussion sections from prior weeks to the current week or as a way to synthesize multiple responses) and summarizing the posts without direction from you? Do you always summarize the blog or do you allow students to summarize? Is this done singularly or in collaboration?

12. Ethics: What safeguards do you take in order to properly monitor the postings? Do you delete words or phrases that you find inappropriate? Have you
punished students for abusing blog privileges? How much free expression do you allow in the blog? Have you established rules? Have you allowed students to form their own rules? How do you handle issues that should remain private, yet a student feels the need to post the issue publicly?

13. What recommendations do you have regarding the use of blogging in the classroom that might assist a teacher just beginning to blog?

14. We have discussed a number of things today. What is the most important thing that we should know about the use of blogging in a classroom?

15. What would you like to share about blogging that was not covered in the questions?

Document Analysis of the Participant’s Blog

This qualitative study used document analysis collected “virtually” via the Internet as another source of data. I evaluated the classroom blogs of the 12 interviewees and provided my own impression of the blogs as they related to the research questions and to the participant’s responses. Document analysis in this study was a systematic examination of blog documents in order to identify instructional and or communication needs and challenges and describe this blogging activity in detail. The focus of the analysis is a critical examination of layout design as well as a description of the blog content as determined by the established criteria. The analysis included questions about the instructional or communicative purpose of the document; how the teacher and students are using it, and how it is (or is not) contributing to learning. This allowed me to gain insight into this instructional activity and find validity in the practice. Subcategories, categories, and themes that emerged from an
analysis of the data are reported and described in narrative form. The analysis of the 12 blogs took place after the interview questions were submitted by the teachers.

Analyzing the blog documents also enabled me to triangulate the perceptions of the teachers with the actual text. This is a form of data triangulation, involving the collection of information from multiple sources, but aimed at corroborating the same phenomenon (Yin, 2003). Case studies using multiple sources of evidence are usually rated higher in terms of validity than those using only a single source of information.

I am aware that many bloggers are also communicating via private blogs or e-mail. By just observing a public blog it is possible to miss out on what goes on behind “closed doors” (Mason, 1996). This should not be a problem for most classroom blogs, although some schools have adopted a privacy policy that is password protected when student work is displayed. The 12 blogs examined did not require logins and passwords to view the contents. The actual blogs studied will not be shown in this study, nor will the URL addresses be given in order to protect the identity of the respondents.

**Overview of the First Survey**

Since the first data collection method was to be an electronic survey, proper dissemination of the survey would be a key issue. Very few teachers currently blog as an instructional practice and even fewer are in the selected criteria of certificated K-12 teachers working within the United States. To find these teachers and promote an interest within them to take the survey, several options were possible. Those options were (a) advertising on the Internet via search engines, (b) advertising in trade
publications, or (c) receiving an endorsement from leading blog educators. The latter was chosen to assist the collection method.

On July 5–7, 2006, David Warlick spoke at the National Educational Computing Conference (NECC) in the San Diego Convention Center. Warlick is an internationally known educator, author, and speaker through his company Landmarks for Schools. This company boasts more than 6,000,000 page views a month from nearly 100 countries. Warlick also writes for a number of magazines and online journals, and publishes a blog and a podcast. After Warlick’s presentation, I spoke with him about the idea of studying blogging principals instead of teachers. He quickly confirmed that there were few principals blogging. He encouraged me to focus on teachers and to stay in touch with him. I met him again at the TRLD (Technology, Reading & Learning Diversity) Conference in San Francisco in February 2007. At this time we had a longer discussion about the study, and he promised to help promote the survey with an e-mail blast to his subscribers and a posting on his websites.

In October 2006, the San Diego County Office of Education sponsored a talk by Alan November, who was named one of the nation’s fifteen most influential thinkers of the decade by Classroom Computer Learning Magazine. In 2001, he was also named one of eight educators to provide leadership into the future by the Eisenhower National Clearinghouse. His writing includes dozens of articles and the best-selling book, Empowering Students with Technology. Alan was co-founder of the Stanford Institute for Educational Leadership through Technology and was selected as one of the original five national Christa McAuliffe Educators. I met with November
and traveled around the county visiting schools with him. He became interested in my study and promised to help promote it when the time arrived. He confirmed this promise when I spoke with him at another conference in Riverside in February 2007.

The CUE (Computer Using Educators) Conference in Palm Springs in March 2007, gave me an opportunity to talk face to face with Will Richardson. Richardson was the first teacher to write about his experience using the blog as an instructional practice. His book, *Blogs, Wikis, Podcasts, and Other Powerful Web Tools for Classrooms* (2006), has been a best seller among educators. Richardson speaks around the world and believes close to 10,000 people read his blog. He also promised me his assistance in promoting the study.

Australian James Farmer is the founder and CEO of Edublogs and provides consultancy, design, and development for a variety of different online community projects. The Edublog website is maintained by educators so teachers may effectively use blogs in teaching and learning at all levels. Farmer created the Edublog Awards in 2004, perhaps coining the term “edublog” for the first time. He replied to my e-mail on March 8, 2007, that he did not currently support link dissemination and would be unable to assist in promoting the study.

**Review of the First Survey**

The first survey named “Blogging Classroom Teachers” (Appendix F) was created February 25, 2007, after three drafts. The last draft was sent out to 26 peers, including dissertation committee members, for comments and edits. Final revisions were made and the survey was opened to respondents on Survey Monkey on March 8,
2007. Shortly thereafter, Warlick, November, and Richardson delivered on their promise; each sent an e-mail blast out to their subscribers, posted it on their blog or website, or did both (Appendix E). Although it is difficult to estimate the number of educators who saw the survey, the potential audience according to the three authors is 30,000. However, not all of these blog readers would be teachers meeting the criteria for participation.

The first response arrived on March 12, 2007, and the last response was received on April 18. In all, 168 people responded to the survey. Of those respondents, 116 met the criteria of being a K-12 certificated teacher using a blog for instructional purposes in a classroom in the United States. Other respondents were from higher education, other countries (South America, New Zealand, Australia, Canada), or just curious bloggers. Because the response far exceeded my expectations and my original dissertation proposal, I decided to further filter the respondents to a final grouping of participants. This final group met the original criteria, but these respondents also gave their Internet blog address (URL) and their e-mail address. These responses allowed me to be able to contact the bloggers for clarification, a second survey, a virtual interview, or to analyze the blog document. The group of 65 participants was eventually sent a second survey (Appendix H), of which 51 actually responded.

Demographic Data of Respondents

Participants were generally experienced teachers with 92% teaching three years or more. More than 43% of the participants taught more than 10 years. The majority of the teachers were using the blogs in middle school or high school with
40% in grades 6-8 and 39% in grades 9-12. Over 73% of the middle school teachers had been reading blogs less than two years, and 53% reported they began using blogs for classroom communication less than a year ago. Secondary teachers began reading blogs earlier than middle school teachers. Approximately 44% of secondary teachers began reading blogs over two years ago, similar to middle school teachers in the length of time they had been using the blog in the classroom (Figure 3.1).

![Figure 3.1. Length of time K-12 teachers have used blogging as an instructional practice](image)

**Overview of the Second Survey**

The original proposal for this research did not include a second survey. It was believed that 50 to 100 people would respond to the first survey and that six to ten participants would be selected for interviewing. Receiving 168 respondents from the
first survey and gaining 65 teachers who could be considered participants led to the creation of a second survey. The responses given by the survey participants were rich with new data and explicit with information on blogging as an instructional practice. After meeting with the doctoral committee, it was decided a second survey would be useful to gain additional information based on responses from the first survey. Adding a second survey would also allow for more selective filtering of participants in order to find the participants who would best be qualified to answer the interview questions.

**Review of the Second Survey**

The second survey called “Researching Blogs as an Instructional Practice” (Appendix H) was created on April 22, 2007, using Survey Monkey software tools. Three drafts were created over a period of time allowing for editing and suggestions by the doctoral committee. Finally on May 6, 2007, the e-mailed link was sent out to the 65 selected participants via the Survey Monkey collector method (Appendix G). With the e-mail invitation collector, the survey was sent to an e-mail distribution list. This allowed me to customize a message as a survey invitation and enabled me to track the respondent information in the survey results as well as the respondent status. The link sent through the e-mail tool was for a specific recipient and could not be forwarded to other recipients. This ensured that no others would be able to take a new survey using the original link sent to a specific recipient.

In addition, the e-mail invitation collector provided me with a recipient summary and a message summary. I was quickly able to view the total number of respondents that had sent the message, the number of respondents in my list that had
not been sent the message, and the total number of sent messages. The recipient summary provided automatic updates for the partial and completed responses collected. The e-mail message was entirely customizable enabling me to place tag fields into the body of the message for additional personalization.

Respondents were able to access their unique link sent through the message manager from any computer to edit or complete their survey at a later date. Using the unique identifier gathered from the first survey, each recipient was tracked from the opening of the survey to the closing of the survey. Reminder e-mails were sent weekly during the 24 days of collection.

The first e-mail’s subject line was titled “Second National Survey of Blogging Teachers” (Appendix G). Within six days 30 responses were collected and a reminder named “Time is Running Out for Blogging Teacher Survey #2!” was e-mailed out to the other 35 recipients on May 12. Within the next week, another 13 responses were received. The third reminder named “Three days left to complete blog survey!” was e-mailed via Survey Monkey to the 22 recipients. Another five responses were collected and the final e-mail reminder titled “Last Chance to Help Other Teachers!” was sent on May 19. The final total of respondents was 51 with one person opting out from further e-mailing.

Cooperative Learning

I will now review the thought process used to create the questions used in Survey 2. To do this, I must describe in more detail some results found in Survey 1
that caused me to consider the different path taken in Survey 2. This new path created sub-categories not considered in the initial proposal.

Throughout the anecdotal data in Survey 1, several references were made by teachers to student to student interaction. They saw this as a form of relationship building not only with the teacher, but also between students for classroom team building and cooperative activities. Because of the worldwide reach of the Internet, there were even implications that student to student interaction could be a global phenomenon. These blogging teachers seem to have found a new way of delivering an old technique of instructional practice called cooperative learning.

Educators have used cooperative activities as a way to encourage learning as well as lessen poor behavior in the classroom (D. W. Johnson & Johnson, 1994). Research suggests that cooperative learning is good for all students and that it is part of comprehensive school reform efforts. To achieve this change, teachers are encouraged to work together to build networks within their school community. Teachers also attempt to establish cooperative classroom principles that emphasize overall community building, open communication about differences and classroom practices, and mutual helping relationships. Meaningful content in cooperative lessons is critical for the success of all students. For students to succeed within their groups, careful consideration regarding group demographics must be given in combination with roles that ensure active and equal participation by all students. Creative assessment practices must be developed to record achievement of outcomes for students.
Some of the teachers in Survey 1 mentioned the network of community they discovered outside the school community. This network of blogging educators, commonly referred to as “blogosphere,” seemed to be important to the teachers as they took this unique path of blogging in the classroom. They even gave themselves a new name—“edublogger.” These edubloggers established rules for blogging (Warlick, 2005, p. 168, 2006) and began to think more critically of the types of assignments offered to the students. These attributes of an edublogger closely mimic the type of teacher who promotes successful cooperative learning techniques as noted above from research by Johnson and Johnson (1994).

Deeper Thought Process

Other teachers in Survey 1 commented on the depth of thought students create when writing in a blog. This depth of learning is a desirable attribute for students to display, but it is difficult to assess. Scouller (1996) believes there appears to be a strong relationship between method of assessment and students' learning approaches. Because the assessment method may narrow or broaden the strategies and motives employed by students, selection of the appropriate assessment method emerges as a vital decision to be made by course designers. Therefore, the assignment essay may be the more appropriate form for assessing deeper thought. Her research showed that students themselves selected the assignment essay rather than the short answer examination as their preferred assessment method. Multiple choice and short answer assessments tend to elicit low-level verbs, leaving students feeling that multiple choice
and short answers do not reveal what they have learned, while portfolios and essays encourage high-level verbs.

Professors at the University of Technology Sydney in Australia (2007) continued along this line of thought and built upon the research of Scouller (1996) and Biggs (1999) by describing in some detail what the deep approach to learning is and how it can be used in the classroom. They explain that when students are taking a deep approach they develop understanding and make sense of what they’re learning while creating meaning by making ideas their own. In their learning strategies they focus on the meaning of what they’re learning and try to develop their own understanding. They will relate ideas together and make connections with previous experiences. The students might ask themselves questions about what they are learning, discuss their ideas with others, and enjoy comparing different perspectives. They are also likely to explore the subject beyond the immediate requirements and are likely to have positive emotions about learning.

Allowing students to blog as a form of assessment would be a form of essay writing, could build upon the student’s previous knowledge, and may therefore allow them to be more expressive of that knowledge using a deeper thought process for more extensive learning. As noted by Scouller (1996), students actually prefer, and to some extent enjoy, essay writing compared to multiple choice forms of assessment. The teachers in Survey 1 reported evidence of students being more motivated to write using blogs rather than other forms of assessment. Pennebaker (1990) wrote that the use of a diary was therapeutic and created an enjoyable experience for the author as
they wrote with a deeper, more introspective thought process. These factors all contribute to the idea that blogging could be used to stimulate increased learning with deeper understanding for students.

Introduction of New Sub-Categories

After studying this research on cooperative learning and deeper thought learning and then applying it to the Survey 1 data, I decided to use the themes of cooperative learning and deeper student thought as Survey 2 sub-categories as shown in Table 4.1. Grouping the themes of deeper thought around the three major categories, questions were created that would hopefully discern the actual practices occurring in a blogging classroom. To prompt the teacher to find these themes in a relatively new instructional experience, I also designed the questions to have multiple answers that related to the same main category. For instance in one question, three sub-categories from the one main category would be listed as three possible responses, even though my research was simply looking for data to support the main category. Using this technique of data collection, I would be able to gather a greater depth of answer from the teachers. To further this type of data collection, this researcher also created two ways of answering most questions such as multiple choice with multiple answers. A rating scale was also used, assigning a weight to each choice in order to force a ranking. Finally, in true blogging style, questions with essay answers were created, attempting to draw the thoughts of the teacher into deeper responses, similar to their possible hope of more thoughtful response from their students.
Demographic Data of Respondents

The gender of teachers responding was almost perfectly divided between men and women, which is surprising since most teachers are women (Fishel & Pottker, 1977). Participants were similarly experienced teachers compared to the first survey with 92% teaching three years or more. More than 43% of the participants taught more than 10 years. Blogging teachers worked in middle school or high school with 33% in grades 6-8 and 45% in grades 9-12. Over 29% of the respondents taught multiple subjects; 20% were English-Language Arts instructors. A third of the respondents were in unique teaching situations, listing computers, technology, library, and foreign language as their current assignments.

The next demographic question was intended to discern which subject a multiple subject teacher used when delivering instruction with a blog. English-Language Arts was the heavy favorite with over 33% saying they used blogging to enhance this subject. Nearly 25% reported they taught multiple subjects. But the “other” category stayed strong to their unique subjects with 25% saying they used blogging for teaching students computers, technology, library, and foreign language material.

Overview of Virtual Interviews

The objective of effective teacher communication is to build a trusting relationship while imparting important information with students in order to create collaboration and understanding, thereby increasing student learning and instructional efficiency. This study was undertaken in an attempt to determine if teachers might
achieve this objective by creating a blog for the purpose of communicating lessons and assignments, providing additional instruction through online assistance, providing more feedback on student work, and improving classroom collaboration.

**Review of the Virtual Interviews**

The virtual interviews were conducted in order to discover if the original hypothesis is true: If a teacher uses a blog as a mode of communicating instruction, they will perceive their instruction is more effective and student learning opportunities will improve. Participants were contacted by e-mail and asked to complete the attached word processing document containing the interview questions (Appendix I).

Since the study is “purposeful” (Patton, 1990) in its sampling strategy and my desire is to “discover, understand, and gain insight” (Merriam, 1998) into the use of blogging as an instructional tool, the sampling strategy was nonprobabilistic. I was selective and used a non random sample purposefully chosen to best illustrate the phenomenon of interest—how teachers used blogs for instruction and seemed to be using blogs in a more purposefully pedagogical way. These “expert” edubloggers were selected based on the depth of their answers to Survey 2 and their enthusiasm for blogging. I also considered their demographic data and how the mixture of the demographic sampling from Survey 1 could also be attributed to this final sampling of participants.

**Demographic Data of Respondents**

Of the 51 participants in Survey 2, only 16 were asked to participate in the interviews. This number was chosen based on the above characteristics in order to
achieve the six to ten interviewees originally proposed. The group was evenly mixed by gender, they have taught on average more than seven years, they have been blogging for just over a year, and they had been blogging in the classroom for less than one year. Only one teacher worked in an elementary school, two teachers worked in a high school, and the other nine taught in the middle grades. Other than the first survey group having taught for more than nine years on average, the comparison data with the 16 interview participants were similar and unremarkable.

After the 16 participants were contacted by e-mail (Appendix I), I followed up with an e-mail five days later that gave the potential participant a gift certificate for $25 from Amazon.com. This was all done in a virtual environment. Several of them began answering the e-mail, most promising to send their responses within a week or two. A week later I sent another e-mail out to those who had not responded in any way with an e-mail suggesting that they may have misplaced the communication and attached the same Microsoft Word document to that e-mail. Whenever someone would respond with either a promise or the actual interview response, I sent them a personal e-mail communication thanking them for their response and promising to send them the full study when it was completed. I did not send out any further communication to those not responding.

A total of 12 teachers responded out of the original 16 participants. All 12 teachers included word processed responses to the interview questions. Those responses were then downloaded into an electronic spreadsheet in order to code the data using the same process of coding as was performed on the first and second
survey. The results section of the virtual interviews in this study includes a large part of those responses. Each question will be analyzed and then followed by the responses from each participant.

**Overview of Document Analysis**

Document analysis was collected “virtually” from the 12 interview participants via the Internet as another source of data. I evaluated the blogs and provided my own impression of the blog as it relates to the research questions and to the participant’s responses. This systematic examination identified instructional and communication practices as well as commonalities among the participants. The analysis includes questions about the instructional or communicative purpose of the document; how the teacher and students are using it, and how it is (or is not) contributing to learning. This allowed me to gain insight into this instructional activity, find validity in the practice, and to triangulate data received from the surveys and the interview. The blog analysis took place after the teachers were interviewed.

Analyzing the blog documents enabled me to triangulate the perceptions of the teachers with the actual text. This is a form of data triangulation, involving the collection of information from multiple sources, but aimed at corroborating the same phenomenon (Yin, 2003). Case studies using multiple sources of evidence are usually rated higher in terms of validity than those using only a single source of information.

Some schools have adopted a privacy policy that protects student work with logins and passwords. Although I was given permission to view the password-protected versions of some of the teacher blogs, I decided against this analysis. The
blog login allowed me to view student grades and personal information; I chose not to take this liberty to protect the integrity of statements I made to the three university Institute Research Boards limiting my use of human subjects to the teachers, not to the students. Most of the student work was available on the Internet without a login. Therefore, all document analysis has been performed on that portion of the blog that is available to all via the Internet.

**Review of Document Analysis**

The driving question asks how teachers are using blogs in the classroom. The analysis will be performed in three ways: (1) A graphical and technical study describing commonalities and differences in blog formats and styles, (2) ways in which the teacher communicates general information to students, and (3) ways in which the teacher uses the blog for instructional purpose.

Blogs are built with a format that is simply the opinion or preferred style of the owner. Certain commonalities include a title, multiple links to other sites of interest, RSS feeds, places to post a reader’s comments, and information about the creator of the blog. Some blogs are password protected, contain advertising, ask for login or registration, and provide a control panel for ease of use. A few contain blog rolls. Blog rolls are lists of recommended sites that appear in the sidebar of a blog. These sites are either on similar topics, sites that the blogger reads regularly, or sites that belong to the bloggers’ peers. Still other bloggers use tagging. Tags are the keywords people add to articles in their blog or to web pages via social book marking tools. While the links to
other sites or blogs were viewed, the data presented does not reflect statistics from those sites.

The blogs were analyzed for their use as a general communication tool for the classroom teacher. Categories for blogs as a communication tool included the online professional representation of the teacher, published work of the student or teacher, opportunities for student interaction with their peers, and ways for teacher to student relationships to strengthen.

How the teacher incorporates blogs as key, task driven elements of their instructional practice is the last factor analyzed. The blogs were viewed to find evidence of their use as a part of class activities and assignments as a part of the teacher’s method of motivating students to learn, and as a part of student assessment. Finally, the blogs were studied to see if the teacher integrated their instruction with the blog or if the blog simply stood alone as another practice. Evidence of this could be seen when teachers used blogging to include portfolios, student peer reviews, book reviews, online poetry, outside reviews, blogging artwork, learning reflections, international exchanges, past blogs, future blogs, writing development, team blogs, and year-end self-assessment (Warlick, 2005).

Data Management

Case study protocol was used to bring order to the data collection (Yin, 2003) by ensuring that all documentation was properly saved and recorded electronically. This also made retrieval easier during the reporting out phase. I kept a running journal using word processing tools, saving it in multiple locations. This journal recorded not
only the statistical information gained by the surveys, but also my personal thoughts as
I peruse the information gathered and the blogs on a daily or weekly basis.

In order to consolidate the data, I also utilized an interim case-summary
protocol (Miles & Huberman, 1994). This summary enabled me to begin the process
of reporting the findings by creating a report on each participant. The summary
included findings such as a list of people and positions, why each person was chosen
as a participant, any relevant background, a brief chronology of events relevant to
research questions, how analysis was performed, problems encountered, confidence in
results, and suggestions for the next summary or the final report. A combination of
spreadsheets and word processing documents were used for this protocol.

**Data Analysis**

True to conventional ethnographic methods, the analysis and the data
collection was performed in parallel (Merriam, 1998). Once the information was
gathered it was examined through the process of inductive data reduction (Patton,
1990). As the patterns, themes, and categories of analysis "emerge out of the data,” I
attempted to find a focus for the analysis, an annotating of the data. I became
thoroughly familiar with the data, was sensitive to the context of the data, was
prepared to change or discard categories, considered connections and avoided needless
overlaps, recorded the criteria on which category decisions were to be taken, and
considered alternative ways of categorizing and interpreting data (Dey, 1993).
Cross-sectional Survey

Cross-sectional surveys are used to gather information on a population at a single point in time. An example of a cross sectional survey would be a questionnaire that collects data on how parents feel about Internet filtering, as of a certain date. A different cross-sectional survey questionnaire might try to determine the relationship between two factors, like religiousness of parents and views on Internet filtering (Babbie, 1973). The survey questions for this study were formed using the three driving questions as separate categories.

Since this survey was performed in order to find teachers who are blogging according to the criterion, it is not a true representative random survey. The teachers who took the survey were chosen according to Internet or e-mail searches, previous knowledge of teachers in the field, and recommendations from colleagues. Participants also had the option of taking the survey, creating additional lack of randomization through self-selection. Nevertheless, this process yielded a rich sample from which teachers who are intense users of blogging for instructional purposes were selected for additional in-depth study.

In-depth Interviews

I used Kvale’s (1996, pp. 188-204) six steps of analysis to interpret interview results. The first step simply uses the subject’s own descriptions of the events with little explanation from the researcher. The second step asks the researcher to describe any new connections the subject may have formed during the course of the interview.
The third step was a little more difficult electronically. In this step, the interviewer attempts to condense the thoughts of the interviewee during the interview in order to clarify or offer self-correction. In an asynchronous mode the issue of timeliness to this self-correction may have hindered or even changed the final outcome. It is possible for this type of analysis to be effective using instant messaging, but difficult using e-mail.

The transcribed interview is interpreted in the fourth step. Since the interview was text-based, this step was unnecessary. All of the text and graphics were captured and saved by the researcher for further study or clarification. This step also involved the development of meaning to the interviewee’s responses. This researcher looked for meaning or new phenomena by utilizing the five approaches to analysis of meaning—condensation, categorization, narrative, interpretation, and ad-hoc.

The last step of the interview may have inadvertently influenced the teachers. As a result of the interview, the participants began to act from new insights they gained simply by being asked these questions. Since blogging research is relatively new, asking questions about the validity of their practice stimulated teachers to ask questions about their continued use of a blog in the classroom. This phenomenon necessitates further research.

According to Patton (1990, p. 376), the first decision to be made in analyzing interviews is whether to begin with case analysis or cross-case analysis. I used case analysis of the interviews to gain an understanding of how each teacher was using blogging in the classroom. After coding the interview and document data for each
teacher, I used the constant comparison method "to group answers . . . to common questions [and] analyze different perspectives on central issues." As data were recorded and classified, they were compared across categories. This process underwent continuous refinement throughout the data collection and analysis process, continuously adding to the process as a whole to build a cross-case analysis that presents as complete a picture of how teachers are using blogging to support instruction.

**Document Analysis**

The driving question for this proposal asks how teachers are using blogs in the classroom. The document analysis was a description of the actual blog, describing commonalities and differences in blog formats and styles. The analysis was performed in three ways: (1) Graphical look and use of technical features, (2) ways in which the teacher communicates general information to students, and (3) ways in which the teacher uses the blog for instructional purposes.

No quantifiable rating system for blogs currently exists except for those that offer an opinion to the topic of the blog. Technically blogs are built with a format that is simply the opinion or preferred style of the owner. Certain commonalities include a title, multiple links to other sites of interest, RSS feeds, places to post a reader’s comments, and information about the creator of the blog. Some blogs are password protected, contain advertising, ask for login or registration, and provide a control panel for ease of use. A few contain blog rolls. Blog rolls are lists of recommended sites that appear in the sidebar of a blog. These sites are either on similar topics, sites that the
blogger reads regularly, or sites that belong to the bloggers’ peers. Still other bloggers use tagging. Tags are the keywords people add to articles in their blog or to web pages via social bookmarking tools like del.icio.us, Technorati, Yahoo! My Web 2.0, Bloglines, etc.

Awards have been given for the past three years for the best education blogs as voted by the readers. Edublogs.org was founded in 2005 by James Farmer as an extension of the incsub.org project aimed at providing teachers, students, researchers, librarians, writers, and other education professionals with freely available emerging technologies. His Edublog Awards were first given in 2004 as a way to feature the best (as voted on by peers) blogs created by educators. These award winners serve as examples of education blog formats.

I looked to see if the teacher incorporates blogs as key, task driven, elements of their courses. Most were using them as socially motivating tasks, forming a part of class activities and assignments. The blogs could be part of assessment, but were not used in this manner consistently. Assessments should be performed on assignments that have a high degree of student motivation or entertainment in order to prevent the student from seeing the blog as drudgery, instead of as opportunities for writing and being expressive (Farmer, 2006).

I also analyzed the blogs for their use as an alternative communication tool. The blog should not be used to build quizzes, run polls, or have near-synchronous conversation—there are other tools for that type of use. Blogs should assist people to
publish work, represent themselves online, interact with their peers as part of an organic community, and manage their own digital content and identity (Farmer, 2006).

Other instructional applications to make note of include portfolios, student peer reviews, book reviews, online poetry, outside reviews, blogging artwork, learning reflections, international exchanges, past blogs, future blogs, writing development, team blogs, and year-end self-assessment (Warlick, 2005).

**Summary of Methodology**

Blogging is a powerful communication tool, growing daily in number of sites and in the number of uses by occupations and fields. Communication is the life blood of education. If the learner uses a different set of communication tools than his/her teacher, an increasing disconnect between teacher and student is likely. Deciding to use 21st century tools for communication may be the single most important decision educators may make in 2007. Even Time magazine (Grossman, 2006) has recognized the importance of these tools and the subsequent prolific use by the general populace. The editors chose the public or “you” as the person of the year because of the community and collaboration performed by ordinary people on a scale never seen in history. They boldly state that the World Wide Web has allowed people to take power from the rich and powerful few and instead to use their personal power to help one another for nothing. They proclaim this will not only change the world, but also change the way the world changes.

This qualitative multiple case study endeavors to look at those who are trying to take advantage of this collaborative power in the classroom. Through document
analysis and interviews, I ask those pioneering educators how they are using blogs in the classroom and how they believe it is allowing them to be better communicators and more effective instructors. Their answers form the basis of my research and, with those answers, perhaps a hope for a new more effective instructional strategy that can be used to inform the education field.
CHAPTER 4
FINDINGS

This exploratory study investigates teachers’ use of classroom blogs for communication and instructional purposes. Since little is know about classroom blogging as an instructional practice, and traditional ways of identifying participants did not seem appropriate, I used technology to assist me in finding blogging teachers and gaining their perceptions of how blogging was used in their classroom both as a communication and an instructional tool. Using the synchronous and asynchronous ability of the Internet, participants were found via email requests and website links. Respondents were asked to participate in two electronic surveys and a virtual interview. This researcher then studied the participant blogs for established criteria.

Overview of the Surveys

E-mail blasts are simply e-mails sent out to groups of people with a common interest in the message. Three well-known experts in the field of educational technology agreed to use their lists of educators to send out this message in order to publicize my research. I described the details of this approach in chapter 3.

Again using technology, data collection occurred in four phases: (a) an electronic survey inviting respondents and advertised via e-mail blasts (Appendix E) and website postings (Appendix D), (b) a second electronic survey sent out via e-mail (Appendix G) to 65 teachers from Survey 1 who met the established criteria, (c) an in-depth virtual interview sent out via e-mail to 16 of the 51 respondents to Survey 2,
and (d) a document analysis of the blogs created and used as instructional practice by
the 12 respondents who completed the interview. This chapter includes the findings
from these data sources.

As discussed in the methods section, the first survey was initially created as the
only survey to be administered. Using the electronic survey tool called Survey
Monkey, Survey 1 was created and posted to the Internet (Appendix F). Because of
the higher number of respondents due to support from internationally recognized
technology educators, a second survey was created and sent to selected respondents
(Appendix H). This second survey was sent out to 65 teachers out of the 168 who
responded to the first survey. Of those 65 teachers, 51 responded to Survey 2.

**Results of the First Survey**

The summary of findings of Survey 1 will provide an overview of the
categories as they are applicable to the findings. The findings are summarized in four
general categories: 1) frequency and type of posting, 2) equity of technology access, 3)
purpose for initiating blogging, and 4) use of the blog in the classroom. Due to the fact
that data were collected primarily through both multiple choice answers and essay
responses, the findings are presented quantitatively through tables or charts and
qualitatively through edited statements found in the virtual surveys and interviews.
Although all statements are verbatim, the length of some of the sample statements
necessitated editing to reduce repetition and to ensure privacy of the respondents.
**Frequency and Type of Posting**

A blog receives high praise and a certain level of validity from readers when it is updated frequently. Advertisers pay bloggers each time a blog website is viewed; the more frequently one updates their blog, the more frequently people return to the site. The same may be true of teacher blogs. It is possible if a teacher posts daily, students and parents are more likely to return to the teacher’s blog. But increased posting may also indicate that the teacher perceives the blog is an effective tool in the classroom. The results of the first survey show that teachers who have used a blog for instruction for two years or more tend to post to their blogs more frequently (Figure 4.1). Over 60% of the first year bloggers posted to their blog on a weekly basis, while 20% of the first year blogging teachers posted daily and the rest posted monthly. Other teachers reported that after two years of using a blog as an instructional practice, 60% of them posted to their blog daily while none of them posted just monthly. This may indicate that the longer a teacher uses a blog as an instructional practice in the classroom, postings may occur more frequently. However, since this study does not provide longitudinal data, it is impossible to know if this is true.
Students seem to respond to this more frequent use of the blog. The entire participant group estimates that 59% of their students view their classroom blog on a weekly basis. But when teachers post new information to their blog daily, teachers indicate that their students respond similarly. The 68% of the teachers who reported they post daily also believe that their students read the updated blogs daily. These same teachers said that 42% of their students respond back to the teacher by posting a comment in the blog daily. The data compare in kind with teachers who post weekly. These weekly updated blogs receive a look from students 85% of the time over the course of that week. They also receive a weekly posting from their students back to them 60% of the time.
Equity of Technology Access

Teachers may be reluctant to assign students the task of viewing the blog away from school. Over 40% of the participants said they never posted an assignment on their blog that they expected the student to view that night, yet 47% said they expected students to view the blog as homework either monthly or weekly. This disparity bears a striking resemblance to the issue of equity of technology that confounds the education community across the globe. The Digital Divide (McConnaughey, 1999) is a reality for educators, yet technology marches on. This confusion by the participants seems to mirror a national concern. When only responses from daily posting teachers are used, 26% say they expect students to view the blogs at home and 26% say they have never assigned students this task. These findings suggest that teachers are aware not all students have access to computers at home and therefore are reluctant to use their blog as the sole means for communicating assignments. Further studies on this topic should compare teacher use of blogs using student or family socioeconomic data.

Purpose for Initiating Blogging

With all of this time being spent on blogging, has the teacher thought out the purpose for blogging? Given the opportunity to mark their reasons for blogging, the teachers believe they have multiple reasons for blogging. Their choices (Table 4.1) also included the option of providing another purpose other than that specified. Communicating with their students and using the blog as a writing tool tied for the number one purpose at 76%. The rest of the responses were evenly distributed, except when a filter was applied to include only the teachers who posted on a daily basis.
Teachers who posted daily felt strongly (95%) that communicating with students was their main purpose for starting a blog. It is interesting to note that the next three choices were quite close in stated purpose with communicating with parents and posting assignments tying at 75%, writing drops to 73%, and relationship building achieving a 58%. These teachers provided more choices in their response compared to the average of the total group. The responses for reasons other than those listed included professional development, information sharing, authentic writing community, literature discussion, and collaborating with other schools.

Table 4.1: *For what purpose(s) did you start using a blog?*

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication with students</td>
<td>76%</td>
</tr>
<tr>
<td>Writing tool</td>
<td>76%</td>
</tr>
<tr>
<td>Posting assignments</td>
<td>54%</td>
</tr>
<tr>
<td>Relationship builder</td>
<td>46%</td>
</tr>
<tr>
<td>Communication with parents</td>
<td>45%</td>
</tr>
<tr>
<td>Other</td>
<td>27%</td>
</tr>
</tbody>
</table>

*Use of the Blog in the Classroom*

While the information above asks the teacher for their initial purpose for starting a blog, this next set of questions investigates how they actually use the blog in practice. Teachers who post only on a monthly basis overwhelmingly feel they do not
use the blog to communicate with the families of their students. Teachers who post daily have mixed feelings on this topic with 47% using the blog to communicate at least often with families. The same gap exists for teachers using the blog to post assignments for their students. Teachers posting monthly hardly ever use the blog to post assignments while those teachers posting daily use the blog to post assignments over 60% of the time.

Using a blog as a writing tool was one of the most popular purposes as stated by the participants. However, of those posting monthly, over 75% said they did not use the blog to post writing assignments. Teachers posting daily said they used the blog to post writing assignments close to 60% of the time.

Results Lead to New Categories

The responses from Survey 1 showed that the perceived results of blogging in the classroom led to three general classifications.

- Learning as a Result of Blogging
- Communication as a Result of Blogging
- Instructional Changes as a Result of Blogging

Using these three classifications, I created a method of coding the open-ended responses. This procedure transformed the raw data into a standardized format for data analysis. Coding the qualitative data helped to identify recurrent words, concepts, and themes. After creating the sub-categories under the three main categories, I began attaching numerical values to those sub-categories. The categories and their related
sub-categories along with the text values used for coding (Table 4.2) created the foundation for the participant questions in Survey 2.

**Summary of First Survey**

The results of the first survey may indicate that the longer a teacher uses a blog as an instructional practice postings will occur more frequently (Figure 4.1). Of those teachers who used the blog over a two year period, all of them posted at least weekly with 60% of them posting daily.

Access to technology at home or at places other than school by students seems to create a split among blogging teachers as to whether they should assign blogging tasks as homework. Over 40% of the participants never posted an assignment on their blog as an overnight homework assignment, yet 47% said they expected students to view the blog as homework either monthly or weekly. Filtering those same results using only teachers who post to the blog daily produced similar results.

A large majority of the teachers say they use the blog to improve their communication with students, but only daily posting teachers use it to post assignments to any great extent. Only half of the blogging teachers use the blog to communicate with the families of their students. While a large majority of the teachers say their goal is to use the blog as a writing device, 75% were not using it in this way. Only the daily posting teachers (60%) used the blog to post writing assignments.
Table 4.2: *Perceived Results of Blogging in the Classroom from Survey 1*

### Learning as a Result of Blogging

<table>
<thead>
<tr>
<th>Coding</th>
<th>Response choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIU</td>
<td>Increased understanding; making sense of what they are learning; develop their own understanding</td>
</tr>
<tr>
<td>RDT</td>
<td>Deeper thought processes; create meaning and new ideas from topic</td>
</tr>
<tr>
<td>RES</td>
<td>Exploration of the subject beyond the immediate requirements</td>
</tr>
<tr>
<td>RCX</td>
<td>Connections with previous experiences</td>
</tr>
</tbody>
</table>

### Communication as a Result of Blogging

<table>
<thead>
<tr>
<th>Coding</th>
<th>Response choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPI</td>
<td>Increased peer interaction</td>
</tr>
<tr>
<td>RTI</td>
<td>Increased teacher interaction</td>
</tr>
<tr>
<td>RPE</td>
<td>More positive emotions about learning</td>
</tr>
<tr>
<td>RSI</td>
<td>Increased sharing of ideas</td>
</tr>
</tbody>
</table>

### Instructional Changes as a Result of Blogging

<table>
<thead>
<tr>
<th>Coding</th>
<th>Response choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAB</td>
<td>Additional use of blogs</td>
</tr>
<tr>
<td>RWA</td>
<td>More writing assignments</td>
</tr>
</tbody>
</table>
Results of Second Survey

The content of Survey 2 was based upon the responses from the first survey and went deeper into the actual practice of the ways teachers use a blog for instruction in the classroom. I will now review the results of Survey 2 using the three general classifications gained from Survey 1 to guide the review. In summary, the results have shown that most teachers continue to be enthusiastic toward the practice of blogging, even after two years. In fact, because of the changes to instruction and the motivation of the students, a teacher may increase the time spent on this practice, as well as the time students spend on computers, and will perceive an increase in not only student cognition, but also their own professional development.

Respondents overwhelmingly felt that students were extremely comfortable with the practice of blogging. Over 67% of the teachers perceived that 75% or more of their students were comfortable with the act of blogging. A similar percentage of teachers believed that over 60% of their students truly enjoyed the experience. Results did not show that students preferred blogging to face to face communication. However, a majority of teachers felt their students had mixed feelings on this subject with 56% saying that most of their students preferred communicating in person. Interestingly, five teachers believed that 90% or more of their students preferred blogging to face to face communication.

Similar to the first survey, teachers were asked about their motivation or reasons for using a blog as an instructional practice in the classroom. The results
parallel responses from the first survey in that communicating with students and practicing writing were two primary reasons for starting a classroom blog.

However, this group of respondents also indicated they began using a blog as a motivational tool and to connect student learning to others outside the classroom. In fact, the teachers from the second survey felt these two reasons were equally as important as the original two answers given previously (Figure 4.2).

Figure 4.2. What Motivated You to Begin Using a Blog for Instruction?
Other reasons given for beginning a blog for classroom instruction include the teacher becoming motivated after attending training on blogging, recommendations from peers, and a need to connect students with technology and future trends.

Supports and Constraints for Blogging

The world has become more complex for educators with a society based on information. The ability to think, learn, and adapt has become increasingly important for a larger percentage of the workforce. Educators are finding they must change the existing paradigm of educating children for an industrial workplace to a more collaborative, connected through digitally-based tools workplace.

“If we insist on developing organizational change processes suited for machines and ignore life's imperative to participate in the creation of itself, then we can only anticipate more frequent and costly failures” (Wheatley & Kellner-Rogers, 1998).

In every organization, change is inevitable, yet most find that change to be both supported by some and resisted by others. The blogging teachers in Survey 2 found this to be true in their educational organizations. The main supporter of blogging teachers appears to be the principal, while the culprit for constraining the blogging teachers is clearly the difficulty of mastering the technical side of computing.

Supports for Blogging. Teachers felt that the principal assisted them greatly in implementing this new form of instruction (Table 4.3). Teachers also felt continuous encouragement because the site administrator conveyed “openness to risk taking in the interest of innovation” (Teacher 42, Survey 2-Q5). One principal actually used the
writings from the blog as part of the faculty meetings to engage conversation. Another principal highlighted the teacher’s blog in the monthly newsletters sent home to all school families. Still another felt the blog served a purpose toward a stated goal of creating a paperless workplace. One principal even commented on how easy it was to observe the teacher’s instruction via the blog. The positive attitude of the principals seems to be best summed up by one, when asked by the teacher for permission to start a blog, the principal’s response was simply “make it happen” (Teacher 43, Survey 2-Q5).

Table 4.3: What and who have supported your use of a blog for instruction?

<table>
<thead>
<tr>
<th>Response Choices</th>
<th>Response Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>31%</td>
</tr>
<tr>
<td>Individual Effort</td>
<td>15%</td>
</tr>
<tr>
<td>Technical Personnel</td>
<td>15%</td>
</tr>
<tr>
<td>Fellow Bloggers</td>
<td>15%</td>
</tr>
<tr>
<td>Students &amp; Parents</td>
<td>14%</td>
</tr>
<tr>
<td>District Office</td>
<td>8%</td>
</tr>
<tr>
<td>University Training</td>
<td>3%</td>
</tr>
</tbody>
</table>

Participant responses for support of blogging became mixed after noting the principal’s part. Teachers felt strongly that, because of the newness of the technology, their own individual effort was their main support. This “single-handed effort”
(Teacher 49, Survey 2-Q6) was buoyed by fellow bloggers through a growing network that has been shaped by the blogging teachers via blogging. Other edubloggers from around the world came together in virtual spaces to discuss the issues and encourage one another. This idea of being part of the blogosphere seemed important to teachers and something they should do before beginning to blogs in the classroom. Most used trial and error, selecting different online blog software, before settling on their current choice.

Equally as important as blogosphere networking and self-reliance to the blogging teachers were the encouraging words of the students and parents. Students enjoyed the online work and parents enjoyed the convenience of viewing that work online from home or work. Even though some parents did not care for the extra online homework, others went out of their way to be virtual classroom helpers by checking student postings and offering suggestions on grammar, punctuation, and content. These “Writing Coaches” (Teacher 19, Survey 2-Q5) collaborate online with the students’ postings via the blog. Both parents and students enjoy the immediacy of assignment postings, links to online sites that will assist with learning, and the continuous conversation with the teacher.

Last but not least on the list of blogging supporters, the district and school site technical staff were rated equal by respondents in their assistance to the blogging teacher. Some of the teachers held dual roles of classroom teacher and technology specialist for the school. Others used the term tech to refer both to a technical or technology specialist as well as the school media specialist, more commonly known as
the librarian. Some teachers were lucky enough to have both a school tech and a
district tech, while others relied on the technology committee made up of site peers.
Techs were sometimes supportive in finding additional computers for the students to
use and then training the students and the teacher on the proper implementation of the
blog. Some techs have expressed a distrust of the blog because they are not in control
of the postings and student behavior as they are with e-mail or listserves.

Constraints for Blogging. The technical staff rated low (15%) on the list for
teachers as support for classroom blogs. Because of that rating, it was not a surprise to
find technical difficulties were listed as the number one constraint by respondents
(Table 4.4). School districts attempt to block student access to parts of the Internet, the
intranet workings of the school or district, and student information systems. This
filtering system deters students from gaining access to harmful or private information.
It also can eliminate or severely restrict access to blogging. Teachers become
frustrated over the continual blocking of their site for viewing by others within the
school system or even themselves. Students place links, pictures, video, or podcasts
within their postings and the filtering system blocks those attempts even though the
content is teacher approved for instructional purposes. Even the word “blog” is
blocked in some cases. It is unknown whether the technology specialists are simply
unacquainted with current prevention methods or if the software used for filtering is
unable to distinguish proper materials for posting. One teacher wrote that, “they
[techs] have been somewhat resistant to the transparency inherent in blogging, but
predominantly supportive” (Teacher 42, Survey 2-Q6).
Table 4.4: *What and who have constrained your use of a blog for instruction?*

<table>
<thead>
<tr>
<th>Response Choices</th>
<th>Response Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Reasons</td>
<td>35%</td>
</tr>
<tr>
<td>Nothing</td>
<td>21%</td>
</tr>
<tr>
<td>Time</td>
<td>17%</td>
</tr>
<tr>
<td>District Office</td>
<td>14%</td>
</tr>
<tr>
<td>Students &amp; Parents</td>
<td>10%</td>
</tr>
<tr>
<td>Other Teachers</td>
<td>3%</td>
</tr>
<tr>
<td>Technical Personnel</td>
<td>0%</td>
</tr>
<tr>
<td>Principal</td>
<td>0%</td>
</tr>
</tbody>
</table>

Issues over the posting of private materials were a concern for some districts. Students using their real name caused some administrators to shut the blogs down for a time before the legal concerns could be investigated and a decision made. A few parents have made their concerns over privacy known to the teacher and to the administration, furthering the constraint toward blogging. Some schools have circumvented this concern by making the blog private or a form of intranet, available only to those who have password access.

Software and hardware are also technical reasons that constrain blogging teachers. Computer access for all students anytime and anywhere is still years away.
for most schools. Teachers are frustrated when they cannot get all students access to a computer or Internet connection even at school, much less broadband access when they go home. Blog software still has improvements to make in the opinion of many teacher respondents. Some teachers will try several different software brands before settling on one type they feel will fit their classroom and school technical support.

Two software blog packages that have been mentioned favorably by many respondents are Blogger (http://www.blogger.com/home) from Google and Class Blogmeister (http://classblogmeister.com/), from David Warlick; both are free classroom blogging tools.

The time it takes to try different blogging tools, fight with technical issues, and obtain additional computers for students is another primary constraint to classroom blogging. One teacher summed it up by saying, “Time. Making a major change like this is hard without the time to do it” (Teacher 16, Survey 2-Q6). Teachers are generally burdened with too little time to be innovative in their instruction without taking on another task. Frustrated respondents found little solace from fellow bloggers when time constraints became burdensome. One teacher tried learning the popular blog software Wordpress.com (http://wordpress.com/) during one semester and just gave up altogether the next semester because of the time it took to master the software.

Time can also be an enemy within the school’s master schedule. Computer labs are popular places to bring the entire class and allow students to work. But schools are on tight schedules; it is not easy to schedule enough time for students to feel they have made adequate progress on the assignment. These labs do not always have all
computers working properly with respondents noting the lack of electricity, virus-plagued machines, and slow Internet speeds as their chief complaints. Even the length of the year is not enough for some teachers to teach the theory and baseline instruction while still allowing time for the students to complete the assigned project.

The district office, students, and parents are also constraints to the instructional blogging. These two categories are the only responses that duplicate the responses given for support of blogging in the classroom (Figure 4.3). The district office became a favorite area to lump all of the technical and legal issues into a single place. Parents were generally concerned with student safety or privacy issues, placing the act of blogging into the same category as MySpace.com, a popular social networking site sometimes unpopular with parents because of account about child abuse, explicit sexual pictures and words, and a parent’s ignorance of the site itself. Students were also guilty of deterring blogging by abusing their time on the computers (streaming podcasts) and as one teacher states, “my student's lack of experience with using computers and the Internet as tools as opposed to toys” (Teacher 1, Survey 2-Q6). Student apprehension with the blog technology was also listed by one teacher.
Respondents to Survey 2 alleged that really nothing constrained them to any great extent. Teachers were surprisingly candid with their perception that nothing deterred them from creating their classroom blog. “Nothing” was the second most popular constraint voiced by the respondents. Most of the teachers were quite at ease with this unique form of instruction. One teacher was succinct in saying, “absolutely nothing [constrained blogging in the classroom] – everyone was enthusiastic from my principal to the parents” (Teacher 9, Survey 2-Q6). Even when some colleagues voiced concern over whether the students were just “playing on computers,” others
gave encouragement, making the job of building and maintaining the blog easier, making it feel as if the work was “nothing.” A teacher who answered that nothing constrained the implementation of the blog summed up the worthiness of the endeavor by saying, “blogging actually has helped student work” (Teacher 7, Survey 2-Q6).

Differences in Blogging Over a Period of Time

Question 7 in Survey 2 helped to verify the findings in Survey 1 that teachers used the practice of blogging more frequently over a two year period. The results of this question showed that close to 20% of the teachers became more reliant on classroom blogging and began using computers more with their students. Teachers also felt that students became more collaborative with one another and with the teacher. Over 23% said that they employed more collaborative learning techniques in their instruction than before they practiced blogging in the classroom. A similar amount (16%) viewed their instruction as more complex, while 11% saw no change in their practice. Only 6% said they experienced increased professionalism and the same amount perceived an increase in their students’ global perspective (Table 4.5).
Table 4.5: *How are you using the blog differently today compared with when you first began to use a blog for instruction?*

<table>
<thead>
<tr>
<th>Response Choices</th>
<th>Response Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>More Collaborative Learning</td>
<td>23%</td>
</tr>
<tr>
<td>Increased Reliance on Blog</td>
<td>20%</td>
</tr>
<tr>
<td>Increased Computer Use</td>
<td>18%</td>
</tr>
<tr>
<td>More Complex Instruction</td>
<td>16%</td>
</tr>
<tr>
<td>No Change</td>
<td>11%</td>
</tr>
<tr>
<td>Increased Professionalism</td>
<td>6%</td>
</tr>
<tr>
<td>More Global Connections</td>
<td>6%</td>
</tr>
</tbody>
</table>

**Communication as a Result of Blogging**

The sub-title of Survey 2 is Student to Student to Teacher Interaction. This sub-title creates an inference to the participants that this survey would mostly be about communication. Indeed, one of the driving questions to this study intends to discover how teachers use blogs to communicate general information to students. Survey 1 provided the categories and also the sub-categories that surround this issue of communication as it relates to students communicating with other students, how they communicate with the teacher, and how the teacher communicates with the students.

Effective communication starts with the premise that communication is a two-way process. As affirmed by Hagel and Brown (2005), this push-pull of ideas, thoughts, and feelings can be achieved through some of the new technology pervading
our society—a blog being one. Survey 1 respondents provided this study with promises of stronger student relationships between both peers and teachers. They also said that there was a possibility that students could feel more motivated about their learning. They even felt that learners might expand their world by sharing their ideas with others. Survey 2 set out to discover the specifics of these promises.

The teacher respondents in Survey 2 have lofty goals for their students’ interaction with one another (Figure 4.4). They recognize that by encouraging peer interaction through blogging they will increase peer collaboration and let students expand their ideas while sharing with others. They also have the goal of fostering more positive emotions from their students about the learning experience. To a lesser degree the teachers hope to enhance their own interaction with the student in order to encourage a stronger relationship. Other answers included increasing student motivation, interacting with the global community, instigation of debate, and the valuation of another student’s work.
Figure 4.4. What are your communication goals for student to student interaction?

Student to Student Interaction

Over 92% of the teachers in Survey 2 said they encouraged student to student interaction in their blogging lessons. The reasons they encourage this interaction vary, but ultimately the teachers encourage this interaction because they believe it promotes more effective communication and therefore increased learning. While it is not a revelation that a teacher wants children to learn, it was interesting to discover in what ways they have encouraged student to student interaction through blogging.
I had an assignment where I forced the kids to review any peers' assignment and play the role of Simon or Paula from American Idol. Of course I told them to be nice. They really liked it. At first I received very basic comments, but after I didn't approve them and they had to keep going back and redoing them I began to see much deeper thought.

(Teacher 20, Survey 2-Q11)

We pull up blog entries especially daily journals on the Smartboard and proofread them. We help one another expand on their ideas, and expose ourselves to alternative viewpoints.

(Teacher 46, Survey 2-Q11)

We had difficulty getting the amount of interaction we had hoped for in Spanish. Some classes did respond back to us in Spanish, but they were lower levels of Spanish and did not challenge my students. We had hoped to hear more from students in Spanish-speaking countries.

(Teacher 42, Survey 2-Q9)

Relationships

Student to student interaction can naturally lead to stronger classroom relationships. A teacher hopes the stronger relationships will help the students to feel safer, thus creating a better climate for learning (DuFour & Eaker, 1998). Blogging seems to promote a culture of collaboration because of the very nature of communicating with someone on a continual basis. Increasing the relationship they had with the student was not one of the goals most teachers felt was a part of their
reason for blogging. Just 42% listed the category of encouraging a stronger relationship with the teacher as a classroom communication goal. Similarly, only 48% felt that blogging would be a reason for enhancing interaction with the teacher.

The teachers in Survey 2 practiced a number of collaborative activities, the most prominent being simply the act of requiring students to read and comment on another student’s blog posting.

But within my classroom, 6-8 students share 2 computers, and a natural collaboration occurs. Students are teamed up purposefully so that a greater conversation can result instead of them just "getting it done."

(Teacher 7, Survey 2-Q11)

I encourage students to read each others posts. I also ask them to discuss the blog topic with each other before forming a response.

(Teacher 10, Survey 2-Q11)

Sharing of Ideas

Blogging is a way for people of like minds to share ideas, thoughts, hopes, and dreams. By allowing students to share their ideas with one another, teachers hope to promote additional knowledge or understanding through blogging. Just over 90% of the respondents to Survey 2 had the goal of increasing peer collaboration and increasing their students’ opportunities to share ideas with one another. This sharing of ideas was not limited to the local classroom. Students were also encouraged in some cases to communicate with other students in different classrooms across the world.
Upon posting student written fiction, others were to read and respond to their work. Many students went beyond the "typo" correction to suggesting ideas for content and writing more in depth.

(Teacher 19, Survey 2-Q11)

Not only do I hope that my students can interact with other teenagers from around the world and compare and contrast cultural lifestyles, but I hope that through their interaction on the blog, they will learn to be better communicators in the target language.

(Teacher 43, Survey 2-Q12)

*Positive Feelings toward Learning*

Another way in which cooperative learning contributes to high levels of motivation is in the way that it promotes good academic attitudes among group members. Slavin (1990) cites several studies in which students in cooperative-learning groups felt more strongly than did other students that their collaborative peers wanted them to come to school every day and work hard in class. Edubloggers are achieving this same type of positive feeling toward learning by allowing the students the time to write and be participative with the rest of the class. This activity appears to promote learning and makes the student feel happy about their surroundings whether they are a classmate sitting in the seat next to them or “peer connections with other classrooms around the country & world” (Teacher 44, Survey 2-Q11).

At times I have required students to comment on another student's posting.

Now they do it automatically.
Students have really enjoyed responding to other student's ideas. For example, the students in Israel made PowerPoints concerning ideas taken from Romeo and Juliet. My students were intensely interested in viewing these PowerPoints and had enormous fun in making responses to these. One of the PowerPoints had an open ending and my students wrote different endings. My students enjoyed reading all the different endings from their classmates and so did the students living in Israel. Some students also enjoy seeing their work in a public domain. They seem to have pride showing off their work.

(Teacher 50, Survey 2-Q11)

**Learning as a Result of Blogging**

As previously discussed, the responses from Survey 1 showed that the perceived results of blogging in the classroom led to three general classifications.

- Communication as a Result of Blogging
- Learning as a Result of Blogging
- Instructional Changes as a Result of Blogging

The categories and their related sub-categories (Table 4.5) created the foundation for the participant questions in Survey 2. I will now summarize responses from Survey 2 participants regarding the use of blogs by learners in the classroom.

The greatest majority of teachers believe that they encourage student to student interaction because it will increase a student’s understanding of the subject matter, that it will help students to make sense of what they are learning, and that it will assist the
students to develop their own understanding of the subject matter. Perhaps most interesting is that teachers feel strongly that by encouraging this collaboration between students, students will gain a deeper understanding of the subject (Figure 4.5).

![Chart showing reasons for student to student interaction]

**Figure 4.5.** Why do you encourage student to student interaction?

More Collaborative Learning

The respondents believe that students benefit from the use of blogging in the classroom because of the perceived increase in collaborative learning. A teacher who had previously spent time only with posting content now spends more time on the quality of that content and the student to student interaction with that content. This
teacher said, “I encourage and require them to read and comment on fellow students’ blogs [and I believe] commenting and collaboration is at the heart of the blogging experience” (Teacher 2, Survey 2-Q7). This collaboration occurs not only with the teacher and fellow students, but also with other students in the community and across the globe. Consider the foreign language teacher who uses the blog for writing exercises in the second language. Combining the written word with audioblogging (a form of podcasting), the teacher and students then reach out to students in the country whose language they are studying and communicate with them in both languages.

Teachers stated in Question 4 they originally began to blog in order to promote writing and as a way to motivate the students to learn. According to responses from Question 7, most of the teachers are now using the blog to promote student collaboration. Some report they have increased their reliance on the blog as a communication and instructional tool. Over 92% now encourage blogging as an interactive, continuous communication between teacher and student and student to student. About 78% of the teachers perceive this student to student interaction has increased student understanding of subject material and caused the students to have deeper thoughts on the subject matter.

Teachers think this “tool to fuel interaction between students and their classmates” (Teacher 10, Survey 2-Q7) creates more student accountability, giving students freedom to use blogs for project based assignments. Some teachers even require students to post all assignments as a way of increased accountability and record keeping. It has become a starting point for lessons, a communication device for
parent interaction, and a critiquing area for student to student and/or class to class interaction. Rather than posting work only for classroom assignments, students are creating work together specifically for publication on blogs. A good summary of this collaborative spirit comes from one teacher who said, “I love the opportunity to provide a different place for students to write. Some want to comment on their classmates’ blogs and some want to comment on other classroom blogs. Most enjoy doing some writing for their own blog” (Teacher 44, Survey 2-Q7).

The data collection methods in both surveys allowed for some answers in multiple choice form and some answers in essay form. The open-ended responses gathered in Survey 2 did not provide evidence of the multiple choice responses related to student learning through peer interaction in Questions 8-10, which asked teachers to explain if and why they encouraged student to student interaction. Teachers responded they were encouraging student to student interaction because of the four types of learning listed above. Question 11 asked teachers to list some ways they have encouraged student to student interaction. Almost 40% of the respondents used the blogs for simply reading other student work, commenting on other student work, or proofreading other student work. The greater number of those responses showed evidence of teachers simply requiring the blogs be read and commented on to some extent. Blogs showing evidence of increased understanding or deeper student thought were evident in less than 10% of the open-ended answers in Question 11.
Instructional Changes as a Result of Blogging

It appears that many changes occurred with the instructional practices of these blogging teachers (Figure 4.6). According to the Survey 2 respondents, 89% of them perceived their instructional style changed as a result of blogging. Although the issue of increased time on the computer was not specifically addressed by respondents, many noted in the essay answers for both surveys and the interviews that they increased the time they spent using and preparing lessons with the blog. This, of course, leads to the conclusion that teachers who blog as a form of instruction are spending more time on computing devices than ever before. The type of computer teachers used, including operating system, laptop or desktop, and the place they used it the most (home or school), were not discussed in the responses. These are topics for another study, although the type of operating system one uses is not important when your primary use is via a broadband Internet connection.
Figure 4.6. What changes to your instructional practice have you observed as a result of blogging?

*Increased Time on the Computer*

The commitment to blogging has naturally translated to increased use of time on a computer and, of course, the Internet. While the problems of home computer access and broadband equity still pervade their thoughts, the teachers seem to be increasing their class computer time the longer they use blogging as an instructional practice. All forms of data collection, except document analysis verify this perception.
My students are able to communicate through discussion forums. They can view blog pages everyday and make responses. Before, I had to sign up for our computer lab to reserve a day and I would be lucky to get my students on a computer once a week. Usually my students could only access a computer a couple times a month. Now it is everyday.

(Teacher 1, Survey 2-Q7)

*Increased Reliance on Blogs*

Based on the data, it appears that blogging more frequently creates changes to classroom procedures, instructional techniques, and delivery methods. This change appears to influence teachers profoundly. Comments such as, “I am teaching completely differently now,” or “blogging has created the single largest increase in the quality of my teaching,” were provided by the respondents. The blog appears to have almost an addictive nature to it as teachers rely on it for much more than they ever planned.

The blog started as a way of posting a short note about that day’s lesson. Nowadays, I use it more to post links to reinforce the learning objectives of a lesson, provide complete solutions to homework exercises and advise on upcoming submission deadlines.

(Teacher 37, Survey 2-Q7)

*More Complex Instruction*

The goal of Bloom's Taxonomy (Bloom, 1956) is to motivate educators to focus on all three domains of learning, creating a more holistic form of education, and
thereby assisting student learning by achieving higher levels of cognition. Blogging instructors believe they are more “focused” on lesson design as they use the blog for instruction.

The first year I did blogging with students we had a class blog for posting essays and commenting, the second year I did memoirs on personal blogs and poetry on personal blogs, and this year my students are blogging about any safe and authentic topic at least once a week. I also maintain a lesson plan blog, a reflective teaching blog, and a podcast blog.

(Teacher 22, Survey 2-Q7)

Complexity Leads to Constructivism

This focused instruction appears to have allowed teachers to take hold of constructivist thinking. Blogging permits individuals to construct new knowledge from their experiences and lends itself well to the idea that students should take control of their learning and that teachers should be the facilitators of learning.

There is more teacher and student ownership. The first few blogs, I set up, and was the moderator for comments. Now, the individual classroom teachers are becoming the moderators and I am available for assistance when needed.

(Teacher 41, Survey 2-Q7)

The complexity of instruction can be viewed in a different way, however. Previously I discussed how the issue of time can disrupt the flow of personal and professional lives. Blog management can also create issues of time and complexity as teachers struggle to keep up with student sophistication and software intricacies.
Managing 28 to 35 blog postings or separate blogs per classroom can be a struggle unique to any other educational activity. Add to that the power of a global perspective with the risk of unlimited postings and you get the possibility of being overwhelmed. As one teacher commented, “originally only I posted entries and kids would comment on it. Now they each have their own blogs and comment on mine, theirs, and other students from around the country & world (Teacher 7, Survey 2-Q7).”

Some edubloggers report they have a difficult time knowing when to stop improving or working on their blog. They said that adding podcasts, new links to Internet information, and other software (VoodooPad, Flickr, YouTube, Global SchoolNet) are valuable additions to the class blog and contribute to the learning. This issue of constantly finding ways to change could be one of the reasons teachers complain of not having enough time for planning, preparation, and actual instruction.

**Summary of Second Survey**

The most revealing question in Survey 2 asked the participants to share the ways their instructional practices have changed as a result of blogging. The list included practices that were most commonly discussed by the respondents in Survey 1. Some of the practices were basic such as giving more writing assignments, while others were designed to reflect levels of Bloom’s Taxonomy (Bloom, 1956). Participants were asked to rank the practices they felt most supported student learning from slightly to significantly.

However, in the second part of the question where respondents had the opportunity to rank in order their choices, they were given the alternate choice of “not
applicable.” A high percentage of respondents used this choice for the lower competency skills such as proofreading. Apparently they felt that they had gone beyond believing that the common uses of a blog such as a writing assignment, assessment devices, and a way to proofread another student’s work were efficient ways for children to learn. Instead they chose to give more time to students to use the blog. They chose to allow themselves more time to instruct using the blog. Finally, they chose to use their time updating and posting in the blog as well as allowing students to find other sources of information out on the Internet (Table 4.6).

Table 4.6: Top Ways Edubloggers Support Student Learning

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Increase the amount of time spent using blogging as an instructional practice</td>
</tr>
<tr>
<td>2.</td>
<td>Increase the frequency of updating the blog</td>
</tr>
<tr>
<td>3.</td>
<td>Use the Internet as a source of information more frequently</td>
</tr>
<tr>
<td>4.</td>
<td>Use resources from outside the classroom more frequently</td>
</tr>
</tbody>
</table>

I found it interesting that the respondents chose to use the “not applicable” button rather than attempt to rank the common uses of a blog as an instructional practice. This type of attitude toward learning, toward using a blog, or perhaps just the attitude of one who is on the cutting edge of change seems to be a prevalent spirit among all the participants. The idea that they are searching for better ways to serve their students and may have stumbled upon a great idea with blogging makes them
almost fanatical about their practice and this new way of instruction. Choosing the not applicable may just be the typical response from someone who has gone beyond the typical classroom instruction. It may be typical of someone who believes they have a higher professional belief. It may be typical of the edublogger.

Overview of the Virtual Interviews

Up to this point in the research, the use of blogging by teachers with their students seems to be perceived by teachers to be a viable mode of communication. They seem to believe it has the potential to increase collaboration between the teacher and the student and among the class as a whole. Students involved in these classrooms seem to benefit through peer-to-peer learning, an appreciation of intellectual property, a diversified cultural expression, developing modern workplace skills, and an empowered concept of citizenship both locally and globally as theorized by Jenkins and others (2006). The final phase of research, virtual interviews and document analysis, will be needed to deepen and elaborate on the teacher survey responses and to provide more concrete examples of the ways in which teachers use blogs.

Virtual Interview Findings

The 12 respondents to the interview provided this study with a deeper look inside the practice of blogging in the classroom. The responses show the newness of this practice, with all respondents using a blog with students less than two years. The questions for this phase of the study (Appendix J) are intended to start the conversation so that future research can build upon this fledgling practice. Some responses have been edited to secure the privacy of the participant.
Overall the responses confirm many of the survey results and at the same time they provide insights into the hows and whys of blogging that multiple choice responses cannot. The interview responses help to more fully answer this study’s research questions of how teachers are using blogs to enhance communication and instruction and what the implications of using blogs are for teacher practices.

Several themes emerged from analyzing the interview responses: (a) what excites edubloggers about teaching and blogging, (b) how blogs change student roles, (c) how blogs change a teacher’s communication and instructional roles, (d) how blogs affect students academically, (e) how teachers address information flow issues and ethical concerns, and (f) what these teachers recommend to colleagues starting to blog.

*What Excites Edubloggers about Teaching and Blogging*

The survey data indicated that edubloggers are finding ways to use blogs to enrich their classrooms. The interviews provided a way to probe and explore how these bloggers view teaching and what excites them about blogging. The responses overall reflect enthusiasm about teaching and blogging. Typical responses included such statements as "My favorite thing about teaching is observing the light go on in young minds; or as my Schwabian nanny used to say, the fifty cent piece went down in the soda machine" (Teacher 2, Interview, 1-Q1). Another teacher said he was inspired with "the room's pulsating energy, when a student learns something new" (Teacher 12, Interview 1-Q1). A third teacher suggested, "I love to learn and to build insight, so I also love constructing opportunities for students to do the same" (Teacher 9, Interview 1-Q1).
These teachers seemed to appreciate blogging as an approach "to make the light go on" and see the “50 cent piece drop.” Teachers specifically discussed the use of the blog as a tool for introducing the students to a larger, more global world of learners and how they could interact with them as well as the community at large.

I like how it puts the world at the students' fingertips. When they realize that what they are writing has the potential of being read and responded to by anyone from almost anywhere in the world, they tend to put a lot more effort into what they say, and what they think before they say it.

(Teacher 11, Interview 1-Q2)

Blogging motivates students to complete their writing assignment to the best of their ability because other people, besides the teacher, will see their work. Also, most students enjoy sharing their ideas and seeing their writing published on a public blog.

(Teacher 8, Interview 1-Q2)

Symbolically my classroom walls came down to allow student voices from across the sea to participate in classroom activities. This expanded my students learning and gave deeper meanings to the lessons. They were motivated and could see the connections of what they were learning and how this applies in today's world. This is indeed exciting.

(Teacher 8, Interview 1-Q3)

The big breakthrough of blogging is allowing ideas to be linked together. When my students were only writing for me or for themselves, there was no
possibility for them to link to one another and build off of one another. When most people think of blogging, they think about commenting, but I think that the real power is in the “building comment.” This is a term that my class and I came up with (I think) that describes when you have seen something on someone else’s blog that inspires you to write your own blog post about the subject and then link to the original post. Your building comment is logged as a comment on the original blog, but you have added something to your own blog as well. I love this process because it allows students to see the progression of ideas. One of my favorite moments of the year was when a student was explaining to me about her building comment on a building comment on a building comment on a blog post [sic]. The conversation had deepened to the point of analysis of the very words they were using. I just don’t think that would happen with sticky notes and a gallery walk.

(Teacher 12, Interview 1-Q2)

*Extending and Deepening the Educational Process.* Teachers also seemed to like blogging because it helps them get their job done in a more efficient, yet comprehensive manner. They indicated that the act of blogging can simplify their educational process while assisting the students to find deeper, more thought provoking ideas. They also showed their awareness of student extended learning. Without mentioning constructivism, some made reference to students working on their own, searching for answers with the teacher as a guide, rather than a leader. These values of blogging were expressed by the teachers in a variety of ways.
I would say my instructional practice has really only changed on the surface level where you see activity. My purpose and approach is consistent – that I want students to write what they genuinely are interested in writing, and I want them to use writing to think and interact with works of literature and with classmates. The blogs have given me a fitting medium to pursue those goals, and they have changed the activities to allow me to put students’ writing back into the eyes of other students (reading each other’s blogs, seeing what other students are doing – I couldn’t do that with typed assignments or with notebooks).

(Teacher 9, Interview 1-Q3)

My instructional practice has changed tremendously since using blogs. I constantly think about ways in which I can further incorporate them into the instruction. It is a truly spectacular way to teach kids to interact with others appropriately and to use critical thinking in their responses.

(Teacher 10, Interview 1-Q3)

I know that my instructional practice has changed a lot. It has become more project-based and student-centered. In addition, because it is a work in progress, the students are learning more asynchronously. They are not limited to classroom time to work on it [blog]. They can work during their study hall, before or after school in the computer lab, or at home if they have a computer with Internet access.

(Teacher 11, Interview 1-Q3)
My instructional practice has been transformed by blogging. Before I started blogging within my classroom, I kept all of my lesson plans in a lesson plan notebook. Although I liked the tactile feeling of writing out an agenda with pen and paper (I write a lot of notes and draw pictures to myself, etc.), the ability to search through my entire “lesson catalogue” for key words allows me to create a much greater sense of continuity within all of my lessons. I can come back to something that I did six months ago and link to that lesson on our blog…

(Teacher 12, Interview 1-Q3)

I like that it allows my students to express their confusion about certain parts of a book. They are able to ask questions that they might have been afraid to ask in class. Blogging also allows interaction between all of my reading students. It provides students with a chance to communicate their thoughts and feelings about a book without having to worry about what others might think of them (they are anonymous on the blog). It provides practical assessment and instruction during my class time. The students are also willing to participate, because they are on the computer and can type anything that pops into their head. More importantly, it is meaningful to the students in a way that a classroom discussion might not be.

(Teacher 1, Interview 1-Q2)

*Reflective Professional Development.* An unexpected yet consistent response of why these teachers enjoy blogging is teachers felt it contributed to their own growth. The teachers seemed to use the blog to grow in a personal and professional
manner. Some of the teachers wrote about their own personal growth as the power of writing in a blog gave them added personal and professional strength. In other words, it helped their own light to go on as they used the blog as their own electronic diary. Various teachers reflected in their responses how blogging was benefiting them professionally and thus was a motivator for them to use it with students.

Blogging provides me a way to express my thoughts and concerns about education. It makes me reflect and write. The writing part is what I never used to do. I was never drawn to journaling but blogging is much more conducive to my lifestyle. It also has let me communicate with people from across the globe which is incredible!

(Teacher 6, Interview 1-Q2)

Blogging helps me be more reflective of my teaching. I like the idea that other teachers, parents, and community members can access our daily goings-on just by going to my site. It excites me to think that anyone in the world can see what we’re up to in my classroom – give feedback, ideas, comments, accolades, criticisms, etc.

(Teacher 5, Interview 1-Q2)

I get to receive, disseminate, and share information; … I greatly enjoy the massive community of learners … created by the blogosphere.

(Teacher 3, Interview 1-Q2)
That communication element and the relationship to writing make it a wonderful tool for me as an educator – its natural genre (reflective, informal, interactive) lends itself to educational pursuits.

(Teacher 9, Interview 1-Q2)

I maintain a reflective teacher blog that is constantly responding to what the students bring up in class. I show them how my blog becomes an extension of my thinking about literature (including new literacy) and life. I also show them how to write in their blogs (on the smart board) and let them explore tutorials that have been created by other teachers.

(Teacher 12 Interview 1-Q10)

*Modeling the Practice of Blogging.* This idea of the teacher blogging not only with the students, but also as a way of developing professionally led to a question of how they modeled the behavior of blogging to their students. The responses to this question were split between traditional pre-instruction methods and simply allowing the students to visit the teacher’s blog or other class blogs for an example. The traditionalists gave the students samples of the expected responses, showing the students exactly what the teacher expected. Some first year teachers grew professionally from their experience, learning with their students the power of personalized writing in an electronic diary.

I demonstrate how they would go about logging in to the blog and posting both a discussion and a response. I also give every student a directions sheet, so that they can refresh themselves in case they forget.
I always give a full sample of what I expect if it is something new for them. For example, the first assignment was a biography, so I did one of myself to share with them. When we did podcasting for the first time, I recorded my own and played it for the class. When we included a picture for the first time, I did a sample for them.

We all kind of learned together. It was a bit haphazard, but it worked. As I mentioned, I had my most interested students as guinea pigs, and we went headfirst into it all together. Now that I have a few months’ experience, I plan to model blogging by showing work samples from this year. I also will show some of my reflective posts (such as my reflections on professional development conferences) so students get a feel for what blogging is all about.

The non-traditional group guided the students through the technical side of blogging, but was careful about prejudicing their writing style or blogging techniques. They applied rules to blogging just as they would have established classroom rules of behavior and talked with the students about the consequences of inappropriate posts. One edublogger shared their own “reflective blog” giving the students insight into an area that is normally not allowed for them to see. This sharing of thoughts could attribute to a stronger relationship with the students and the teacher, causing the students to be more open and willing to share their own experiences.
I keep a personal blog about using games in education that all students know I keep and they read it from time to time and comment to me about it.

(Teacher 6 Interview 1-Q10)

I show them my blog from the previous year. I also have a few hand outs that I gathered through my inservice as a result of my subscription to the Class BlogMeister listserv. One is the Blogger's Contract [(Warlick, 2005, p. 168)]. I make sure that students understand how blogging is to be used and they make an agreement at the beginning of the year to abide by it. In addition, they receive a handout which explains step by step how to set up their accounts and post and respond to comments.

(Teacher 11 Interview 1-Q10)

Each of the groups modeled their blogging expectations for the students in a way that allowed the students to begin blogging on their own. This modeling seemed to be more effective and personally satisfying when the teacher used their own blog as the example. Creating and maintaining a blog can be a satisfying yet time consuming endeavor, but the benefit to student understanding and teacher enthusiasm for the blogging practice seems to be worthwhile. Thus what the teachers in this study seem to be indicating is that blogging as an instructional practice is exciting and contributes to their personal motivation and eagerness for continuing to maintain this practice of blogging. This enthusiasm is demonstrated by the survey data that suggest that over a two year period these teachers are increasing their time on blogging and their use of computer based learning.
Increased Use of Blogging Over Time. The results of the first survey revealed that teachers blogging as an instructional practice over a length of time update their blog and post to it more frequently than they did when they first began (Figure 4.1). Over 60% of new bloggers updated their blog only weekly, while two year veteran edubloggers changed their habits and began posting new information daily. No teacher posted just monthly after two years and 60% of those teachers posted to their blog daily.

With those results, it would seem likely that most of the interviewees would respond their use of the blog increased. Indeed, all but one replied they would be increasing the use of the blog either as a tool for student practice or as a communication device for the community. The one teacher who hesitated toward an increase, responded simply that “I plan to continue using it as I did this past year but reduce the size of each assignment” (Teacher 11 Interview 1-Q7). This teacher already appears to be using the blog to a great extent in her classroom. It would seem the data found in Survey 1 contain some veracity.

Next year I plan to use blogging more. I will not use it with every unit, because I do not want the students to become bored with it, but I think as long as I mix up our uses for blogging, the interest level will always be there. There are endless possibilities for incorporating blogging in the classroom.

(Teacher 1 Interview 1-Q7)
…access to technology is a major factor in the frequency of blogging in my classroom. I’ve been advocating for more access to the technology and we’ve been getting it.

(Teacher 3 Interview 1-Q7)

I am increasing in the use of blogs. I started with one classroom blog in fall and now have 2 classroom blogs (one for me personally as a teacher and one for the class as a group), plus I have had a great surge of student interest in this last quarter of the year. I hope next year we can start where we left off this spring, and we can continue to grow in the use of all web 2.0 tools.

(Teacher 5 Interview 1-Q7)

…I have been involved in a pilot program using a class set of online laptops. I will continue with these laptops at the beginning of this coming school year so I can have my students online every single day. This will dramatically change how I teach and I can have my students become extremely active on blog pages.

(Teacher 8 Interview 1-Q7)

The first year I only used them [blogs] for essay writing. The second year I did units with memoir and poetry. I also maintain a master blog to house all of the student blogs and to provide assignment details. This past year, I maintained a lesson planning blog, a reflective teacher blog, approximately 120 student blogs, a wiki resource for the blogs, and a place for other teachers to come and learn about blogging in the classroom [URL addresses omitted for privacy].
Prepared to Spend Extra Time. Teacher excitement about blogging is also substantiated in the data regarding willingness to spend the time needed to learn how to blog. New software can be difficult and time consuming to learn. Blogging is not only new software, but the teacher must also learn how to incorporate and integrate it into existing instructional practices.

No one cares to take on another task when it seems there is not enough time in the day for the tasks you are already assigned. Teacher unions bargain for preparatory time for their members at every opportunity. The hope of technology is for the tools to be time-savers. However, it is common knowledge among those who use computers that the learning curve on technological tools is steep and one must plan on spending more time to learn the intricacies of the device before one can gain the time back. The edubloggers seem to accept this fact and are perhaps minimizing it to some extent in order to justify the time they spent on the learning curve. All seem to feel that in the end, after learning the software and developing a system, they spend no more time than they did before blogging with students.

I can monitor the classroom discussion on the blog, while the students are still blogging. It takes a little longer for me to read everyone's responses, but the important thing is that everyone responds, where in a classroom discussion, everyone might not want to respond or feel comfortable. That is what planning time is for right? I usually spend an extra 30 minutes per class or almost 2
hours responding to students' blogs. I find this to be beneficial to both myself (I can tell if they are reading) and to the student (they get teacher feedback).

   (Teacher 1 Interview 1-Q9)

I find it easier to monitor a blog because I don’t get the negative attitudes and the interruptions typical of whole class discussions. Blogging helps the kids to learn how to interact appropriately with each other. They feel safe speaking their thoughts and responding to other's thoughts. The most time consuming is reading the blogs to see if they’re appropriate for the Internet and others to see.

   (Teacher 10 Interview 1-Q9)

It takes about the same amount of time to monitor a blog, maybe a little bit more. The information that I get from monitoring the blog is much more meaningful that the information that I get from monitoring a classroom discussion. First of all, in our blogs, everyone participates an equal amount. That never happens in a normal class discussion. Also, I’m able to critique their submissions on an individual level. That also never happens in a whole-class discussion.

   (Teacher 3 Interview 1-Q9)

It doesn't seem to take much extra time to teach the students the process to blog as any other type of special activity. Most students are computer savvy and pick up computer lessons pretty quickly. It does take me a lot longer on my own time to prepare new types of lessons using the Internet and new blog systems. I feel all good teachers need to continually improve their lessons and
keep updated with what is going on in the world while using technology. I justify the added time I take as part of what I should be doing anyway and the enormous benefits of seeing students succeed is worth every extra minute spent in preparing valuable lessons.

(Teacher 8 Interview 1-Q9)

However, one teacher actually took offense to the idea of comparing oral discussions with blog discussions, saying the question seemed to imply a falsely created competition between the two types of discussions.

I won’t answer this question as it’s stated, because it sets up a competition that I don’t feel. I have never used blogs to replace what would have been a class discussion. I do use blogs to replace reflective writing assignments, and with the interactive function, I have been able to expand that reflection into interaction.

(Teacher 9 Interview 1-Q9)

Although the question was not intended to invoke the thought of competition to written and oral discussions, it does create an interesting dilemma for the edublogger. How much time does one devote to the written discussion versus the oral discussion? What is the proper balance even if the majority of students prefer one over the other? At what point does the teacher as diagnostician for the class decide that enough is enough and the students must participate in a different activity even though learning is occurring and the students are motivated? This is perhaps the same dilemma parents have with their children’s obsession with video games or instant
messaging with friends; when is the activity harmful to the child or when do you decide a balance of activities would be more healthful? I will leave the answers to these questions for another researcher to uncover.

Some teachers have discovered a smarter way to manage their blog observation time. By employing the use of software that automatically and continuously checks specific Internet addresses for updated material, topical information of your choice, or exact words or phrases that one might be interested to see. RSS (Really Simple Syndication) documents contain either a summary of content from an associated web site or the full text. RSS makes it possible for anyone to maintain their favorite websites or blogs automatically.

…I also have set up a few searches in my feed reader to look for inappropriate words so that it will send me a message anytime someone is swearing or talking about something sexual/inappropriate. We also do most of our discussions on the discussion tab of a wiki now. I can monitor that quite easily, and I have the ability to delete any inappropriate comments. As for the added time, I really don't find that reading my students work is anything that I wasn't doing already. Checking an RSS feed that is already prepared to search for inappropriate words takes a few seconds, so I don't feel like I have to justify it too much.

(Teacher 12 Interview 1-Q9)

Ah, time. This is the beauty of it! I monitor all, including grading homework, in my RSS Reader. I am anxious to try live blogging next year; that would be
the ultimate! There is no expense in time, I actually save time. I get a lot more
done in less time – just don't tell the admin as they already have me doing two
things (teacher and librarian).

(Teacher 2 Interview 1-Q9)

Motivational Tool. To help students be successful, instructors use a variety of
instructional tools to differentiate and accommodate the learning styles of all students.
This must all be done in a manner that is highly motivating to children in order to
spark their interest. Blogging appears to be one of the tools that could be used to assist
the teacher with this task. Many respondents commented on an increase in student
motivation for learning as a way to prove the blog had been successful with
academically.

I haven't done any statistical comparisons but I would say from observation my
students are more motivated to complete their lessons to the best of their
abilities since other people will see their work. It seems their writing skills
have improved.

(Teacher 8 Interview 1-Q8)

They seem to be more motivated to do their best when they know they are
publishing for a worldwide audience. I don't think that blogging itself has
taught them more...it has just seemed to have an" awakening factor" that
simple classroom writing or speaking activities do not.

(Teacher 11 Interview 1-Q8)
Blogging Changes the Student Role

There are many parts or roles that any person plays in any given situation; so it is with the roles of a student. In order for any instructional practice to be effective, it must consider the whole student and the many roles that student must play in order to be successful. A student will have many roles in the classroom that will shape their learning in both a positive and a negative way.

One important student role is that of interacting with the physical world and with other people to discover concepts and apply skills. Students can then reflect upon their discoveries as they observe and apply the thinking processes used by practitioners such as the teacher. Students can also become teachers by assimilating their learning. By changing their role in the classroom, they become producers of knowledge, capable of making significant contributions as they progress (Jones et al., 1994).

I have previously discussed several different roles a student may take such as being collaborative with student to student interaction, learning through a constructivist methodology by taking charge of their own learning via project based lessons, or by having good relationships with their teacher and with others by being communicative through the sharing of ideas. These positive relationships will also create positive feelings toward learning, making the student want to make other connections with learning outside the classroom.

Teachers have shown us many ways that a blog enhances learning. As stated previously, 92% of the teachers in Survey 2 said they encouraged student to student
interaction because they believe it motivates students to learn. Perhaps the strongest argument for blogging in the classroom is its effectiveness at increasing a student’s motivation toward learning. However, this study does not consider any quantitative data concerning student learning and only views the teachers’ perceptions of student achievement as blogging in the classroom influences communication and instruction. That being said, the teachers interviewed seem to believe in the power of blogging as a motivational device to influence student academic achievement.

Motivational Writing Tool. The idea that blogging in the classroom is merely another way of motivating students to improve their writing has merit with all of the respondents. This use of technology does appear to be highly motivating to this generation of children and worthwhile as a communication device and a vehicle to promote writing. However, half of the respondents talked about the added benefit of students gaining a greater understanding and appreciation for the cultures of other students across the globe.

Blogging is beneficial for everyone involved. I am thinking of even more ways to include blogging in my classroom next year. I plan to connect with a teacher in another country and have my students read a book that is popular in their country and respond to it and visa versa. I think this will be a great way to help our students understand cultures around the world and for them to see that reading is important.

(Teacher 1 Interview 1-Q14)
Motivation Toward Learning. The other half of the respondents wrote how blogging creates greater student motivation toward learning. The students appear to enjoy the experience and they seem to be more successful in other academic areas. One teacher firmly believed that behavior issues would decrease dramatically. Still another was resolute in his belief that “It is one of the only ways that I have found to authentically raise student achievement” (Teacher 12 Interview 1-Q14).

It's got a lot of different permutations, and implementations. Some people might not classify what my students do as blogging strictly speaking because it lacks some elements of interactivity. In my opinion though, it's all good. They are writing, and communicating, and that's a good thing.

(Teacher 7 Interview 1-Q14)

Students love it! They will bend over backwards for you and do anything you ask as long as they’re able to do it on the computer. Once you begin blogging your discipline problems will be reduced by 98%; it’s amazing.

(Teacher 3 Interview 1-Q14)

Connected Collaboration. Teachers say the power of blogging transforms students from the role of single-minded learners into the role of full-scale collaborators. Students appear to feel empowered by the writing process to engage with other students in a critiquing of their work and the work of others whether they are at school or at home. This collaboration becomes a connection with the world and the learning day becomes extended. Students become excited at the prospect of communicating with other students in far-away places; they engage in conversation
and are informed of another’s culture through this exploration (Jones et al., 1994). This dual learning process and change in students’ roles appear to be very appealing to the edubloggers.

Students have certainly become more responsible for sharing their thoughts about topics. Classroom discussions which at times have been very difficult have become much easier with the use of blogs. Now every kid has to express their views which are much easier for some students to do in writing than verbally.

(Teacher 6, Interview 1-Q4a)

I have found my students learn the best when they work in collaborative groups. Working in collaborative groups especially helps the ESL students learn concepts. It also helps them improve their English skills.

(Teacher 8, Interview 1-Q4a)

My role as a single teacher creating my own lessons changed when I began using a blog with another teacher in another country. When I began collaborating with another teacher from another country my students began viewing me not as their only teacher but as a team teacher. It was almost as though my students had two teachers. When my partner teacher asked my students for their evaluations of the project my students had to think about what they were writing to her and not me. I became their assistant to help them write to her. I changed from being their primary teacher to being their secondary teacher at that time.
Mostly, my students’ roles have changed in their ownership of a space on the web. I always tried to make them experts, but it was a kind of undercover expert – it depended on my responses in notebooks for affirmation. Now, with the blogs, they become experts as any other blogger becomes an expert – by drawing readership from classmates (and in some cases, the world). They are therefore experts in a more real and legitimate manner. As I tweak my methods with blogs, they also become collaborators, since I ask them to read and link to each other’s work – something they could not do in the past.

(Teacher 9, Interview 1-Q4a)

*Increasing Self-esteem.* Students receive praise not only from the teacher, but also from each other. Teachers are finding that allowing students to critique and praise each other’s work will raise the sense of relationships within the classroom as well as increase a child’s self-esteem. This unique role of encouraging others to succeed has been used to a great extent with collaborative learning models (Bruffee, 1984; D. W. Johnson & Johnson, 1994; Sandholtz, 1997) and to some extent in classrooms engaging in constructivism (Bodur *et al.*, 2000; Brooks & Brooks, 1999; Dixon *et al.*, 1999; McMahon, 1997). Several of the teachers interviewed discussed how this side benefit of collaboration added to the experience of blogging.

In order to follow proper procedures in quoting my students' posted comments, in other discussions, I must have parent approval. I have never had a student or parent refuse this permission. This validates they don't mind the posted
comments being shared. Students usually tell me they are very pleased to be quoted and I would guess this does raise their self-esteem.

(Teacher 8, Interview 1-Q4c)

Since this has been my first year of using the classroom blog, this was something I did not do on the blog page, but rather verbally in class. I would recognize a student who did a good job on a particular blog and encourage others to check out his or her work and leave a comment. I definitely think this adds to a student's self-esteem.

(Teacher 11, Interview 1-Q4c)

I find that students tend to care more about their peers positive feedback than the teachers. In class I will hear a child reading a response to their posting and saying, “Wow, [blog name of student omitted] really thought what I had to say was good. I am going to go read theirs.” This adds a sense of community among my students.

(Teacher 1, Interview 1-Q4c)

I haven’t done this, but I would see that it would increase self-esteem and motivation, just like referring to a student’s written work in class.

(Teacher 4, Interview 1-Q4c)

*Communication Apprehension*. The student has an important role of being an active participant in the classroom. Some students find this role disconcerting and attempt to shirk this duty, negatively affecting their performance (Holbrook, 1987).
Shy or rarely communicative students appear to blossom with blogging as they discover a safer technique for communicating with other students and their teacher.

I feel that the students are more willing to come to my class, because they know that they will have a chance to express themselves and do something they like to do, work on the computer. I am able to see the thoughts of those students that do not usually speak in class. I think that that has been the best part of blogging for me and has helped to change the way I see the quiet child in the class.

(Teacher 1, Interview 1-Q4b)

I think it makes my passive students feel more confident when they know I am reading their excellent post. Even if they are the only one that knows it is their response. I actually had one of my quieter students come up to me and tell me that she works on posting responses at home and that she enjoyed being to participate in class that way.

(Teacher 1, Interview 1-Q4a)

I can only say that the blog provides a way for students to reach out and communicate with others, and this does help shy students.

(Teacher 4, Interview 1-Q4a)

I feel that the students are more willing to come to my class, because they know that they will have a chance to express themselves and do something they like to do, work on the computer. I am able to see the thoughts of those students that do not usually speak in class. I think that that has been the best
part of blogging for me and has helped to change the way I see the quiet child in the class.

(Teacher 1, Interview 1-Q4b)

Active Learning. Another student role that seemed to be affected by blogging was that of active learner, as visualized by Vygotsky (1978) and Piaget (Brainerd, 1978; Singer & Revenson, 1978). This role permits the teacher to become more of a facilitator, a guide on the path of learning. Students seem to adopt this role with enthusiasm as they discover the joy of blogging and the power of harnessing technology as a communication tool and viewing device to the world beyond the classroom walls.

…the biggest change is in how the students view control in the classroom. My role is more considered by them to be a facilitator. They are in charge of their learning. While this idea is new to most, they are starting to grasp it.

(Teacher 2, Interview 1-Q4a)

My students have become active learners. By using the blogs they are constantly put into situations where they have to prove themselves. They love to prove themselves right – so they explore the answers on their own and site where they found it. I see the kids rise above what I expect of them.

(Teacher 10, Interview 1-Q4a)

My students now have a much bigger role as teachers for one another. Before blogging.wikis there really wasn’t a way for my students to see one another’s
work on a regular basis. Now, my students are reading, commenting on, and
learning from each other’s work daily.

(Teacher 12, Interview 1-Q4a)

Blogging Changes the Teacher Role

The communication and instructional role of the teacher seemed to change just
as the role of the student seemed to change as blogging began to be used as an
instructional practice. All of the teachers responded that some kind of change in their
classroom role had occurred. Some responded that student motivation for learning had
increased and behavior issues had lessened, increasing the teacher’s time on the task
of instruction. Others felt that not only had their communication with students
improved, but also the communication gap between home and school had decreased.
Still others felt strongly that the simple act of blogging with their students had
transformed not only the learning behavior of the students, but also the instructional
procedures the teachers employ each and every day.

I think I am more organized now and am able to post homework way ahead of
time. Some seniors have jobs, attend school, and are involved in sports. They
appreciate being able to get the homework done on their time. I can
communicate with students outside of the school defined by time and space.
This really stretches me—learning continues outside of the limitations we place
upon school.

(Teacher 2, Interview 1-Q3)
Regarding communication, my practices definitely have changed. Before the blog, I would type class newsletters weekly or monthly, and wonder who received the updates. I also had a very sparse class website with no easy way to communicate regularly, post pictures, provide electronic documents, or communicate with my class. Since using the blog, I can communicate daily. Not only that, but extended family members and non-custodial parents can also be informed and involved.

(Teacher 4, Interview 1-Q3)

Somewhat changed. I have gotten feedback from other educators via my blog, and that has influenced my teaching practice positively. I had left a reflection on my blog site about using www.vyew.com in my class one day. I had had some negative experience with that site, and expressed my feelings in the blog. That evening, a reader left a comment directing me to another site that was similar. Though I didn’t end up using the alternate site, it was exciting to think how easy and quick the response was. I did a lesson this fall where students were to learn about the dangers of inhalants and then share their knowledge with as many people as possible. Some students aimed for the traditional (and safe) posters or school announcements. However, a few students were daring enough to set up a blog site, and shared their knowledge with the world that way. They got a great deal of response from all over, and all different kinds of people (students, professionals, etc.), which was naturally motivating and engaging as well as a great way to learn from someone besides the others in the
class or the teacher. That was actually my first experience with blogs…and of course with such great results, I was hooked.

(Teacher 5, Interview 1-Q3)

I'm at the point where it's changing around the edges more than at its core. I'm still using my adopted curriculum, but I'm using the web, blogs, and other technology to supplement it. … This has motivated students to participate at a higher level, and to respond at a higher level.

(Teacher 7, Interview 1-Q3)

I am enjoying teaching even more now, because my students have an enthusiasm I have never seen. I have had students come up to me and say, “This is the first book I have ever read all the way through.” That alone means something.

(Teacher 1 Interview 1-Q15)

Guide on the Side. Teachers also perceive their role has changed from the fount of all knowledge to a learner guide. This new role, as envisioned by Freire (1993) and Dewey (1916), allows the teacher to employ constructivism to some extent. The teacher facilitates the learning, allowing the student to act as their own teacher.

…Blogging does level the playing field, so that everyone can be seen as a learner and teacher. I try to be a learner in class as well, so the way I act in both places is similar.

(Teacher 3, Interview 1-Q4b)
I have become more of a facilitator between the kids. I guide them in the right direction, but I let the debate occur between them. They love proving each other wrong and really research to locate the answers they need – it's fabulous! I wish I had more computers!

(Teacher 10, Interview 1-Q4b)

I think I was always the facilitator, not the sage. The students seeing my willingness to learn something new has probably been the biggest advantage. I no longer have to rely on paper homework...it is all on the web. Looking at our blog would be the best example.

(Teacher 2, Interview 1-Q4b)

I feel that I have more time to work with students. Yes, reading all of their posts and responding with my own thoughts takes a very long time, but it is worth it. While the students are blogging I can help others that might need extra assistance in understanding the book or some type of other help.

(Teacher 1, Interview 1-Q4b)

My role has changed to become more of a facilitator and less the center of attention in the classroom. It has been a lot harder and more time consuming for me to incorporate blogging as an instructional practice in the classroom because it means that I need to interact with each student at some point via the classroom blog. The commenting feature that is built within BlogMeister (the blog that I use) allows me to interact with my students before anything ever gets posted. They can submit work, I can comment and ask them to redo, and
they can make corrections before requesting publishing to their blog a second time. I firmly believe that because of this interaction, my students have really learned from their experience and will go back and listen and watch the product of their learning many times as long as it remains posted.

(Teacher 11, Interview 1-Q4b)

With every student working on their writing for an entire 50 minute period, I was free to go around and help struggling students or extend students who were already excelling. Without realizing it, my students were creating an organic writer’s workshop. I was able to talk to students in the middle of their writing process, rather than after it was completed.

(Teacher 12, Interview 1-Q4b)

_Improving Relationships to Increase Learning._ Building teacher-student relationships through enhanced communication techniques has been researched as a tool for bridging the achievement gap, especially among low socio-economic groups (Jesse et al., 2004; Snyder & Angus, 2000). Teachers who work at building a relationship with their students improve their students’ attitude toward school positively. When this occurs, the likelihood of academic success is greater (Duttweiler & Madden, 2001; Thernstrom & Thernstrom, 2003). Yet teachers often struggle with the time and tools needed to develop this changed role.

As discussed previously, time is a major issue with teachers whether they are blogging or not. It appears that a majority of the teachers interviewed feel that the time spent blogging with their students increases their relationship and improves the quality
of their work. Although they provide no hard evidence, their anecdotal revelations along with several examples serve as evidence of their success by building relationships and creating more efficient communication.

The performance of my African American students has improved (really they are almost all minority students in my class and the white students are definitely SES). I think I have a strong relationship with all my students in part because of how I use technology. I think motivation has improved, but I'm not sure that writing has.

(Teacher 7, Interview 1-Q5)

I feel that I get more information from my students because they have to respond to the questions on an individual basis. The do not mind spend the entire class time writing responses because they have the freedom to post whatever they feel and more than likely someone will agree with them. My classroom setting is more comfortable and positive. I think that my students writing has improved since they have to express themselves through writing and not just orally.

(Teacher 1, Interview 1-Q5)

The way that I get and give information has definitely changed. I now grade assignments in more real-time. I will offer my feedback almost instantly after a student has posted. The number of completed assignments has decreased in number but increased in meaningfulness. Students’ writing has improved, for sure. I only work with minority students and many of them are reluctant
communicators. They, for some reason, feel more comfortable communicating in the blog format, as a result I have learned a great deal more about them, their lives, and their abilities.

(Teacher 3, Interview 1-Q5)

Previously I shared that student writing definitely has improved and by working collaboratively the minority students have improved in their academic skills, making them feel better about themselves. When students feel good about themselves in a classroom, generally they get along with the teacher. I feel this has been true for me. Using blogs, especially within a project with another teacher, I become the guidance teacher and the students become the drivers of their learning. This is how it should be. Students need to feel in charge of their learning to reach their highest potential. I feel there are fewer assignments, but the students are much more involved and much deeper learning is taking place. I feel it is better to have fewer assignments and have deeper learning than many assignments that are quickly and briefly taught.

(Teacher 8, Interview 1-Q5)

Because we have gone to a more authentic platform of completing assignments (project-based student-driven), I see that there is a lot more continuity between assignments. … The level of student writing is continuously improving. The most obvious difference is that of fluency. … Many students started writing longer works and breaking them up into chapters or sections. They also started to write about world issues such as global warming, poverty, and inequality, all
without me asking them do so as part of an assignment. Their achievement in writing has also improved because they are constantly looking at other students and comparing their work. When they see that someone else has done something great, they build upon it and make it their own. We have spent quite a bit of time talking about Creative Commons and remixing, so they are pretty comfortable with the idea of sharing their ideas in a collaborative way. I have always had a pretty great rapport with my students, but blogging has allowed the discussion to be more than just about their interests. I can talk to them in an engaging way about their writing and their creativity.

(Teacher 12, Interview 1-Q5)

*Integrating Technical Tools.* As the classroom of the 21st century evolves, the more integrated instructional practices become with digital tools. Edubloggers appear to have as much difficulty procuring computer based hardware and software as their non-blogging peers. Some expressed that their success with blogging encouraged administrators to increase any budget they may have in order to fund additional tools to assist the edublogger. One teacher discussed how the blogging practice almost seems ubiquitous within a properly outfitted digital classroom.

I don't see the blogging separately from the other technology I use, the projector, organizers (Inspiration, PowerPoint), the Podcast, and what we do in person. It's hard to tease out the blogging from all of that, and that's good because it means it's well-integrated into my practice.

(Teacher 7 Interview 1-Q15)
I also use a Smart Board to annotate their writing and make comments directly onto the post. I also encourage others to do this. I will sometimes save the comments with a screenshot that is later posted onto my blog. I like to do this about once a week.

(Teacher 12, Interview 1-Q4c)

**Blogging’s Influence on Academic Rigor and Critical Thinking Skills**

Blogging provides opportunities for students to interact in meaningful ways that extend instruction in the virtual classroom (Glogoff, 2005). While some blogs serve personal agendas, educators use blogs for student journals, parent communication, posting assignments, and other communication tools (Long, 2002). As a way of enhancing classroom discussion, it appears to have great promise. But does it cause the student to go deeper in their thought processes?

**Deeper Student Thought.** This question seemed to cause some discomfort for the interviewees. A few felt inadequately prepared as professional educators to answer the question. Others tried vainly to address the points, but came up short of finding any critical thinking skills or synthesis of thought that students were experiencing. Only two were able to give examples of student work that strove to achieve this level of learning.

My students work best in groups and they definitely have to synthesize concepts from the lessons and apply their knowledge to other areas of life when they respond to their peers in other countries. They must reflect in what their peers in their own classroom think as well as in what their peers in...
another country think, too. They have related units of study from previous weeks to current issues today when they synthesized concepts and themes from Romeo and Juliet and described how these same concepts and themes are true in today's world.

(Teacher 8 Interview 1-Q11)

We spend quite a bit of time reflecting on previous posts and reflecting upon blogging as whole. I find that it is one of the easiest ways to have them understand exactly what they are learning in my class. My favorite piece of reflection that we did this year was the last one. My eighth graders are moving on to high school and it is a pretty safe bet that many of them will not be blogging with their English teachers there. So, I had them write a post about how they learn best for their teacher next year in the hopes that the teacher will realize that there are tools out there that will help them to do their job better. I will be sending these blog posts on to the teachers at the beginning of next year, but the fact that so many kids wrote about how they learn through linking to one another, through discussion, and through writing on blogs was both reassuring and wonderful. We also use a delicious account for collecting their best posts, so they are doing some description, summary, and reflection when they are putting in the details about their post for delicious. They are also actively tagging the posts with things that they believe other students will want to look for.

(Teacher 12 Interview 1-Q11)
The others gave answers that simply described their daily experiences, regardless of the lesson’s attempt at deepening the discussion or learning. Some were apologetic, wishing they had considered this type of activity, and promising to try to achieve this level of learning in future blogging lessons.

When the students log in to their blog, they can see what others have to say about what they have written. I think by reading others responses, the students are able to reflect on what they have read and written. I see the students relating the readings and other people’s responses more in our classroom discussion. A student might say, “Oh yeah, I saw something like that from ___ in the blog several weeks ago, they must be really good at predicting.” Students will usually summarize the information that they have read in our classroom discussions as well, although I have seen several students kind of sum everything up in a response to someone else’s blog. The day after we blog, we go over the blogs and what people had to say about the book. We kind of summarize the blog both individually and together. One person will state their summary and others will add more information if they feel that the first person left off an important detail.

(Teacher 1 Interview 1-Q11)

A few kids have connected conversations, but I think the use of blogs in our school is too new for it to happen on a regular basis. We talk about metacognition and fill out surveys online about our metacognition. We could definitely do a better job on this one!
Some days I will hand out a half-page worksheet with lines on it and say, “By the end of class you need to read at least 10 blog posts and comment on at least 5. Write down the names of the posts that you read on the sheet and turn it in at the end of class.” I really do have to force them to reflect sometimes. With my students (English Language Learners), most of them are not comfortable with summarizing, synthesizing, or weaving discussions. Our blogs are rather structured. I give them a topic to write about and they create a post. I plan on doing more reflective/summarizing type blogging in the future.

I haven’t done enough academic blogging with students to comment on this. From what little I have done, I usually create a summary of the topic and provide a few prompting questions. My fourth graders have referred to the comments of others’ in their posts, but in a limited way. I have also found that fourth graders limited keyboarding skills hinder them from writing detailed responses. I plan to integrate 15 minutes of keyboarding a week at school to try to get students to improve this skill.

I cannot say I’ve seen too many students summarizing and compiling thinking from a number of previous posts without my direction. It has happened lightly, but usually if I want that kind of response, I ask for it. My primary use of the blogs is for reflective writing, so I have had them think extensively about their
own learning, about the classroom, about assignments, their opinions about books, and life in general. I do not always summarize what students have written. I do not have time, and I generally do not have time for students to do it either – we need to move on. I have had my student aid summarize great work, but not every time.

(Teacher 9 Interview 1-Q11)

Reflection for my students is an area that I have not developed. They do listen/read one another’s' posts and can identify mistakes, especially as the year progresses and their skills have sharpened. … Because level I Spanish students are usually communicating on a very elementary level, the discussion/writing is short and does not go into much detail.

(Teacher 11 Interview 1-Q11)

Assessing the effectiveness. This lack of an assessment tool to discover the depth of student learning also hampered the teacher’s ability to gauge the overall effectiveness of the blogging practice. Perhaps because of the newness of this tool or because of the lack of time, the interviewees were unable to be definitive using an appropriate assessment or rubric. Most had a “feeling” that scores or learning had increased. Many commented on the increase in motivation for learning as a reason to declare the blog had been successful in raising academic achievement. Regardless of the lack of formal assessment, all of the teachers perceived that blogging was helpful in increasing the potential for student success.
To help students be successful, any instructor must use a variety of instructional tools to differentiate and accommodate the learning styles of all students (Tomlinson & McTighe, 2006). Blogging appears to be one of the tools that could be used to assist the teacher with this task. These teachers explain why they felt blogging was an effective instructional practice.

Blogging is sort of like a think aloud. My original post gives them something to think about while they are reading. If they get at least one thing from their experience, I would like to think that I am helping them to read for understanding and not just to read.

(Teacher 1 Interview 1-Q8)

Every single one of the teachers in my building who read the blogs of our students are impressed at the quality and sincerity of the posts. I get many comments like, “Wow, they don’t write like that in my class.” Or, “Wow, she never says a word to me, yet she’ll podcast on the Internet for you?”

(Teacher 3 Interview 1-Q8)

If district benchmark testing is an indication, in Language Arts I have probably moved 3 students up to Advanced level, and about 4-5 up to Proficient and two up to Basic. I think that blogging, podcasting, and other things I’ve used in my class have helped students make connections to their learning, but I may be fooling myself. Those scores may not hold up on state testing. The students may have gained more for tutoring, and direct instruction materials related to
testing to fill in standards holes in our adopted curriculum. Self-assessment is
difficult, and separating out the true causal factors may be impossible.

(Teacher 7 Interview 1-Q8)

My students have certainly become better able to achieve on higher level
thinking skill assignments. They have improved in my class in terms of their
writing, but because many other teachers are not using these tools, I’m not sure
if they are any better at doing worksheets.

(Teacher 12 Interview 1-Q8)

Addressing Information Flow and Ethical Issues

The Internet is both beneficial and frightful to a classroom teacher. There are
many wonderful opportunities for furthering the flow of information to students, but
this flow of seemingly unlimited information also carries a potential threat of a teacher
losing control of how that information is used and what is obtained. There are two
issues when discussing teachers losing control of the information in their classroom.
The first issue concerns the obvious problem of allowing children to post their
personal written work to the Internet. Children make mistakes by posting something
that is hurtful to others or hurtful to themselves. They may post obscenities that will
get them and the school into hot water. Worse yet, they may post private information
that could be seen by sexual predators that scan the Internet waiting for such an
opening to engage a child in conversation, hoping for a face to face meeting. Warlick
(2005, p. 111) addresses this issue of privacy and the teacher’s fear of losing control in
the classroom. He has been introducing teachers to the art of classroom blogging for
two years. He has found they are reluctant to blog because of these reasons, sensing the loss of control as a professional failure. This point alone caused him to create his own software blogging tool at the end of December 2004 called BlogMeister (http://landmark-project.com/BlogMeister), a free service that provides strict controls for this flow of information from student to teacher.

The second reason teachers fear a loss of control has more to do with the teacher than the student. The giant paradigm surrounding classroom instruction does not allow for student freedom. The teacher controls the students, the time, and the information. Nothing happens except what the teacher has planned to happen. This “Sage on the Stage” (King, 1993) attitude has permeated instruction for centuries. However, as we have discussed, the theory of constructivism begs to differ with the paradigm about the effectiveness of this style of instruction. Constructivism in part says that students learn by incorporating understanding of the subject into their existing knowledge base, and so must take an active role rather than being passively taught. The teacher’s job is therefore to facilitate learning rather than lecture.

As Warlick found, blogging brings out both of these fears. Question 6 attempts to discover if these fears are founded in our panel of participants. All of them stated they had no such fear, but it was said with some apprehension. Some were still wary of control over the flow of private or inappropriate information, just a few seemed reluctant to walk off the stage.

Some control over what is leaving my classroom is lost, but after we have our classroom discussions, the students see all other opinions as well. If anything,
it is teaching them a life lesson that there are other views and that not every view is wrong. I believe it is helping my students to become a better-rounded person.

(Teacher 1, Interview 1-Q6)

I wanted so badly for this “experiment” of blogging to go well that I set up the blog so that I control everything that is posted and edited. On the other hand, I rarely censor anything (I’ve only done in maybe one time in 600+ posts). I do not feel uncomfortable letting the information leave the classroom.

(Teacher 3, Interview 1-Q6)

There is some sense of a lack of control with a blog. I have my blog set to allow comments with minimal moderation (only for blacklisted words or multiple links). Periodically, I have had to delete comments with personal information. But I haven’t had any incidents of inappropriate comments as of yet.

(Teacher 4, Interview 1-Q6)

…sometimes I look at what students publish and cringe a little bit. … My hope is that the public who reads the information will take part of the role of the teacher by calling out those mistakes. It seems kids internalize it better if it’s coming from a neutral, nameless critic rather than the picky teacher (me). It does not bother me to not have complete control over this information. I do think it’s important that kids know they are responsible for establishing and then maintaining their credibility on the web.
…I do not feel I lose control over information presented in the classroom and what is posted publicly. The reason for this is because I monitor what is posted. From past experience I have learned it is not wise to have adolescent students post their own item without approval first. I have students present their items for the blog page to me first for approval. After my approval, then I post their item.

I am not trying to control information. I am trying to help students learn how to access the information that they need … Now I do sometimes worry about students who may try to duplicate what others have created on their blogs, but so far, this has been very easy to detect. Part of their grade is originality.

I’m not really sure what control I need on the information that leaves the classroom. … Transparency is so important to me because it allows me to become better at what I do, and it gives my students a greater (and more authentic) audience for their work.

Trust students. They’re practically old enough [in high school] to vote and fight in wars with large airplanes, boats, and tanks. Giving them freedom of “incorporated subversion” with a tiny corner of the Internet is not going to destroy the school district or the child’s life.
Ethical Treatment of Student Work. Edubloggers have the ability to see student writing (or post) before the writing actually appears (or is posted) on the final blog. This empowers a teacher with the right to edit, comment, or simply disregard before others see the writing. If a student uses inappropriate language, the teacher can avoid the embarrassment to the classroom by not posting the writing to the blog. Conversely, the teacher can avoid embarrassment to the student by not publishing student work that may be quite private or potentially explosive.

While the right to censor is the teacher’s, the right to have appropriate work published is the student’s. This posting of student work is similar to the practice of pinning a child’s paper to the bulletin board in a classroom with a big gold star atop the page. The practice makes the child proud of their work and gives them a feeling of self-worth. The teacher hopes the student’s feeling will translate to increased effort in the classroom and therefore improved learning. Posting a student’s written or verbal work in a blog or audioblog is a popular practice with the teachers interviewed and one they find powerful in order to foster student self-esteem.

When they see their words in print, or a comment from another, or a posting named after them (like "The Harry R. Honors Blog"), it really reinforces the ideas that their words matter and that this is a global conversation.
Students love it when I comment on their blogs in class. And they also love it when I leave a comment for one of their posts. I believe it shows a genuine interest in the student and their thoughts. And who doesn’t like that?

(Teacher 6, Interview 1-Q4c)

I don’t often quote, but rather show the original post in its original context. I find that this gives students a sense of self-worth that is not achieved by quotation or mere recognition.

(Teacher 12, Interview 1-Q4c)

Editing or censoring student work can take enormous amounts of time unless a system is developed to organize this practice. This teacher had a very creative and technologically advanced answer to both the issue of blogging taking too much time and to what the classroom of the future might look like when a teacher understands and uses the power of modern tools to manage new instructional techniques such as blogging.

…my goal is for my role to become less crucial in terms of feedback. Feedback is still important, but now I can pass along affirmation by tagging a blog as excellent in my del.icio.us account, which feeds that article through the motherblog as exemplary (I run the feed in a sidebar widget called “Notable Articles”), which would hopefully draw other students there to read. It also gives me a chance to pass off the lecture style, me as the expert and coordinator of every good discussion a little bit. I still need to coordinate and draw good things from my students, but with the published blogs, I can direct
students to the insights of other students, or at least reference them in my summary comments and articles. I might have students write about a topic, and then in reading their articles I’ll copy and paste great quotes into an “update” article where I summarize some of the great thinking I read. It’s basically the same thing I do when I lead a discussion and note students’ insight, but with the discussion guidance, it’s easy for students to think that the insight was mine and not their classmates.

(Teacher 9, Interview 1-Q4b)

*Online Safety and Ethical Student Treatment Issues.* Educators must be concerned and aware of two areas of online safety: those who would wish harm on students and students who wish harm on others. Both of these areas can be controlled by the teacher, school, or district with proper safeguards in place. One of those safeguards includes educating the students of the dangers that exist in either area. The teacher participants are keenly aware of these dangers, but execute their plan of education in very unique ways. Some choose to be laissez-faire, placing general rules before the students with the hope that the student will make wise choices.

The main rule is: “Treat blogspaces the same, or with more respect than classroom spaces. All of the rules that apply in the classroom apply to the blog.”

(Teacher 3 Interview 1-Q12)

The only real rule I have for blogs is that it must be school appropriate. Kids have been very respectful of that.
These solutions seem naïve when held against the scrutiny of the public, including parents who do not know of the dangers or know enough to make them unreasonably fearful of online interactions. Others go a bit further and enlist the aid of software, online assistance, or commercially available special agreements for students to sign.

In monitoring posts, I simply subscribe to the blog in my RSS reader and check them several times a day. I have found students writing questionable content, and I will address it with them in such a way that they can deal with it the way they want. I think I do push the envelope a bit (probably allowing more in a blog than in a letter to the principal or a parent), but always remind the student that the blog is a reflection of your maturity, thoughtfulness, consideration of audience, and other factors. To put vulgar words in [the blog] really turns off an audience and defeats the purpose of blogging. It seems to help to do that, and it’s non-confrontational. I have not established clear rules. Well, nothing in stone anyway. Because it was a learning process for both the students and myself, I didn’t take the time to set up a clear set of expectations for blog etiquette. I have not run into the privacy issue yet.

I train students by having them get their Web License, which is a PBS Kids Internet safety site. I also stress the importance of not posting personal information. I haven’t had to deal with inappropriate language on my class
blog, but if that situation arose, I would consider requiring students to login to post, or holding comments for moderation, but I would rather not do that. I could also expand the list of blacklisted words to include derogatory words and expletives.

(Teacher 4 Interview 1-Q12)

Some teachers took on the role of censor, editing every word before it was posted. These teachers used a combination of software such as Warlick’s BlogMeister, RSS feeds, or simple e-mail of the text from the students that the teacher would then post once it was scrutinized. This takes more time, but none of the teachers complained about this, seemingly more worried about the consequences of inappropriate material on the classroom blog.

I read everything before it gets posted on the web-site. Many times I am reading submitted blog posts while the students are in my room, so if something is inappropriate I will ask that student to make the correct changes. For the most part, my students have the freedom to write their opinions and feeling on others postings or the book. It is very rare that I might have to have a student fix something that they have written. I do not delete anything from my students writing. I feel that the post is their way of expression. I do not grade my students on spelling or grammar. On certain assignments they may have to write a minimum of sentences. That is usually the only time I will have them go back and fix their blog. I have not had to punish any students for abusing the blog discussion. I want my students to feel that they have
ownership of everything that they post. I do not edit or delete anything they write. At the same time, they know that certain language should not be used on school assignments. Before we start blogging, I talked to my students about blogging and what was appropriate and not appropriate. Basically, my rules are to express yourself. The students are aware of what language should and should not be used. My students did not need to come up with rules, because basically there are only two rules. 1) Express yourself 2) Use appropriate school language. … If I ever do have a situation arise that I think should be private and not for everyone, I would talk with that student and depending on the topic and the age group of the students, we might discuss it in class. I do not like to make my students feel that their views are unwanted. I try to make sure that they know we can talk about almost anything in my class that pertains to our literature books.

(Teacher 1 Interview 1-Q12)

I use BlogMeister which gives the teacher a lot of control. In this school community and in K-12, that is necessary. I have deleted words or posts. If they came from another school, I also alerted the teacher of that student. I have not had to 'punish' anyone farther than not publishing. There is great incentive just to see one's work online. We seek to follow the WWJD rule here in all postings, but free expression is all over their blogs. Because of the currents laws, we use initials only. Photographs are verboten. We use Portrait Illustrator to create avatars that we can post.
From past experience I have learned I must monitor my students' comments. Most high school students are mature enough to make proper comments but occasionally there are one or two students who think it is funny to make comments not appropriate. Other times there are students who don't mean to write something inappropriate but it turns out to be that way because of poor writing skills or unawareness of special etiquette. Only one time, when I let the students write without me monitoring their work, a student wrote something that was offensive to a student in another country. My student apologized to the student and that student's teacher. Now all students must send me, through an e-mail, their comments before their work is posted. If there are grammar errors I have them correct them. If something is unclear I work with the student to have him write with better understanding. This helps my students learn to write better. I make every effort to allow my students to write their own thoughts, just so long as they follow my proper netiquette rules of politeness. I have never had to deal with any issues that were private that someone wanted to post.

(Teacher 8 Interview 1-Q12)

Probably the best solution was offered by Teacher 12’s students. This class used a wiki to form their own set of rules and maintain this wiki throughout the year. This online code of conduct builds upon work performed by other students and teachers in true wiki fashion. The code is very explicit, easy to understand, and
contains links to other sites for additional help for the reader. Because the code was created by the students and continues to be maintained by the students, their “buy-in” to the ethics of blogging could be enormous. The code is “dedicated to creating a community of parents, teachers, and students that are positioned to make the Internet safe for all students. This community of informed individuals will help students to make better decisions about online activities, to know what is appropriate internet/computer behavior both in and out of school, and to set expectations for one another in terms of supervision and support” (from the wiki of Teacher 12). Because the wiki identifies the teacher, I am unable to share the Internet address in this study.

Recommendations to New Edubloggers

All of the teachers were positive and enthusiastic about recommending blogging to other classroom teachers. Each of the 12 respondents seemed to enjoy giving the advice without any reservations, except for a warning that it will take more time to learn how to blog in the beginning stages. One teacher had a short, precise recommendation to teachers who have decided to begin blogging in the classroom: “Do it yourself for a while. Use a walled garden” (Teacher 2 Interview 1-Q13).

A walled garden is defined as “content that is designed specifically to be available to some subset of users, and not generally available on the World Wide Web” (Local Enhancement Collaborative, 2003). Most of the interviewees suggested that potential edubloggers create a blog for their own personal use in a friendly, safe environment before they go online with their students. They suggested that one must also be prepared for the consequences of changing your habits to that of a reader and a
contributor. This contrasts with the traditional view of a teacher’s role in the classroom as a lecturer, sage, and mandator of all things within the classroom walls. Thus the teacher becomes a facilitator of learning.

Social Constructivism Suggested. This follows the constructivist attitude of Piaget. He believed that learning and thinking involve the participation of the learner. Knowledge does not derive from the lecturer, but must be constructed and then reconstructed by the learner. The learner must be active; he is not a vessel to be filled with facts. Piaget contends that the child must act on things and it is this action which provides knowledge of those things (Sigel & Cocking, 1977). This philosophy seems to be what the respondents are suggesting to beginning edubloggers.

Start simple. Make a blog for yourself and practice a lot with the technology so that in the classroom the technology is a tool and not a stumbling block. If you make it look easy, the kids will feel comfortable and excited about it. Have a serious talk with your kids on the lines of, “You guys are the pioneers of this technology and I expect that you’ll be a great example of how awesome it can be…” They’ll dig it and they will take it seriously. They love computers. Emphasize that it is not MySpace .... Be careful about the legal issues and check your district handbook to make sure that you don’t get yourself in trouble. I’d like to say that anyone can do it, but honestly, it’s probably not for the technologically-illiterate, at least not yet. My dream is that someday it will be simple enough.

(Teacher 3 Interview 1-Q13)
Share the blog with your co-workers. I put a link to my blog in my signature at the bottom of my e-mails. Don’t be afraid to put yourself out there a little. We have to maintain that professional fine line between asserting our opinions and understandings and being prudent and conservative. (I’m guessing that many of those who are blogging are not on the far conservative side, though…). Find other classroom blogs and see what they’re up to.

(Teacher 5 Interview 1-Q13)

Start off with your own blog (either lesson planning or reflective teacher) so that you can fully understand what a blog is all about. Start reading blogs in a feed reader. (Take a look at other teacher who are already doing this and steal the blogs that they read until you find some that fit even more closely with your own tastes.) Try to keep it simple.

(Teacher 12 Interview 1-Q13)

Start slow, read them all, respond or make reference to them in class and have fun with it. Post about non school issues as well.

(Teacher 6 Interview 1-Q13)

_Courage to Collaborate with Students._ The respondents recommend new edubloggers also be at peace with the new technology. Problems will occur and one could easily feel embarrassed at not knowing some of the unique features to the software. The respondents suggest that new edubloggers work with the students, explore the practice together, and allow students to work with the teacher in a collaborative manner. This is not to suggest that the instruction should be unplanned;
quite the contrary. The instruction should be deliberately designed and structured, and the learning should be allowed to flow through that structure at a pace and direction that works for the learners.

Blogging is a wonderful way to communicate with families and students.

Blogging software, such as *WordPress*, makes a wonderful content management system that can be used as your class website. Not only is it easy to update, but can be made to look very nice and can be customized with plugins. To accommodate students without Internet access at home, teachers can consider setting aside 30-60 minutes of in class time for students to use the classroom computer during instructional time. They could work with partners, if necessary, and the schedule could rotate to give all students up to an hour during the week for blogging and Internet research.

(Teacher 4 Interview 1-Q13)

Do not get frustrated. Technology can be overwhelming sometime, but once you see how in to blogging your students are, it will all be worth it. Make sure that you show them step by step how to do things and for your own sanity give them a paper with the instructions, so they do not have to ask you all of the time.

(Teacher 1 Interview 1-Q13)

I think it is important to establish ground rules and provide sample work. If students aren't guided they may go off in different directions and problems may occur. After the structure is established and students are comfortable
within the structure then they can slowly venture out of the structure to be more creative on their own but still be within the guidelines of the main lesson of study. But they must first begin with the structure to have success.

(Teacher 8 Interview 1-Q13)

If you don’t like reading students’ writing, please do not have them blog. Much of blogging is about audience, and if you’re not a willing audience, what is the point? Also, you have to blog yourself (reading and writing), because if you have not determined by your own experimentation what is fun to write and fun to read, you won’t be able to assign compelling articles for the students to write.

(Teacher 9 Interview 1-Q13)

**Overview of Document Analysis**

Document analysis data were collected virtually from the 12 interview participants. After a systematic examination of the blogs, I provided an analysis of the blog as the participant’s responses related to the research questions. I identified instructional and communication practices as well as commonalities among the participants. The analysis includes questions about the instructional or communicative purpose of the document; how the teacher and students are using it, and how it is (or is not) contributing to learning. This triangulation of the data received from the surveys and the interview questions assisted me in gaining insight into this instructional endeavor and finding legitimacy in the practice. The blog analysis took place after the teachers were interviewed and their responses were analyzed.
Participant blogs were rich in student data. I will use some of their personal writings in this section of the study, but will do so naming neither the teacher nor the student. Some teachers asked their students to reflect on the experience of blogging. These reflections were not a part of the analysis, but appear to be useful in summarizing the study by allowing the student to have a voice in the research.

I had considered using parts of the actual blogs in this phase of the research either as figures or as part of the appendix, but was unable to redact or delete the parts of the blog that identified the teacher and students without destroying the appearance of the formatted blog.

**Results of Document Analysis**

*Graphical and Technical Features*

Hypertext Markup Language (HTML) is the predominant language for the creation of web pages. It provides a simple means to communicate text-based information in a document and to supplement that text with interactive forms, embedded images, and other objects. However, most users do not consider this computer programming language simple to use or understand, so companies have invented software that allows users an easy way to place their text and pictures into Internet pages. This simplicity allowed for greater numbers of people to be a part of the Internet conversation, out of which blogging was created.

While HTML continues to be a major part of any Internet page, these commercial companies continue to make blog creation and updating easier. Over 88% of the participants used software from David Warlick’s Landmark Project called
BlogMeister and from Automattic’s Wordpress. One participant used several different blog formats possibly because his use of each blog differed. Still others had personal blogs on other sites, most notably Blogger. Many of the participants had links to their personal or school websites where additional information about them could be gleaned, but only 40% had that same information on their class blog. None of the BlogMeister blogs had a link button named “about” that would allow the reader to discover more about the teacher. Still others had links to wikis where students would be directed for further instruction.

Privacy issues generated a great deal of discussion with the interviewees. Some believed the question addressed information students related about them that should not be discussed on the Internet. Others felt secure about students divulging personal information because the software they used did not automatically post to the Internet. Instead the software waited for the teacher to read the post and edit the information before it was released to the public. Either way the teacher thought about the issue of privacy, a login or password combination is necessary to inform the teacher of the posting. At least 77% of the participants had such a combination at the sites analyzed.

None of the participant sites allowed banners for advertisers. Blog rolls were not popular with the participants with only 26% placing them on the blog. However, most of the blogs had links of some kind directing the reader to various sites of interest to the teacher. Less than half of the participants used RSS feed technology or took the time to place tags inside of their blog. This is a curious misuse of the
technology by these participants since many in Surveys 1 and 2 related how the use of RSS feeds made communicating with and managing students easier.

**General Communication**

Remember, that publishing to the Net may be our best opportunity to reassert ourselves as the experts on education and the group that should be taking leadership in retooling classrooms for twenty-first century teaching and learning (Warlick, 2005, p. 98).

With that warning to teachers, Warlick has set the standard for all educators to take a greater role in leading instructional change through the use of technology. That standard could begin with a simple biography of the teacher displayed on the home page of the blog. It is a common practice for any blog author to tell something of their personal or professional life in this manner. While only 40% chose to do this using the “about” link button, 77% of the blogs showed evidence of this in other ways, such as text boxes on the side of the page displaying the teacher’s picture and brief personal or professional information. Only three blogs displayed the educational philosophy of the teachers even though most of the teachers spoke of their philosophy in the interviews.

The most surprising finding of document analysis came while viewing displayed student work. Survey 2 respondents claimed that 92% of them encouraged student to student interaction. Many of them said that after a prolonged time of blogging, students began to automatically respond to each other’s blog when they saw a posting. Yet, when I reviewed the blogs of the 12 participants, only half had links to student work available to the general public. It is possible that the student work was
behind the scenes on a school intranet, but from the visual signs displayed on the blogs, it appears that only half use the blog to publish student work.

This then would possibly explain why only 25% of the participants showed evidence of student to student interaction. The blogs were filled with evidence of class assignments, but those assignments did not to any great extent encourage or require peer interaction, peer review, or peer critiquing. The emphasis seemed to be placed more on teacher to student interaction with over 50% of the teachers showing evidence of communication intended to build or strengthen their relationship with their students. This observation differs with the data gathered in Survey 2 where respondents claimed their communication goals were directed towards increasing peer collaboration 92% of the time as contrasted with increasing the student’s relationship with the teacher only 42% of the time (Figure 4.4).

When peer collaboration was encouraged, the experience seemed to be enjoyed by the students. Teachers 9, 11, and 12 had a combination of assignments that seemed to push students to find ways to collaborate with one another. These teachers also asked their students to comment on the blogging experience and offer opinions on the use of blogging as an instructional practice.

I enjoyed assignments when we would just read a short story and than we would have a short blog also. The reason I liked it was because I could get great insight with other bloggers, and also it was fun to just get things done fast.

Student of Teacher 9
Let's give it a try! I know you are told by your teachers to keep those cell phones of yours turned off and out of reach, but the truth is, most of you have them and we might be able to turn those cellular toys into tools for learning how to communicate in Spanish. Just for fun, first listen to a short voice recorded assignment for 5-1. Once you know what you want to say in Spanish in response, call on your cellphone or regular phone to record your voice. Dial the toll free number [number excluded]. You will then be prompted for a channel number (6702) and then a channel password (our room number). Later, you can post your voice to your blog. Ask me for a how-to printout on posting your recording to your blog. Let's see how many responses we will get! Due date: Friday January 26.

Assignment by Teacher 11

yes, paper is evil. it is awesome that we can use computers!

Student of Teacher 12

I loved how practically our whole class revolved around computers/technology. Its the way to go with learning and teaching.

Student of Teacher 12

So far this year I have really enjoyed doing these blogs. I was just saying that I think i’m going to continue to use this program because it’s a really good way of self expression. I’m pretty bad at writing, but I think it’s alot easier for me when it’s just free and I don't have to make a Rough Draft and all that good stuff. I think it would be cool if she school had their own blog station like Mr.
[omitted] was talking about, that would probably work out alot better than the
t way we have to do it now. I like how Mr. [omitted] is the computer guru type
because I have learned alot this year that can help me out anytime in college
when all you do is take notes. I think blogging could help alot in college when
all we do is take notes…haha.

Student of Teacher 9

*Instructional Purpose*

The most obvious use of a classroom blog or website is to post assignments for
continuing announcement, clarification, or added information via links to other sites.
This was evident from the respondents to Survey 1; when asked their purpose for
starting a blog well over half said they wanted to communicate with students
particularly as it related to assignments. The analyzed documents showed that 88%
were vehicles for communicating assignments to students. Even more of them
contained wording, graphics, or actual assignments that were intended to motivate the
student to perform these assignments or perform the assignments in a more thoughtful
manner. The application of a blog as a motivational device seems to be a natural use
since over 75% of the respondents in Survey 2 felt that students actually enjoyed the
use of a blog as an instructional practice.

Using the blog as an assessment to instruction is not quite as popular with the
teachers. Only 10% of the blogs studied showed evidence that they were being used as
an assessment tool. Those that were viewed as assessments had dates when the
assignments were due with consequences for tardiness, rubrics for grading, and the
weight of the grade upon their final grade reporting. One blog used an online survey tool to discover student thoughts on subjects, but it did not appear to be a graded assessment or an assessment of a subject similar to grade level standards. That blog was not counted as a blog that showed evidence of using assessments.

Some of the blogs simply stood alone as another instructional practice utilized by the teacher for either a single subject or as a communication device. Some of the blogs showed evidence the teacher used it to integrate their instruction with the practice for greater student use. Evidence of this could be seen when teachers used blogging to include student peer reviews, book reviews, learning reflections, international exchanges, past blogs, future blogs, writing development, team blogs, and year-end self-assessment. I saw no evidence of portfolios, outside reviews, or blogging artwork. Only 40% of the blogs demonstrated proof of integrated instruction.

For the most part I liked blogs this year. They were easy to use, and you always got to express your thoughts on anything. I think this is a good way to get people to think, or to just let people write about what is on there mind. Blogging might have been more interesting if we didn’t always have to right about a book or something specific. If we could of just blogged about anything on our mind that day, it would have been a lot funner. Blogging has been way different than just writing in other classes. For example instead of writing a big essay at the end of the book, we already wrote everything we thought through the book. I think blogging is a good way to help you understand and remember what is going on.
I think this year was my favorite year over all the years of taking english. I completely love the blogs. they’re so easy to use and so contemoprary, these days technology is one of our big uses so why not embrace it in our schools? I think why a lot of students like it is because blogs are not set up in the hardcore research paper mode. it’s more of our thoughts on the internet and we pretty much just let them flow. I know i like it because we don’t get docked for spelling or grammar but we do get graded on out thoughts and i think that is really what is more important. It also helps students who hate english to enjoy it a little more due to how easy it is to use. Using the internet helps if you actually have a teacher who knows what to do when you don’t know how to insert widgets or import old blogs into a new accout. thanks mr. [omitted]. This year i enjoyed reading all the books, even if they weren’t our specific choice, it was fun to write about my thoughts on a certain book and have someone discuss my point of view. teachers mostly just care about getting grades on time and having students actually turn in assignments, but with blogging teachers can read my thoughts and maybe even learn a different perspective on a book that they have read before. i think that blogging helps both parties. Through this whole year i think i have progressed as a writer due to blogging, now i don’t get stressed out about having to write a blog on a specific topic. This has helped me out so much this year…i wish we could use this in every english class.
Student of Teacher 9

I think the best thing Mr. [omitted] did for us was teach us to utilize all of our resources. Like technology, peers, as well as himself, so we were learning at our own pace instead of at a teacher's pace.

Student of Teacher 12

I think that mr.[omitted] has taught us really well because he taught us to interact with our peers and to work better with them in order to expand on our ideas and everything. He's always finding new ways to help us learn better and have us like what we are doing.

Student of Teacher 12

I think the stuff on computers helps me learn because it's not nearly as boring as doing something on paper and I am more likely to do a good job online. Online we can also add multimedia junk which make learning WAY more fun.

Student of Teacher 12

Teacher 12 was particularly inventive in his use of blogs for a variety of instructional purposes. He used at least four different blog addresses during the school year, all of them available to students to view, but only two blog sites were used for student input. This teacher appeared to engender collaboration to a greater extent than the rest of the participants. Following is a text-only example of the last assignment of the year:

Reflections on School Year 2006-2007

As we whhskusberap [sic] up an amazing year it is time to start reflecting upon all that went on. I would like to say that I did everything right and that all of my students were served equally by my curriculum and teaching style, but I
know that I can always differentiate better, create more engaging learning environments, and foster growth for a greater number of my students.

With this in mind, I would like to take a critical look at everything that we learned throughout the year and see what was essential, what is nonessential, and what is missing. I would also like to discuss the perceptions and observations that students have about their own learning. Without too much more exposition, let’s look at what actually happened this year:

**The Lesson Planning Blog:**
Please take a look back at all of the things that your core did. Use the search field in order to find certain things that we did (or did not) cover. You can also use the calendar in order to pinpoint a month/week/day that you think was particularly important. Use these key elements in order to discuss the questions on the Discussion page.

This lesson garnered a plethora of answers from the students. Almost all of them were appreciative of the opportunity to blog and to use the computer as a valuable part of their learning experience. The teacher’s ability to be vulnerable to student comments seemed to be a fruitful experience for him. A month after I viewed these comments, the teacher overhauled his blog site for the new school year and added additional opportunities for student postings. This teacher also viewed the blogging experience important as a form of professional development. The idea of personal growth and relationship building with students appeared to foster the increased use of the blog for Teacher 12 as a daily instructional practice.

The same was true to some extent of Teacher 11. She continued her use of audioblogging and incorporated it into her daily assignments for the new school year. Student pictures are now displayed and blogs feature written comments in Spanish that are linked to an audio blog of the same text. In this way the teacher has the ability to check grammar as well as vocal style. There is even an RSS feed that encourages
students from other Spanish classes around the world to join in posting to the blog and being a part of their community. She expressed in the interviews her willingness to try using these techniques and it appears she has done so.

Teacher 9 asked students to comment on the past year, but only one student responded. This teacher seemed to have a good sense of collaboration as viewed by the assignments, but little student work was shown to support it. This blog site had a sophisticated login procedure, so it is possible that student work resided behind this firewall.
CHAPTER 5

SUMMARY OF FINDINGS AND RECOMMENDATIONS

The preceding chapters of this study have presented research designed to discover the ways teachers are using blogs as a part of their instruction in classrooms across the United States. Very little was known of this practice when this study began two years ago, and very little research has been performed since that time. However, the Internet presence of educators blogging either for themselves or with their students has grown tremendously. Many have taken advantage of RSS feeds and tagging to form networks to connect with one another. They have even given themselves a name—edubloggers.

This study sought to find how teachers were using blogs as an instructional practice and if the practice is a worthwhile use of classroom time. Blogging seemed to offer the potential to increase collaboration between the teacher and the student and among the class as a whole, thus increasing understanding of the subject being taught. This researcher viewed the issue as two different domains: (a) as a means of communication with students, parents, and the community at large, and (b) as a form of instructional practice not unlike the many different ways educators choose to teach any subject. These two domains have formed the foundation for the study.

This chapter summarizes the findings of the study, focusing in on the two domains of communication and instruction. It is a study of opinions, of feelings, and of actual practices. It is a study that relies almost entirely on the perceptions of the
practicing classroom teachers. Improving education requires creating a bridge across the action-knowledge gap, the gap between current understandings of best practice and actual practice. It is my hope that this study will add value to student learning opportunities and will show the relevance of technology to conventional classroom instruction. This chapter will also present recommendations to future researchers on this topic of study.

**Research Design**

Phenomenological concepts were used to conduct this study using a qualitative, holistic multiple case study design. The data were not pooled, thus making it a multiple case study with literal replication since similar results were found in the cases. Common conclusions from the cases expanded the external generalizability of the findings.

This study also draws on ethnographic concepts, or in this case, virtual ethnography. Ethnography focuses on the ability to find agreement from a number of information sources that a certain phenomenon has occurred. Ethnographic tools can increase understanding of classrooms as cultures and to see and observe life in particular social groups (Green & Bloome, 1997). It is a way of recording, analyzing, and representing aspects of a classroom using blogging for communication and instruction.

Virtual ethnography seeks to create virtual equivalents of the basic ethnographic concepts (LeCompte *et al.*, 1993). It aims to change the idea of fieldwork from a localized space into a network of interlinked settings (Beaulieu,
Virtual ethnography maintains a number of principles of accepted ethnographic work. Converged research will establish which aspects of ethnographic research are challenged, particularly in the shift from face to face interaction to mediated digitized interaction (Beaulieu, 2004; Howard, 2002).

I did not conduct ethnography, but instead, I used the ethnographic tools of repeat observations of selected teachers’ blogs and virtual interviews of teachers managing those blogs. Also by examining the work generated by teachers and students, I was able to observe a slice of the work of their classroom community.

Because blogging as an instructional practice is relatively new to education and there is not a known registry of edubloggers, I was not able to use random sampling as a way of initially surveying and choosing participants. Through an email blast, participants were recruited. Teachers were self-selected for involvement in the study by responding to the initial survey distributed to edubloggers by three nationally recognized leaders in the field. Criteria presented in Chapter 3 were then developed to select among the first survey’s 168 respondents in order to send a second survey to a smaller sample of high-end users. It was anticipated that teachers were likely to be using blogging in a more purposefully pedagogical way and thus would be more likely to provide insights into how blogs are being used to support communication and instruction. Again criteria were established to then select a third purposeful sample for even more in-depth interviewing. Finally, the blog sites of the 12 interviewees were examined. The data presented in the study draws from all of these data sources.
Because there was very little research performed on the practice of blogging and even less on educators who use blogging, I chose to base the study on the perceptions of the teachers using blogging as an instructional practice. Therefore the overarching question this study explored was simple: In what ways do teachers use blogs in the classroom? The first two sub-questions for this study then disaggregated the main question into the two domains: (a) how do teachers use blogs to communicate general information to students, and (b) how do teachers use blogs to deliver specific instruction. The last sub-question then combined the two domains to discover how teachers perceive the use of blogs as an instructional practice has influenced communication and instruction in their classrooms.

**Teachers Blogging to Communicate**

In the book *Good to Great*, Collins (2001) states that great organizations avoid technology fads, yet they become pioneers in the application of carefully selected technologies. He goes on to say technology by itself is never a primary cause of greatness. Organizations motivated by fear of being left behind are destined for mediocrity rather than greatness. Collins’ advice should be considered by school districts as they consider their next large technology investment.

Blogging requires the greatest investment of assets any school district has to offer— the investment of a teacher’s classroom time with students. When teachers spend less than a quarter of the student’s day with them, it is important for that time to be spent on activities that promote learning effectively. Therefore, communicating
with their students in an effective manner is a primary concern of teachers. If blogging is to be a form of classroom communication, it should be effective.

There were four communication patterns teachers perceived as a result of blogging: (a) increased peer interaction among students, (b) increased teacher interaction with the students, (c) students exhibiting more positive emotions about learning, and (d) an increased sharing of ideas among students and with the teacher.

*Student to Student Interaction*

Almost all teachers say they encourage student to student interaction in their blogging lessons because they believe it promotes learning. The teachers believe that encouraging student to student interaction will create increased understanding of the subject matter, that it will help students to make sense of what they are learning, and that it will assist the students in developing their own understanding of the subject matter (Figure 4.5). Teachers feel that by encouraging this student to student interaction, their students will gain a deeper understanding of the subject matter being taught. The teachers’ goals for students (Figure 4.4) also recognize that by encouraging peer interaction through blogging they will increase peer collaboration and expanded sharing of ideas with peers.

*Culture of Collaboration.* Blogging seems to promote a culture of collaboration because of the very nature of asynchronous or synchronous communication. As a social networking tool, blogging helps connect friends, business partners, or other individuals together. As students, this Network Generation (Tapscott, 1998) or Millennials (Oblinger, 2003) has grown up in the Digital Age with
aptitudes and attitudes different from their predecessors. These students turn first to
the Internet for information and are comfortable interacting online with their peers;
they work collaboratively and thrive on interactivity; and they have an expectation of
immediacy from their instructors (Betts & Glogoff, 2004). Quicke (2003) feels we
must understand how learner sees themselves, decide on whether or not they are ready
for a more inclusive type of instruction, and then begin instruction based on
interaction. This study seems to suggest blogging offers this interaction at whatever
level of inclusion is most comfortable for the student or teacher and can be used as
such at most grade levels.

Collaborative Learning. Advocates of collaborative learning assert that the
active exchange of ideas within small groups not only increases interest among the
participants but also promotes critical thinking, higher levels of thought, and longer
This instructional technique is also considered a key part of improving the teaching
and learning of second language learners and culturally diverse students (Doherty et
al., 2003; Duttweiler & Madden, 2001; Thernstrom & Thernstrom, 2003).

Through the surveys and virtual interviews, teachers indicated they were
advocating student to student interaction by requiring or urging students to comment
on each other’s work. In some of the blog sites reviewed for the document analysis
portion of this study, this student to student interaction was confirmed. There were
many teacher postings, especially in their listing of assignments, where teachers
requested that students read a number of other students’ blogs and comment on them
in some manner. The resulting interaction, however, was somewhat simplistic and brief in nature. The student comments were for the most part incomplete sentences, fragmented thoughts lacking a subject or a verb. Some teachers actually encouraged this by allowing the abbreviated language known as chatspeak, a language used by people communicating via mobile phones for some assignments, but then disallowed it for other assignments. Several teachers indicated that student comments increased in length and quality as the year progressed, but this shift was not readily apparent on the few sites where student blogs were available for viewing. Much more careful tracking of student comments over time would be needed to confirm the teachers’ perceptions of how student to student interaction developed throughout the year.

Sharing Ideas. While most teachers in Survey 2 perceived that students enjoyed the blogging experience, half of them believe students still enjoy face to face communication more than blogging. However, those same respondents overwhelming thought that blogging encouraged students to expand their ability to share ideas with others. Over 90% of the Survey 2 teachers stated that the sharing of ideas and increased peer collaboration were reasons for starting a classroom blog. It is interesting to note that the Internet was created as a way for scientists to share ideas in the hopes that this collaboration would spur new ideas and greater invention (Barnes, 1994). Blogging seems to be merely an extension of that original idea, a way for people in similar fields or environments (e.g. classrooms) to share ideas, thoughts, hopes, and dreams.
Teacher to Student Interaction

Since student to student interaction may lead to stronger classroom relationships and possibly increased learning, enhancing a student’s relationship with the teacher may do the same. However, increasing the relationship they had with the student was not one of the goals most teachers stated as a part of their reason for blogging. Less than half of the respondents in Survey 2 listed the category of encouraging a stronger relationship with the teacher as a classroom communication goal. Similarly, less than half felt that blogging would be a way to enhance interaction with the teacher. It may be that teachers feel they already have a positive relationship with their students, and therefore, they did not articulate increasing teacher to student interaction as a goal of blogging. Nevertheless, several teachers gave examples of insights they gained about their students through blogging.

Developing Positive Relationships with Students. Building a relationship with teachers through better communication techniques has also been researched as a tool for assisting low socio-economic groups (Jesse et al., 2004; Snyder & Angus, 2000). Researchers have found that teachers who build relationships with students positively increase the students’ motivation for school and the likelihood of academic success is greater (Duttweiler & Madden, 2001; Thernstrom & Thernstrom, 2003). University of Arizona Professor Glogoff has found success with this by giving positive feedback to students on their comments in blog entries. He believes that many online students miss the traditional classroom contact and that blogging offers useful opportunities for learner-centered feedback and dialogue (Glogoff, 2005).
Although this may not have been one of their main goals for blogging, the teachers provided examples of enhanced relationships with their students in all forms of the data collected. Most of their collaborative blogging activities showed genuine communication with their students. Many stated the simple act of reading and commenting on a student’s blog posting contributed to increased understanding of each other. This somewhat unintended yet beneficial outcome was seen mostly in the comments made by the teachers and verified through some of the document analysis.

*Positive Feelings toward Learning*

Edubloggers seem to be positively affecting the feelings their students have toward learning by allowing the students the time to write and participate with others, even with students from different parts of the world in some cases. This is similar to the way cooperative learning contributes to high levels of motivation in that it promotes good academic attitudes among group members (D. W. Johnson & Johnson, 1994).

*Student Motivation.* Collaborative learning may be defined as individuals encouraging and facilitating each other's efforts to achieve, complete tasks, and produce in order to reach the group's goals. This interaction is characterized by individuals providing each other with common motivation to strive for mutual benefit and maintain a moderate level of excitement with low anxiety and stress (D. W. Johnson & Johnson, 1994). This motivation to learn is an important part of the student’s contribution to their own achievement. Bloom (1976) refers to it as an affective characteristic (p. 48) and Marzano (2000a) calls it student interest (p. 72), but
later renames it to the more popular term of student motivation (Marzano, 2003, p. 124). Regardless of how it is termed, student motivation plays a critical part in student achievement and blogging appears to be a highly motivating instructional technique that can be performed at school or at home. Blogging by a student appears to further their learning and seems to cause the student to feel pleased about their academic environment.

**Summary of Teachers Blogging to Communicate**

Blogging by its very nature gives students a vehicle for sharing their ideas with one another, a contemporary way to gain additional knowledge or understanding that resonates with students being raised in the digital age. Hoping for a better climate for learning (DuFour & Eaker, 1998) and wishing to employ the well-known instructional technique of cooperative learning (D. W. Johnson & Johnson, 1994; R. T. Johnson & Johnson, 1986; Totten *et al*., 1991), the edubloggers seem to be able to strongly promote a naturally occurring culture of collaboration through students reading and commenting on assignments. While increasing the relationship they had with their students was not one of the stated goals, most teachers indicated an increase in student to teacher collaboration. These findings suggest that computers can serve as a critical communication tool within the classroom. The immediate use was for teachers to post assignments, but as they and their students became more comfortable with blogging, the computer became a means of building networks between teachers and students, among students within the class, and with students across the globe.
Teachers Blogging to Deliver Instruction

Colvin-Clark and Mayer (2003) identified three instructional techniques for learning using technology. The receptive method stresses acquiring information, the directive method emphasizes frequent responses from students with instant feedback from the teacher, and guided discovery places the teacher in the role of an expert, leading the learner toward solving actual challenges and identifying the appropriate technique to support the acquisition of student knowledge. The respondents appear to be using blogging to construct learning environments that utilize these instructional techniques.

The data from responding edubloggers describe student learners who have been a part of a blogging classroom as engaged in four types of learning: (a) students increasing their understanding of topics, making sense of what they learn, and developing their own understanding of the subject matter, (b) students cultivating deeper thought processes; creating meaning and new ideas from the subject, (c) students exploring the subject beyond the immediate requirements, and (d) students connecting with previous experiences learned in or out of the classroom.

Promoting Writing through Blogging

As students put their ideas on paper, they often create new knowledge and develop awareness of new ideas, concepts, and relationships they did not have before they began the process of writing. The active nature of writing provides students with a means for exploring their thinking (Vygotsky, 1986). Writing will naturally broaden the concepts underlying the new words that ultimately become an enduring part of a
child’s vocabulary. Writing especially helps to internalize difficult concepts that may otherwise go unlearned through minimum contact with key terms during reading (Pearce, 1984; Pearce & Davison, 1988).

Results from the first survey showed communicating with their students and using the blog as a writing tool were the top reasons teachers use a blog. Of those posting monthly, over 75% said they did not use the blog to post writing assignments. However, teachers posting daily said they used the blog to post writing assignments close to 60% of the time. The results from Survey 2 parallel responses from the first survey in that communicating with students and practicing writing were two primary reasons for starting a classroom blog.

Edubloggers responded that students were empowered by the writing process to collaborate with other students in this writing process at school or at home. This collaboration seems to become a connection with the world. Respondents reported that students are excited at the prospect of communicating with other students inside or outside the classroom. This dual learning process appears to be very appealing to the beleaguered teacher as a way to create additional time for learning in the classroom. Teachers seem to believe blogging changes students from a rigid learning perspective into open-minded writers, highly motivated to not only perform the writing assignment, but also to collaborate with their peers.

The blogs have given me a fitting medium to pursue those goals, and they have changed the activities to allow me to put students’ writing back into the eyes of
other students (reading each other’s blogs, seeing what other students are doing– I couldn’t do that with typed assignments or with notebooks).

(Teacher 9, Interview 1-Q3)

**Student Motivation and Self-esteem.** This newfound excitement about the writing process may have also stimulated the student’s enthusiasm for school. The interviewees expressed strongly how the blogs motivated the students to learn, revealing how they were using the motivational power of blogging to motivate students to complete assignments, write more, think deeper thoughts, or post comments. The teachers also gave examples of how blogs promote deeper thought in assignments and in their postings. I observed an interesting trend with these examples: The teachers talked of raising the levels of cognition in students in the same sentences where they gave examples of raising the student’s level of self-esteem. I did not track this phenomenon, but this link seems supported by the work of others. Pennebaker (1990) suggests some blogs may be mentally therapeutic, adding to techniques educators use to promote higher level thinking and increased motivation towards learning by students.

The limited student data from two of the blogs, confirmed the motivational power of blogging. This is an important finding, since most of the interviewed teachers served upper elementary and secondary students where motivation can become a critical factor in student learning (Bloom, 1976; Marzano, 2003). As Good and Dweck (2006) assert, “motivational processes are central to far more aspects of school success than many have realized” (p. 39). It could be that blogging allows
students to redefine their abilities as they see their work posted next to other students’ work. It also enables them to observe other students commenting on their work and then have an opportunity to reshape and refine their own work. The data in this study also suggest that feedback on assignments from the teacher as well as fellow students may be more immediate, which contributes to student motivation.

Assessment Practices. One interview question (#11) asked the teachers to assess the practice of blogging on specific types of student learning and methods of instruction. The question assumed the teacher assessed the practice of blogging either formally or informally. However, this may not be true. The question seemed to create hesitation and doubt among the respondents. It is puzzling to me that this question failed to produce more response since previous questions were filled with examples of students taking a deeper approach to their learning. Teacher 1 wrote in Question 3 of a week-long assignment that asked deep probing questions of students to relate certain parts of the book they were reading as a class. She admitted the students were “getting more” out of the blog discussions than the previous year without the blogging tool.

The same was true of Teacher 10 in Question 2. She was pleased that her special needs students were able to take the time to create posts that were more thoughtful. Blogging and the patience of the computer allowed these students to develop skills in a way that was previously unknown. She stated that, “eventually, all my kids get to the same level of comfort and as a result their writing improves and the quality of thought that goes into their writing is expanded.”
Both of these examples show proper instruction and assessment, although not in the traditional sense. Perhaps the respondents thought of assessment with traditional implementation and did not believe they were accomplishing this. Perhaps the question was poorly worded, intimidating to the respondents, or should have been in the first section of questions. Conceivably it is a question that is too difficult for edubloggers to answer this soon in their struggles to create blogging classrooms.

I think that the higher order skills kids are honing are very hard to measure. Informally, I am confident that there is improvement in students’ ability to construct their own knowledge. I am basing that on my 4 years’ experience as a teacher, so I may not be correct. Formally, I think the best way to assess would be to create or find a rubric that would help me assess student learning by blog. Know of any that are out there?

(Teacher 5 Interview 1-Q8)

Three Illustrative Examples

Qualitative research cannot always be fully explained; it is a process that is “highly intuitive” and difficult to describe where an insight came from or how associations among data were identified (Merriam, 1998, p. 156). To create a more holistic and summative perspective and to contextualize the educational practices of respondents, I present three individual cases that seem to be using blogging in a way that is effective for students and, most importantly, presents ideas that can be replicated by other teachers. It has been my intention throughout this study to understand how technology and blogging can increase communication and interaction
between students and teacher, among students, and students with the broader world and how blogging can enhance and support the complex process of effective communication. It is my intent to better explain the process of blogging in the classroom by providing specific examples of the practice by focusing in on those using it extensively and successfully.

Therefore, to support the findings in this research, three illustrative examples have been developed to further clarify the extent of the blogging outcomes educators have experienced. These examples will also convey how teachers have demonstrated their competencies in a variety of contexts and across all grade levels and subjects.

_Middle School Science Teacher._ Since most of the participating teachers were primarily English Language Arts instructors, it was refreshing to find a blogging science teacher. This teacher participated only in Survey 1, so I will refer to him as Teacher 13. He was also the only teacher that I was able to engage in face to face conversation.

While touring a school in San Diego with Alan November in the fall of 2006, I happened to meet Teacher 13 and speak with him about his use of blogging as an instructional practice with his middle school students. At the time, he had been a credentialed teacher for three years and had been blogging with his students for less than two years.

His posting style and online content could be considered more of a forum or an online discussion group than a blog. Online services and bulletin board services provide a variety of forums, in which participants with common interests can
exchange open messages, which leads some to confuse these forums with blogs. In his third year of blogging with students he made a distinction between the online portal where general information is posted, the topic forum where students are more conversant in an informal sense on a topic chosen by him, and a separate blog where he encourages his students to write reflections, commentary, reviews, or to share thoughts and ideas.

Teacher 13 posts assignments to the blog daily and expects students to read the blog daily. He has online journals and discussions where students hold each other accountable, engage in supplemental curriculum materials, and find resources to support their statements. When he provides directions to the assignments, he links an interactive simulator to explore science concepts. When the students return to the blog to create a response, their writing seems to be more cognitive of concepts, with students responding in a more stimulating and responsive manner.

The blog also contained a larger collection of graphic representations of students and student work. Students would use a virtual representation of themselves, commonly called an avatar, as a part of their posting. The teacher would also use graphics to explain science concepts and would expect the students to reciprocate in like fashion. In year three, he included the software Inspiration to the tools used by students. Inspiration is a tool students rely on to plan, research and complete projects. In one lesson the students used it to create a graphical outline to expand topics into writing as they created an online comic book about time travel.
Currently in his third year he has made the transition to a fully developed online teaching environment. He considers his former websites to be too rigid and static, and they did not have the ability to do such popular activities as gaming, downloading media, messaging, and social networking. He has developed a completely interactive website that has the potential to do more of the activities that motivate students such as social networking and the sharing of media. He considers this new environment to be the “classroom and the lunch court.” After testing out and researching several content management systems, he chose Wordpress for its simplicity, large support community, and adaptability.

The portal and associated forum and blog require a log in with a username and password for each student. He requires students and parents to read and sign the district and school network, Internet, and computer use agreements. The entire site is a professional academic community where all actions and content are moderated and archived by the teacher and all content is centered on learning. The public is not able to read any of the student blogs.

*High School Foreign Language Teacher.* Teacher 10 has been a credentialed teacher for over 11 years. She is currently the instructor for ninth grade foreign language students helping them to learn the skills of writing and speaking Spanish. Located in an area north of Cincinnati, Ohio, the school consists of mainly Caucasian students who maintain academic scores well above the state averages. She describes herself as a “technology integration enthusiast working to bridge the gap between how students live and how they learn.”
While she has only been blogging for just over a year, she faithfully posts to the blog weekly. Students, however, are only required to post to the blog monthly. This requirement seems to have changed lately with added postings and student interactions noticeably increased with the start of the 2007-2008 school year.

Her school district supported her use of the blog as instructional practice because it was shown to be a safe, fun, and positive experience for the students. She felt it was safe because she used the Blogmeister software from Landmarks Project. Since it is password protected, nothing can be published without first being viewed by the teacher.

She seems to have found success with the idea of worldwide collaboration using podcasts and blogging. She invites comments from other students all around the world and encourages them to talk about who they are and what they do in and outside of school.

Initially she used the novelty of the blog to stimulate assignments that otherwise did not appear to motivate the students. Usually the posting was a response to something they read in class. But this “anytime-anywhere” link to actual use of the language turned out to be more than just an exercise in motivation.

She began to see it as a way for the foreign language students to have an authentic connection with the world. It became a way for the students to publish their work for a worldwide audience to see. The resulting feedback from others from around the world seemed to motivate students to produce deeper, more engaging
work. Blogging became a way for students to document their progress and establish a means of communication between home and school.

Teacher 10 was unique in her use of English and Spanish text on the blog. It is this unique combination of writing and audioblogging in English and Spanish that gave students authentic samples of their work for an online portfolio. Although occasionally she will allow students to post other items to the blog, most postings are actual assignments for students. Many other classrooms have responded or commented to the student postings as a result of the blog being placed on a part of the Global SchoolNet. The world map hit counter at the bottom of the blog page graphically shows a viewer all of the places in the world where other people have viewed the blog.

The endeavor was not without its share of difficulties. The teacher felt a lack in the amount of interaction from Spanish speaking students. While some classes responded in Spanish, the simplicity of their Spanish syntax did not challenge her students. They had hoped to hear more from students in Spanish-speaking countries. She hopes that her students will interact with other students in Spanish-speaking countries and compare and contrast cultural lifestyles. Through their interaction on the blog, she hopes they will learn to be better communicators with the Spanish language.

Because she manages 115 students, it has become difficult to enter grades in a manner synchronous with postings. In order to manage the volume of audioblog grading, she asks one third of the class to do an audioblog one week, another third do it the second week, and the last third do it the third week.

The following is a typical portfolio assignment from November 2007:
Write a short paragraph entitled "Quien Soy Yo.” Include the following information:

1) Three adjectives describing yourself

2) Your age

3) One thing you like

4) One thing you dislike

5) Two things you like but which you like more

6) Describe [your teacher’s] class

For the 2007-2008 school year, Teacher 10 has included an online software that offers an easy way to create and distribute audio content. Gabcast.com provides worldwide access to the podcasting service through VoIP (voice over Internet protocol). The program embeds a flash audio player into the class website/blog and students use the program to communicate via a podcast or audioblog. Once the student makes a recording and it is published, a message is immediately and automatically sent alerting certain subscribers that the blog has been updated.

Middle School English Language Arts Teacher. Teacher 12 has been a classroom teacher for three years, blogging daily for two out of the three years. He is a middle school teacher assigned primarily to the instruction of English Language Arts students. His suburban school is located in central Colorado. He uses a combination of various forms of online communication such as Wordpress websites, blogs, forums, podcasts, and social networks. He appears to be the most prolific user of blogging as an instructional practice in this study.
At the beginning of last year, he had four computers in his room and good support from the principal. This year he has a class set of laptops on order and has gained the attention of district administrators in order to receive more. He believes strongly about creating change in a school by using the right words and data to convince stakeholders that change is essential and proximal. By appealing to the community’s emotions, ideas, and concepts of education technology, he believes they can become the biggest advocates for change in the school.

He first began to use a blog when he saw how powerful it was in his own learning and in the learning of fellow edubloggers. This professional development model appealed to the type of student writing community he was trying to create, but had not been able to create before the use of blogging was possible.

The first year of blogging with students he used the blog for posting essays and allowed students to comment on those essays as he moderated the posts. The second year he posted his and his students’ memoirs and poetry on personal blogs, getting into deeper topics and encouraging the students to become more expressive. He modeled this behavior with his own personal blog. Students are now required to make comment about several safe and authentic topics at least once a week in the main class blog. He also maintains a lesson plan blog, a reflective teaching blog, and a podcast blog.

He has felt supported from other edubloggers around the world who have commented on his blog. Local teachers at his current school site have also supported him in his use of blogging in the classroom. This support has turned into a professional development program that allows him to teach other teachers about
blogging in the classroom. The school principal places information about the blogging practice in nearly every newsletter sent to all parents. The main constraint to his blogging endeavors has been the lack of hardware such as a video projector or additional computers. He feels some guilt when the principal takes resources away from other teachers in order to get more online access for his students.

Last year he had a school-wide audio book review that was posted on the website and a link was provided for students to post those reviews to a central blog. This type of book review then becomes searchable and shareable for the school community. It also allows students from other classrooms to post comments. Although the books are available in audio, students post in text form.

This type of highly motivating instructional technique was also used in an assignment called “The Virtual Vacation.” He used this assignment as a way of teaching about hyperlinking information. When the students were shown how to do hyperlinks, tags, RSS feeds, and the like, they become enthusiastic about sharing the resources they found with others using this method. This encouraged a greater sense of community and student to student interaction. Teacher 12 continued with this positive encouragement by assigning discussion questions to various topics, assigning commenting or replies to postings, and by giving students time to read through posts and comment whether it was in the classroom or outside of the classroom.

Currently he has created a website for students where they can write more for themselves and hopefully become more proficient writers. He has struggled with how to get students to write for themselves in a more authentic way and feels that creating
an audience of worldwide peers will give the students more topic choices and more motivation for deeper thought and content. Giving permission for students to write anytime and anywhere they want via the Internet and making this writing available to an infinite audience will hopefully make the student feel fully supported by people who are genuinely interested in what they have to say, thus their writing becomes something that they desire to create and that other students will view as authentic.

This “Academy Authentic” was created by Teacher 12 as a forum for developing a writing piece of at least one lengthy paragraph or poem on any topic that means something to the student. These writing pieces are posted on individual blogs in order for other classmates to read and respond to them. The postings should be the most engaging of all other postings because they are student selected as the best and most authentic pieces. He encourages the students to do this not simply for a grade, but to help them to become a better writer. They are pushed to build upon what others contribute to their writings and make the writings more thoughtful through this continuous revision process.

Teacher 12 lists three requirements for The Academy Authentic participants:

- You must write something you actually want to write. There is no excuse for being bored by your own writing. So, go and write something that you are interested in. Be creative, be realistic, be hopeless, be mindful, be overjoyed, be open, be wrong, be anything you want to be in your writing.

- You must tag/categorize their Academy Authentic with “academyauthentic” and at least one other tag. This way, the community of writers takes control of
how their words are presented. You are the ones categorizing your writing. You are the ones that dictate how your writing will be seen by the world.

- You must write something you are proud of. Do not tag anything with “academyauthentic” if it isn’t something you think is a cut above your average post. The Academy Authentic should be something that is both personal and universal, something that others will want to read. Everyone has written these types of posts, so don’t be shy about tagging them accordingly.

The teacher also believes that revision and feedback are the most essential elements of the Academy Authentic. He requires them to revise the writing based on feedback or it will be graded as incomplete. This revision based on posted comments must be extensive with not only punctuation and spelling mistakes corrected, but also extensive revision of thought. To do this he has provided the students with a procedure to ask for and then to give feedback.

- Copy over your [writings] if you have not already set up your docs account to post directly to your blog.
- Solicit feedback from at least four people by sharing your document with them.
- Receive comments (insert comments directly into the document by going to insert and then comment) for necessary revision changes.
- Address each comment either by revising your piece or by writing back to the other student within the comment box.
• Compare your piece to the rubric and do a self-assessment at the bottom of your piece.
• Share your finished piece with the teacher.

The list of story starters, provoking images, intriguing questions, and authentic prompts are mostly created by students. This “constantly growing” list of topics is maintained by using Google Docs collaboration tools. This allows students to make changes together, at the same time, and from any location using the free online application software.

These three detailed examples illustrate the major themes found through the various data collection steps (surveys, interviews, and document analysis of blogs). First, all three seemed to be drawn to blogging because of its motivational power for students, thus helping the teachers to be more effective in their instruction. Second, all teachers steadily increased the consistency and use of the blog, expanding the variety of technological tools they and the students used as a part of their blogging. Third, all showed the power of writing and, perhaps more importantly, peer review and revision were used as a motivational and learning tool to enhance knowledge acquisition and cognitive and conceptual development. Fourth, each teacher found unique ways to overcome challenges, such as protecting privacy while encouraging sharing, monitoring postings, acquiring software and hardware, and addressing the volume of student work. Finally, all illustrated how they were using the blog as a way to connect
students to the broader world through links to other sites and communicating virtually with students from around the world or across town.

*Summary of Teachers Blogging to Deliver Instruction*

The data clearly show teachers using blogging as a motivational technique to encourage students to perform writing tasks, which they feel leads to greater depth of thought. As the students perform these writing tasks with deeper thought, teachers perceive that the students begin to make sense of what they are learning and make connections with previous experiences. They are also likely to explore the subject beyond the immediate requirements and are likely to have positive emotions about learning. This phenomenon provides an example of the theory of learning described by professors at the University of Technology Sydney (2007) who built upon the research of Scouller (1996) and Biggs (1999). Scouller’s research (1996) shows that students appear more likely to employ deep strategies when writing essays and to perceive the essay as assessing higher levels of intellectual abilities, allowing students to develop higher order skills. Her research could be interpreted as encouraging the practice of blogging since blogging is a skill similar to essay writing with levels of writing that can vary with the teacher’s purpose of assessment. Biggs (1999) approves of essays because “the act of writing externalizes thought, making it a learning process” (p. 8). He says that by students reflecting on what they see, they have the ability to revise their writing in many ways, creating something quite new and more thoughtful. Essays performed at home where a student has enough time for deep thought and editing promote learning; if motivated because of peer review, the student can consult more
sources and, with that deeper knowledge base, might be able to integrate ideas more effectively.

**The Influence of Blogging on Classroom Communication and Instruction**

As indicated in Chapter 4, the results show that most teachers continue to be enthusiastic about the practice of blogging even after two years of use. This enthusiasm can be easily seen through the change in a teacher’s communication technique with students. The enthusiasm also seems to carry over to the use of blogging to increase students’ time and opportunity for writing. Because of the changes to instruction and the increased motivation of the students, a teacher will generally increase the time spent on practices that are perceived as beneficial. In this study several benefits were identified that seemed to be motivating teachers to invest time in blogging: (a) higher levels of student motivation, (b) increased levels of writing, (c) increased insights into their students through the personal exchanges of comments on readings and writings, (d) greater interaction and collaboration among students in the classroom, (e) increased computer competence, especially for older students, and (f) a teacher’s own professional development. A few teachers stated that achievement scores and proficiency levels had increased since they began using blogs. Almost all teachers in this study indicated blogging did take increased time, especially in the beginning when they were developing their skills, but all seemed to feel the time was well spent in terms of a time to benefit ratio.
Changes to Communication

A possibly significant finding from this study was obtained from the first survey of 168 respondents. The more experience a teacher had using a blog as an instructional practice in the classroom, the more frequently they posted to the blog (Figure 4.1). The less experience a teacher had using a blog as an instructional practice in the classroom, the less frequently they posted to the blog. Over 60% of the first year bloggers posted to their blog on a weekly basis. Conversely, 60% of edubloggers with two years of experience with the practice posted new information to their blog daily. None of those experienced edubloggers indicated they were posting only monthly.

Commercial bloggers receive funding from advertisers when people frequent their blog. Advertisers consider blogs that receive frequent viewings from large numbers of people to contain current and valuable information, to be a blog that is significant and worthy of the expense. The same may be true of teacher blogs. It is possible if a teacher posts daily, students and parents are more likely to return to the teacher’s blog because they consider the blog to be of importance and worthy of their time. So increased student reliance for online information may be the reason the teachers begin to post more frequently after two years of use. Teachers may also be feeling more understood in their directions and assignments to students through the simple act of increasing the flow and availability of communication through the new medium of blogging to the stakeholders.
Changes to Instruction

But increased posting may also indicate that the teacher perceives the blog is an effective instructional tool for student achievement. Hattie (1992) says to improve education one must simply provide feedback in a way the child can understand the steps they must take to improve. As well as feedback on the task, Hattie believes that students can get feedback on the processes they have used to complete the task, and on their ability to self-regulate their own learning, creating the capacity to increase achievement. He believes the most fundamental component of teaching is imparting information to students, assessing and evaluating the students understanding of this information, and then matching the next teaching act to the present understandings of the student. Since blogging with students can be performed synchronous or asynchronous, it is difficult to receive immediate assessment data from students’ increased viewing of blogs. But one act of blogging could cause increased interest, this interest could lead to more blogging, more blogging could lead to greater understanding, and greater understanding could lead to increased student achievement.

Encouragement from the Principal. Another indication that blogging may be perceived as increasing student achievement could be coming from school leaders. The blogging teachers in Survey 2 found their main supporter to be the principal. This school leader was viewed not only as encouraging the teacher to continue blogging, but also they encouraged teachers thinking of blogging to attempt the endeavor. This vote of confidence could be an indication that the principal views the practice of blogging as a potential method for increasing student achievement or improving
communication. But educational leaders must be wary of any practices that may take away from learning. Marzano, McNulty, and Waters (2005) think that “the school leader’s ability to select the right work is a critical aspect of effective leadership” (p. 97). Principal perceptions and ways of providing support for blogging is certainly a topic to be pursued in future studies.

*Increased Time on Computers*

Asking blogging teachers about how they are using the blog differently today compared to when they first began to use a blog for instruction elicited significant, animated answers. Teachers felt strongly that students were receiving better learning opportunities through additional collaborative learning sessions. These sessions came about because of increased use of the computer as the students participated in the classroom blog with the teacher and with each other. According to the Survey 2 respondents, 89% of them felt their instructional style changed as a result of blogging; this finding was also confirmed in the interviews. As teachers became more reliant on the online uses of the blog, their lessons changed to fit the blogging process, and they perceived that their instruction had gone to a deeper, more complex level.

The need for students to be receiving more complex instruction is supported by the works of Dewey, Piaget, and Vygotsky, who laid the groundwork for the instruction of the digital learner (Dewey, 1938; Piaget, 1971; Vygotsky, 1978). The three agree in principle that individuals construct new knowledge from their experiences. They felt the individual is a complex part of a culture that has no meaning apart from the interaction with members, thus contributing to the current idea
of electronic collaboration as a useful instructional practice. Dede (2005) believes that people proficient at collaborative learning are already experts in the use of digital tools. Lock (2002) suggests that communication tools such as blogging will enable learners to collaborate in complex projects. His research was confirmed in this study through the surveys, interviews, and document analysis. Once students refine complex experiences into more understandable packages, they begin to move beyond the current learning level into more meaningful understanding (Berman, 1996; Pennebaker, 1990). Findings from this study suggest, similar to Jesse et al. (2004), that blogging may allow student understanding to reach new levels, encouraging student relationships for increased school success.

As seen in the data from Survey 1 (Figure 4.1), teachers who have used blogging in the classroom for more than a year post to their blog more frequently. This increases the time the teacher and their students spend on the computer. This increase in daily postings raises their expectations for daily student review of the blog, thus increasing the students’ time on computers. Research shows that school-age children are already on the computer for long lengths of time (Lenhart et al., 2005). These students are active in their use of broadband Internet with social networking sites and instant messaging. It is possible that if teachers raise their expectations and place daily assignments on the Internet, students will increase their time on computing devices to an even greater extent. This increased time will potentially create a need to fund more computers, improve the networking infrastructure, change school schedules in labs
and libraries, modify classroom procedures, and provide training on these new instructional techniques and delivery methods.

**Blogging as a Reflective Practice**

As defined in the introduction and discussed in the literature reviewed in Chapter 2, blogging is a form of diary, making it a potential vehicle for instruction as well as an instrument for personal enrichment (Allport, 1942; Esterling, 1999). People write in diaries for many reasons including self-expression, and the desire for personal perspective (Allport, 1942). Pennebaker (1990) believes the act of writing in a diary is mentally therapeutic or preventive maintenance for the soul. The value of writing or blogging about thoughts and feelings lies in organizing ones complicated mental and emotional life. Blogging as a reflective practice may be an inexpensive and simple way to help maintain an educator’s personal and professional health. Several of the teachers shared that blogging seemed to have this influence on their work, as captured in these quotes.

The first year I did blogging with students we had a class blog for posting essays and commenting, the second year I did memoirs on personal blogs and poetry on personal blogs, and this year my students are blogging about any safe and authentic topic at least once a week. I also maintain a lesson plan blog, a reflective teaching blog, and a podcast blog.

(Teacher 22, Survey 2-Q7)

I maintain a reflective teacher blog that is constantly responding to what the students bring up in class. I show them how my blog becomes an extension of
my thinking about literature (including new literacy) and life. I also show them how to write in their blogs (on the smart board) and let them explore tutorials that have been created by other teachers.

(Teacher 12 Interview 1-Q10)

I found the reflective teaching blog mentioned by this respondent interesting. Professional development research (Marzano, 2003; Schon, 1996) suggests that reflective practice that involves thoughtfully considering one's own experiences in applying knowledge to practice can be highly beneficial to people. Stigler and Hiebert (1999) promote a professional development model for a teacher that includes teacher collaboration, continuous feedback, and finally capturing and archiving this collective knowledge gained from the collaborative effort. Marzano (2003) also believes that “collegiality and professionalism involve interactions between teachers that are collaborative and congenial” (p. 67). Therefore, blogging as a form of archived reflective practice could benefit teachers by strengthening their collective instruction, professional shared demeanor, and perhaps even assisting with their personal life. The findings from this study suggest this is indeed happening for some of the teachers and deserves further study.

Summary of the Influence of Blogging on Classroom Communication and Instruction

Though bothered by their increased time on the computer, especially when first starting to practice instructional blogging, teachers found the time spent worthwhile both for their professional disposition and for the increased opportunity students have for learning. Teachers with more than one year of edublogging experience showed
their strong interest in this practice by posting more frequently, increasing student time with computers, and increasing the use of blogging as an instructional practice regardless of the amount of time spent using blogging. The majority of the teachers expressed the belief that their school principal supported this practice because it was benefiting the students.

**Conclusions**

Several important conclusions can be drawn from this study. First, this study highlights the important role of writing in education. Vygotsky (1978) proposed new ways to understand language and thought that have challenged several traditional views of education. His work shows that speaking and writing skills are fundamental to humans and partially dictate how we perceive the world. Vygotsky was resolute that the way children are taught to read and write should be changed. He said that writing was as basic as speaking because it was a natural advancement and children should be given the chance to learn to read and write at an early age. But the method of learning should not be based on the obligatory rote teaching styles; rather, reading and writing skills should be seen as pleasing forms of communication by the children. The research from this study appears to show that students view blogging as enjoyable and they are highly motivated to write as a form of response to the teacher and to fellow students both near and far, even at an early age. They also seem willing to continue their writing activity over longer periods of time not only in the classroom, but also outside of school hours.
Second, blogging represents a new way for teachers to interact with their students. When teachers change their instructional strategies to include practices that encourage the learner to be an active participant, greater potential exists to improve student learning (Dede & Kremer, 1999; Duffy & Jonassen, 1992; Quicke, 2003; Vygotsky, 1978). Marzano (2003) believes that learning requires multiple exposure to and complex interactions with knowledge (p. 112). Piaget (1971) said that students require multiple exposures to knowledge in order for the assimilation, and ultimately the accommodating change of retained knowledge to occur. Blogging seems to offer students many opportunities to explore the subject in greater detail and make multiple changes to their work. Teachers in this study seemed to sense this and began changing their instructional practices to more actively engage students in their learning, to write or talk about facts and theories from the presented curriculum. These teachers even seem to be involving the student in writing about pertinent educational material within the context of their own personal experiences, which has been recommended by a number of scholars (Allport, 1955; Berge & Collins, 1998; Berman, 1996; Cole, 2004; Esterling, 1999; Kelehear, 2002; Pennebaker, 1990). Findings from this study suggest that blogging could be an effective form of communication and instruction for the teacher and a highly motivating digital tool for the student.

Third, blogging as an instructional practice appears to fulfill the desires of a teacher to be an active participant and co-learner with students, which has also been identified as a key component of effective pedagogy by researchers at the University of California, Santa Cruz (Doherty et al., 2003). The Five Standards for Effective...
Pedagogy promotes positive learning outcomes for students by facilitating the construction of knowledge by teachers and students and promoting conceptual elaboration. The standards include collaboration, language use, connected learning, cognitive complexity, and student teacher dialogue. These standards are seen as critical for improving the teaching and learning of culturally and linguistically diverse students, but are useful for all students.

The five standards for effective pedagogy are the result of many years work by the Center for Research in Education, Diversity & Excellence (CREDE) and its predecessor, the National Center for Research on Cultural Diversity and Second Language Learning. These standards appear to match closely with the data collected in this study regarding blogging as an effective instructional practice.

As a form of writing, all data collected seems to point to blogging as an effective communication method, as highly motivating to the learner, as easy to use (for the instructor and students who have access to computers with broadband Internet), as a tool that inspires the learner to use deeper thought for greater understanding, and as a technique that encourages the learner to be an active participant in the educational process. Another conclusion from this study is that this same blogging activity can be beneficial in a personal and professional manner to the teachers, allowing them to write and think in a more reflective style. This could encourage an increase in professionalism, personal satisfaction, and student relationships.
Recommendations for Future Research

On one level, blogs may appear to be little more than personal diaries posted on the Internet for everyone to see. Yet, when used as a communication and instructional tool, they seem to provide a round-table for teachers to share ideas with other educators across the globe or simply talk about themselves and others in a local setting. Blogs become communication bridges with not only the child in the classroom, but also the Millennials who are entering the workplace as teachers. But it is possible that blogging is also an indicator of the teaching profession in transition—and without attempting to use or consider a tool such as blogging—the profession could have difficulty relating to the Digital Age student or teacher.

Blogging for the 21st Century Learner

Future researchers should study the phenomenon of blogging not only as an instructional practice, but also as a survival technique. As students change, as families change, as communication tools and user expectations change (Ethier & Gold, 1996; Ferrandino, 2001; Fuller, 1996; Gates, 2000), so the teacher should change. One could argue that the typical classroom of today would feel just as familiar to a person transported in time from 200 years ago. However, our way of communication, and thus learning, has changed vastly from any other time period in recorded history.

Blogging could be both a stop-gap and an answer to meeting the needs of the Digital Age learner. As a stop-gap, it might appear to some as merely a writing tool; it seems familiar, like a diary, and easy to use as long as you have access to a computer. As an answer to antiquated instructional techniques, it fulfills the requirements of
good educational practice and it takes the student to an engaging electronic place that is familiar to that student and motivating to them as a learner.

**Blogging as a Reflective Practice**

The findings from this study suggest that blogging as a form of reflective practice could benefit teachers by strengthening their instruction as they post information and interact with their students. In addition, it appears that some of the most active blogging teachers are connected and learning from other teachers via blogging. Both the ideas of blogging as reflective practice and as a means of promoting professional growth and development deserve further research.

**Widen the Parameters of Participation**

The larger group of 168 respondents in Survey 1 closely matched the responses of the participant group of 51 in Survey 2. Survey 1 included teachers from many parts of the world and from institutes of higher education. This may lead to speculation that blogging by a teacher for an instructional purpose has commonalities regardless of the level of teaching and location in the world as long as you have Internet connectivity. College professors may be using blogs in the classroom for purposes similar to K-12 teachers. Exploring and understanding who is using blogging for instructional purposes and how it is being used at different levels of the system and in different countries is worthy of further exploration.

**A New Practice Changes Exponentially**

As a result of the survey and interview questions, I noticed the participants began to act or say they would act from new insights they gained simply by being
asked these questions. Since blogging research is relatively new, asking questions about the use and value of their practice stimulated teachers to ask themselves questions about their continued use of a blog in the classroom. The blogosphere’s endless capacity for providing input, answering questions, and stimulating discussion may create changes to this instructional practice at an exponential rate.

Teacher Goals for Student Interaction versus Actual Practice

The teacher respondents in Survey 2 indicated high expectations and goals for their students’ interaction with one another (Figure 4.4). This study may have fallen short of fully confirming that teacher goals and actual practice match. Several teachers claimed remarkable learning outcomes as a result of this increased communication and active engagement with blogging, but I did not collect confirmatory evidence. Future research, perhaps in the classroom, could study blogging teachers and the goals they have formed for their learners by means of the instructional practice of blogging. The challenge of having full access to blog sites because of privacy restrictions requires exploring different ways to actually collect and analyze student responses over time.

Administrative Support

If the main supporter of an edublogger is perceived to be the principal, then a future study of a principal’s perception of the practice must be pursued. The study should include ways the principals see they support or constrain the practice along with ideas they may have to further enrich the experience.
District Funding for Blogging

What change will increased blogging have on district funding? Blogging by a teacher as an instructional practice appears to lead to increased use of computers by the teacher and by the students. This creates a need for more computers and thus more funding. Perhaps the greatest asset of the district is the teacher’s time on the task of delivering effective instruction. Further research should be performed to discover whether or not the increased time by teachers and students on blogging increases learning more than traditional forms of instruction. The high-end users of blogging in this study, who seem to be actively engaging students in considerable writing and using several blog sites, suggest that blogging offers instructional potential that is well worth further study.

Deeper Thought versus Standardized Testing

Teachers perceived that blogging promotes deeper thought in ordinary assignments. This deeper thought was encouraged by the teachers because they believed it would promote further understanding of the subject matter. Currently education is inundated with political demands for students to achieve on standardized tests that do not necessarily assess if the student understands the material beyond a low-level multiple choice response. Unless research can prove that deeper thought also creates increased achievement on standardized tests, school leaders will be unimpressed with this result of blogging.

The bottom line for educators should be that the student has learned those things that the instructor intended and even more. I do not mean to imply that the
factory model “bottom line” should apply to schools directly. This would cause students and teachers to mistake grades as the only "measurable" quality of student progress, or worse, as the estimate for learning and teaching. Students must also learn the nature, knowledge, and skills of investigation as well as the core subjects to be successful.

However, it is encouraging that several teachers in this study also indicated that their students were achieving higher levels of proficiency on benchmark tests and other assessments. Research should be conducted to determine if students who are involved in blogging as compared with similar students who are not using blogging in their classrooms have higher outcomes not only in open-ended performance assessments such as writing, but also on standardized tests.

*Deeper Thought Raises Self-esteem*

As I tracked this perception that blogging promotes deeper thought, I noticed the teachers talked of raising the levels of cognition in students in the same sentences where they gave examples of raising the student’s level of self-esteem. It is possible that raising a student’s awareness of their surroundings, allowing them to form connections with students inside and outside their local community, and encouraging deeper levels of cognition could raise the student’s self-esteem. Research shows (Allport, 1942; Pennebaker, 1990) that writing in a diary is a healthy activity for people, especially when they are experiencing periods of stress or self-doubt. Further research on this topic could assist the field with more effective ways of helping
children, and even adults, use blogging to promote self-esteem as well as develop their confidence as learners and writers.

**Connectivism, Collectivism, and Constructivism**

The literature review attempted to show how the theory of constructivism (Brainerd, 1978; Dewey, 1916; Lambert et al., 2002; Singer & Revenson, 1978; Vygotsky, 1978), and previous research conducted in this area as it relates to learning outcomes, could be combined with the less educationally known theories of connectivism (Siemens, 2004, 2005) and collectivism (Pór, 1995; Rheingold, 2002). Further research may strengthen the connection of how these theories build the case for a new type of learner that is entering the classroom. This new learner expects the instructor to use different modes of instruction, such as blogging, and teachers may not succeed with Digital Age students without changing their mode of instruction to include technological tools such as blogging and podcasting.

**Equity of Technology Access**

When only responses from daily posting teachers are used, 26% say they expect students to view the blogs at home and 26% say they have never assigned students the task of viewing the blog at home. This suggests that teachers are aware not all students have access to computers at home and therefore are reluctant to use their blog as the sole means for communicating assignments. Further studies on this topic should compare teacher use of blogs using student or family socioeconomic data. The continued use of edublogging, and its related effectiveness as a learning tool, could be dependent on student access to the blog away from school.
The Differences between Forums and Blogs

The line between methods of collaborative communication seems to be blurring. A list-serve sends copies of an e-mail to all members on a list and retains a record of those e-mails and replies in an archive available to be read online. A discussion forum posts messages through the website instead of by e-mail. Discussion forums organize discussions into topics and subtopics, allowing members to post repeatedly. A good blog has a distinctive personality or group of personalities at its core allowing visitors to post comments to the blog in a more social manner. Sometimes long discussions can take place on a blog, but each topic is started by the blog owner. Aggregators collect the feeds from many different blogs and list recent posts all in one place.

Research on this changing form of communication would assist the field in not only knowing where this mode has been, but also where it is going. This study has shown the rapid deployment of electronic communication throughout the world and education’s lack of timely response. Since colleges and universities have taken major steps to promote online classes, threaded discussion groups, and forums, it is imperative they keep pace with the evolving technology. With continuing research on this topic, educators could better predict the next evolution.
March 2007

Dear Fellow Educator,

I am a candidate for an Ed.D. in the joint doctoral program in educational leadership at the University of California San Diego, CalState San Marcos, and San Diego State University. I am asking for your participation in my dissertation research. I am looking at teachers who are blogging as an instructional practice in the United States. Blogging has become an incredible way for teachers to communicate with students, families, and the community. Some teachers have taken it a step further and are actually using it as a tool in the classroom for assignments, assessments, and building relationships through writing.

To participate, all you have to do is have an Internet connection and go to http://www.surveymonkey.com/s.asp?u=[omitted]. Completing this brief survey will take you approximately 10 minutes.

Perhaps you are not blogging, but know of someone who is engaged in this practice. Is there a faculty or staff member who might be more familiar with blogging teachers? Please pass this email along to them. Getting a response from teachers is important in developing our understanding about the potential of this instructional tool!

Everyone who completes a survey will be able to request a copy of the study at the end of the survey.

If you have questions about this survey or the study, you can reach me by email at [omitted].

Thank you in advance for your time and participation.

Sincerely,

Jeffrey P. Felix
Doctoral Candidate
Teacher Education Department
Educational Leadership Department
University of California, San Diego; California State University, San Marcos; San Diego State University
Appendix B

Survey 1 Participant Request Letter 2

Dear [Name of Edublogger],

My name is Jeff Felix, the superintendent of Bonsall Union in San Diego County. I am also a candidate for an Ed.D. in the joint doctoral program in educational leadership at the University of California San Diego, CalState San Marcos, and San Diego State University. I am asking for your participation in my dissertation research. I am interested in teachers who are blogging as an instructional practice in the United States. As you are well aware, blogging has become an incredible way for teachers to not only communicate with students, but also to use it as a tool in the classroom for assignments, assessments, and building relationships.

I have been corresponding with blog authors about the research I am conducting. Many are excited and have agreed to send a link via an email blast to other blogging teachers. Both David Warlick and Alan November have already agreed to do so in the interests of promoting blogging and learning more about this valuable tool. I am also personally contacting teachers who are leading the way across the country with the practice of blogging with their students.

Because of the depth you have created in your classroom blog, I would be honored if you would consider being a part of this research. To participate, all you have to do is go to http://www.surveymonkey.com/s.asp?u=[omitted] and take a brief survey. Completing this survey will take approximately 8-10 minutes.

Thank you in advance for your time and participation. I apologize for using your blog to post this request. I was not able to locate your email. However, I would appreciate the chance to converse with you via email, if you so desire to share it with me. If you have questions about this survey or the study, you can reach me by email at [omitted]. You can also learn more about me at my blog, which is [omitted].

Sincerely,

Jeffrey P. Felix
Doctoral Candidate
Teacher Education Department
Educational Leadership Department
University of California, San Diego
California State University, San Marcos
San Diego State University
CONSENT TO PARTICIPATE IN RESEARCH

Jeffrey P. Felix, a graduate student researcher at California State University San Marcos, University of California at San Diego, and San Diego State University, is conducting a study on the use of blogs in the classroom by teachers. You are invited to participate in this study because you are using blogs as a form of communication and instructional strategy in your classroom. There will be approximately 1000 participants in the survey portion of the study. The final portion of the study will include only 6-10 participants.

This study has three objectives:
1. To better understand how teachers are using blogs to communicate general information to students.
2. To better understand how teachers are using blogs to deliver specific instruction.
3. To ask teachers their perception of how blogs have influenced communication and instruction in the classroom.

You will be given an electronic survey to complete. This survey will take approximately 10 minutes. Because of your responses to the survey, it is possible that you will be interviewed in a virtual setting either by email or through your blog. The interview will take approximately one hour and, with your permission, will be used in the final paper. In addition to the first interview, you may be asked to participate in a second more in-depth interview. Both interviews will take place virtually; your responses may be done at any time that is convenient for you. Finally, your blog will be examined over a period of time by the researcher in order to study the ways you are using it with your students. The researcher will need full login privileges in order to view the entirety of the blog, including student responses.

There are minimal risks attached to this study. Your interview and survey responses will be kept confidential; available only to the researcher for analysis purposes. If the length of the interview is inconvenient for you, you may terminate the interview at any time without any consequence to you.

Although there is no direct benefit to you for participating in this study, we feel your participation will likely benefit future teachers who may be encouraged by your response to try blogging in their classroom.
Interview responses will be kept in a safe place. Only the researcher will analyze the information you provide.

Interview responses will not be linked to your name or address. So that our research team can contact you in the future, we will link your name to a unique identification number next to it. We do this to ensure your responses remain confidential and that you feel free to respond as freely as possible. You should know that the Cal State San Marcos Institutional Review Board (IRB) may inspect study records as part of its auditing program, but these reviews only focus on the researchers and the study, not on your responses or involvement. The IRB is a committee that reviews research studies to make sure that they are safe and that the rights of the participants are protected.

You do not have to participate in this study if you do not want to. If you agree to be in this study, but later change your mind, you may drop out at any time. There are no penalties or consequences of any kind if you decide you do not want to participate.

If you have any questions about this study I will be happy to answer them now. If you have questions about the study, you may direct those to the researcher, Jeff Felix, at [omitted]. You may also contact the researcher’s advisor/professor, Dr. Kathy Hayden [omitted]. You may also call the CSUSM Institutional Review Board (IRB) at [omitted] to inquire about your rights as a research subject or to report research related problems.
Appendix D

Internet Announcement of Blogging Survey 1

Hey, Blogging Teachers!
If you are a teacher who uses a blog in the classroom, please join your peers and take a short, simple survey! This survey will help other teachers to better understand the powerful benefits of blogging with their students. It will also help them avoid many of the travails that you went through! Take the survey now; it will take less than 10 minutes!

Click here to take survey
Appendix E

Example of E-mail Blast from Authors for Survey 1

Greetings,

Jeff Felix, a superintendent in Bonsall, California, is working on an Ed.D degree in leadership and conducting research on education blogging as part of that work. We've talked a couple of times at conferences about his work, and I agreed to post his invitation for blogging educators to participate in his project. Here is his text:

Blogging Teachers!
If you are a teacher who uses a blog in the classroom, please join your peers and take a short, simple survey! This survey will help other teachers to better understand the powerful benefits of blogging with their students. It will also help them avoid many of the travails that you went through! Take the survey now; it will take less than 10 minutes! Click here to take the survey . . .

The survey can be found at:

http://www.surveymonkey.com/s.asp?u=[omitted]

I hope that you can take a few minutes and hope in generating some data about blogging in the classroom.

-- dave --

David F. Warlick
The Landmark Project
919-571-3292
For Teachers: http://landmark-project.com/
For Clients & the Curious: http://davidwarlick.com/
Blog • http://2cents.davidwarlick.com/
Podcast • http://connectlearning.davidwarlick.com/

(cc) 2007 by David Warlick • Some Rights Reserved • http://creativecommons.org/licenses/by-nc-sa/2.0/
I'm Jeff Felix, Superintendent of Bonsall Union School District in Bonsall, CA. I am also currently a candidate for the Ed.D. in the Joint Doctoral program in educational leadership at the University of California San Diego, CalState San Marcos, and San Diego State University. As part of my doctoral studies, I would very much appreciate a few moments of your time to complete this short survey.

You have been selected because it is possible that you are using a blog as a way of instructing and communicating. This survey will show me to what extent you are using blogs in your instructional practice. The survey and subsequent research will be used to provide data to better understand the use of blogs in instruction and to inform educators of the possibilities blogs have toward improving learning. When the research has been completed you will be sent a copy of the paper as a thank you for your time completing this survey.

If you have any questions before completing the survey, or would like to know more about my study, please feel free to email me at [omitted]. Thanks again!

2. Getting to know you...
Please provide some relevant demographic data so I may know better who is taking this survey.

1. Are you currently a credentialed teacher and teaching at least one class in grades K-12 in the United States?
   • [ ] Yes  • [ ] No

2. If so, how many years have you been a credentialed teacher?
   • [ ] 1-2  • [ ] 3-5  • [ ] 6-10  • [ ] 11-19  • [ ] 20+
3. What grade level are you currently teaching?
- Primary (PS-2)
- Elementary (3-5)
- Middle (6-8)
- Secondary (9-12)

Let's begin by determining how long you have used your blog in the classroom and how much time you spend with it.

4. How long ago did you begin reading blogs?
- Less than a year
- 1 to 2 years
- More than 2 years
- I don't read blogs

5. How long ago did you begin using a blog as a part of your classroom communication?
- Less than a year
- 1 to 2 years
- More than 2 years
- I don't use blogs in my classroom

6. For what purpose(s) did you start using a blog? Mark all that apply.
- Communication with students
- Communication with parents
- Posting assignments
- Writing tool
- Relationship builder
- Other (please specify)

7. Do you now use blogs as part of your instructional practice?
- Yes
- No

8. If yes, how long ago did you begin doing so?
- Less than a year
- 1 to 2 years
- More than 2 years
9. **How often do you update your blog?**

- Daily
- Weekly
- Monthly
- Never

10. **How often do you estimate your students read the classroom blog?**

- Daily
- Weekly
- Monthly
- Never

11. **How often do your students post comments or assignments to your blog?**

- Daily
- Weekly
- Monthly
- Never

12. **How often do you post an assignment to your blog that you expect your students to view after school?**

- Daily
- Weekly
- Monthly
- Never

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Now let's talk about how you are using the blog and to what extent you use the blog for certain educational purposes.

13. **To what extent do you use your classroom blog to communicate with the students' family members?**

- Greatly
- Most often
- Somewhat
- Not at all
14. To what extent do you use your classroom blog to describe what will be taught during the upcoming week?
   - Greatly
   - Most often
   - Somewhat
   - Not at all

15. To what extent do you use your classroom blog to post assignments with due dates?
   - Greatly
   - Most often
   - Somewhat
   - Not at all

Let’s determine how you are using the blog as an instructional tool.

16. To what extent do you use your classroom blog to post classroom assignments?
   - Greatly
   - Most often
   - Somewhat
   - Not at all

17. To what extent do you use your classroom blog to post writing assignments?
   - Greatly
   - Most often
   - Somewhat
   - Not at all

18. Describe an assignment you perceive uniquely enhanced instruction because of using the blog.

19. Describe a time when students were highly motivated because of an assignment unique to the blog.
20. May I view your blog to better understand how you are using the blog as both a communication and an instructional tool?

- Yes
- No
- Maybe (tell me why you are unsure)

21. If you answered yes, please type below the location or URL address of your blog.

22. If your blog does not list your email address, please type your email address below so that I may contact you directly.

23. If you would like a digital copy of this study when it is completed in early 2008, type your email address below.

I appreciate the time you have spent completing the survey. Additional research is needed in order to determine the true benefits or pitfalls of using blogs in the classroom. I appreciate your feedback. It is your response to these questions that will assist future blogging teachers. Thanks again!

Jeff Felix, Candidate for Ed.D. at the University of California San Diego and Superintendent of the Bonsall Union School District in Bonsall, California.

Questions and comments can be directed to me at [omitted].
Dear Blogging Teacher,

Thank you for taking my initial survey! It appears that many blogging teachers are achieving some unexpected outcomes in the classroom. From your responses, I have been able to determine that you are an actively blogging teacher. Because of this, I need more information from you for my ongoing study.

It would be helpful if you would complete another survey, one that goes deeper into blogging as an instructional support. Your time is valuable; you may leave and then return to this survey at any time. The survey takes about 15 minutes to complete, but I would like you to complete it within the next 14 days.

Here is a link to the survey http://www.surveymonkey.com/s.asp?A=[omitted]

Thanks for your participation,

Jeff Felix

Ed.D. candidate from the University of California San Diego and Superintendent of the Bonsall Union School District in California

Questions and comments can be directed to me at [omitted]

Please note: If you do not wish to receive further emails from me, please click the link below, and you will be automatically removed from my mailing list. http://www.surveymonkey.com/r.asp?A=[omitted]
Appendix H
Printable Replication of Survey 2

Page 1
As you may remember, I'm Jeff Felix, Superintendent of Bonsall Union School District in Bonsall, CA. I am also currently a candidate for the Ed.D. in the Joint Doctoral program in educational leadership at the University of California San Diego, CalState San Marcos, and San Diego State University.

Thank you for taking the initial survey. From your responses, I have been able to ascertain that you are an active blog user and I could learn more from you to add to in my ongoing study. In addition it appears that blogging teachers are achieving some unexpected outcomes in the classroom. It would be helpful if you would complete another survey, one that goes deeper into blogging as an instructional support. This survey was not originally planned, but was created as a result of overwhelming feedback from you and your blogging colleagues across the country. Your additional input will help to make this study an even greater resource for classroom teachers.

Survey #2 will show me to what extent you are using blogs in your instructional practice as it relates to your interaction with the students and their interaction with each other. The survey and subsequent research will be used to provide data to better understand the use of blogs in instruction and to inform educators of the potential of blogs to support student learning.

If you have any questions before completing the survey, or would like to know more about my study, please feel free to email me at [omitted]. Thanks again!

2. Blog usage in the classroom
The first survey showed some unique ways of using blogs in the classroom. Let's investigate that further. . .

1. What percent of your students feel comfortable using the blog?
   ● 0%-14%
   ● 15%-29%
   ● 30%-44%
   ● 45%-59%
   ● 60%-74%
2. What percent of your students actually seem to enjoy using the blog?

- 0%-14%
- 15%-29%
- 30%-44%
- 45%-59%
- 60%-74%
- 75%-90%
- 91%-100%

3. What percent of your students seem to feel more comfortable communicating through the blog versus face to face communication?

- 0%-14%
- 15%-29%
- 30%-44%
- 45%-59%
- 60%-74%
- 75%-90%
- 91%-100%

4. What motivated you to begin using a blog for instruction?

5. Discuss what and who have supported your use of a blog for instruction?

6. Discuss what and who have constrained your use of a blog for instruction?

7. How are you using the blog differently today compared with when you first began to use a blog for instruction?
8. Student to student interaction seems to occur naturally as a result of blogging. Do you encourage student to student interaction in your blogging lessons?
- Yes
- No

9. Why do you encourage student to student interaction? Check all the reasons that apply to your instructional practice.
- Increase understanding of the subject
- Help students make sense of what they are learning
- Allow students to develop their own understanding
- Allow for deeper thought on the subject
- Help students make meaning of the subject
- Assist students in creating new ideas from the subject
- Allow students to explore the subject beyond the immediate requirements
- Help students make connections with previous experiences
- Proofread each others’ work
- Other (please specify)

10. Rate your reasons for encouraging student to student interaction from least important (1) to most important (9).

1 (least important) 2 3 4 5 6 7 8 9 (most important) N/A

Increase understanding of the subject
Help students make sense of what they are learning
Allow students to develop their own understanding
Allow for deeper thought on the subject
Help students make meaning of the subject
Assist students in creating new ideas from the subject

Page 4
Allow students to explore the subject beyond the immediate requirements
Help students make connections with previous experiences
Proofread each others’ work

11. What are some ways that you have encouraged student to student interaction in your blogging lessons?
12. What are your communication goals for student to student interaction?
Choose all that apply.
- Strengthen student relationships
- Increase peer collaboration
- Enhance their interaction with the teacher
- Encourage a stronger relationship with the teacher
- Foster positive emotions about learning
- Expand their sharing of ideas
- Other (please specify)

13. What communication goals for student to student interaction are the most important to you? Rate your goals from least important (1) to most important (6).
1 (least important) 2 3 4 5 6 (most important) N/A

14. What changes to your instructional practice have you observed as a result of blogging?
Check all that apply.
- Increased the amount of time spent using blogging as an instructional practice
- Increased the frequency of updating the blog
- Gave more writing assignments
- Allowed students to proofread each other’s work more frequently
- Blog assignments are used as an important form of assessment
- Resources from outside the classroom are used more frequently
- The Internet is used as a source of information more frequently
- Observed an increase in "global perspective" discussions
- Other (please specify)

15. Which of these practices seemed to you to most support student learning?
Rate your changes from slightly (1) to significantly (8).
1 (slightly) 2 3 4 5 6 7 8 (significantly) N/A

Increased the amount of time spent using blogging as an instructional practice
Increased the frequency of updating the blog
Gave more writing assignments
Allowed students to proofread each other’s work more frequently
Blog assignments are used as an important form of assessment
Resources from outside the classroom are used more frequently
The Internet is used as a source of information more frequently
Observed an increase in “global perspective” discussions

Page 6
Please provide some relevant demographic data so I may better know who is taking survey #2.

16. What is your gender?
• Male □ Female

17. How many years have you been a credentialed teacher?
• □ 1-2 □ 3-5 □ 6-10 □ 11-19 □ 20+

18. What grade level are you currently teaching?
• □ Primary (PS-2) □ Elementary (3-5) □ Middle (6-8) □ Secondary (9-12)

19. What is your primary subject area?
• □ Multiple Subjects □ English Language Arts □ Mathematics □ History/Social Science □ Science □ Other (please specify)

20. Which subject area do you primarily use a blog as a form of instruction?
• □ Multiple Subjects □ English Language Arts □ Mathematics □ History/Social Science
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I appreciate your feedback. It is your responses to these questions that will assist future blogging teachers. Thanks again!

Jeff Felix
Ed.D. candidate from the University of California San Diego and Superintendent of the Bonsall Union School District in Bonsall, California.

Questions and comments can be directed to me at [omitted].
Appendix I

E-mail Message Sent Requesting Interview Participation

June 5, 2007

Dear [name of participant],

First of all, thank you for responding to the second survey in such a discerning and intellectual manner. Over 50 people took the survey and the results are amazing. Secondly, because of the answers you gave and the experience you have had with blogging, you have been chosen to participate in the final phase of this study. Only 16 of the original 165 participants have been chosen for this portion of the research.

Now I know what you are thinking; it is the end of the school year and I don’t want any more projects! I promise to make this as easy and as painless as possible. The interview will be performed virtually via email. You can use any word processing program you desire. You will have three weeks to complete the interview questions.

This is the most critical portion of the study because I am only asking those who appear to be using the blog efficiently and also who appear to be gaining rewards instructionally. It appears that you are one of the leaders in the United States using a blog as an instructional practice. You should be proud! Please help share this practice with the rest of the world by completing the interview document with the same consideration you give to your students via your instruction.

To thank you in advance, I am sending you a gift certificate to Amazon for the time you will spend during this final interview phase. It will be sent to in a separate email shortly.

Please take the time to answer the interview questions. It will mean so much to not only me, but to thousands of educators across the world who are searching for ways to increase learning in their classrooms.

Sincerely,

Jeff Felix
Ed.D. candidate from the University of California San Diego and Superintendent of the Bonsall Union School District in California

[omitted]
Appendix J

Final Interview Questions

Blogging as an Instructional Practice

1. Please state your name and tell me your favorite thing about teaching in ten words or less.

2. What do you like about blogging?

3. Think back to when you did not use a blog in your classroom. Would you say that your instructional practice has changed as a result of using blogs? If so, how has it changed? If not, how has it not changed? Please provide examples?

4. This next question is about roles. Students sometimes perform different roles in the classroom. They can be passive, work in groups collaboratively, or even be experts and/or leaders in the class.
   a. First, how has your students’ role changed since you began using the blog in your instructional strategy? Can you give examples?
   b. Second, how has your role with your students changed since you began using the blog in your instructional strategy? Can you give examples?
   c. Do you feel quoting a student’s posting in your summary of other discussion adds to the student’s self-esteem? How often do you do this?

5. Has the way you give or get information in class changed? For example are there differences in the number of completed assignments, has the level of student writing improved, has your relationship with all students (especially minority students) improved.

6. Do you feel that blogging with your students causes you to lose control of the information that leaves the classroom?

7. Are you increasing or decreasing the use of blogs since you began?

8. Are the students improving academically with the use of blogging?
9. Time: How much time does it take to monitor a class discussion in a blog versus a live class discussion? If the blog takes longer, how do you justify the added expense of time to your actual workday?

10. Pre-Instruction: In what way do you model blogging to your students before you begin the practice?

11. Helping students develop critical thinking and metacognition: In what ways do you allow students to reflect on their own learning and contributions of their peers? Have you observed students weaving (relating discussion sections from prior weeks to the current week or as a way to synthesize multiple responses) and summarizing the posts without direction from you? Do you always summarize the blog or do you allow students to summarize? Is this done singularly or in collaboration?

12. Ethics: What safeguards do you take in order to properly monitor the postings? Do you delete words or phrases that you find inappropriate? Have you punished students for abusing blog privileges? How much free expression do you allow in the blog? Have you established rules? Have you allowed students to form their own rules? How do you handle issues that should remain private, yet a student feels the need to post the issue publicly?

13. What recommendations do you have regarding the use of blogging in the classroom that might assist a teacher just beginning to blog?

14. We have discussed a number of things today. What is the most important thing that we should know about the use of blogging in a classroom?

15. What would you like to share about blogging that was not covered in the questions?

Thank you so much for persevering through the interview!
REFERENCES


Cole, K. (2004). *Providing the soapbox, developing their voice: An analysis of weblogs as a tool for response to literature in the middle school language arts classroom*. The University of Alabama, Tuscaloosa, AL.


