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Exemplary High School Teacher's Utilization of Web-Facilitated Instruction: A Multiple-Case Study

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EXEMPLARY HIGH SCHOOL TEACHER'S UTILIZATION OF WEB-FACILITATED
INSTRUCTION: A MULTIPLE CASE STUDY

by

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EXEMPLARY HIGH SCHOOL TEACHER'S UTILIZATION OF WEB-FACILITATED INSTRUCTION: A MULTIPLE CASE STUDY

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University of Nebraska, 2011

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Technology and the web are becoming as necessary to the education of “digital natives” (Prensky, 2001) as the textbook. This qualitative multiple case study focused on the manner in which web-facilitated technologies influenced instruction through planning, preparation, and instructional practices of secondary teachers. Three high school teachers were selected as participants based on their administrator recommending them as an exemplary teacher utilizing web-facilitated technology. A multiple case qualitative design was employed where 8 to 9 observations occurred over a 2-month period. Observations were concluded by researcher journaled thoughts, feelings, and general impressions of what was observed. Post observation interviews queried participants regarding planning and instructional strategies used with web-facilitated technology. Data analysis was performed on each case and then examined through cross-case analysis to gain an understanding of themes across the multiple cases as a whole. Based on the cross-case analysis themes of collaboration, expectations, the guide, and technological difficulties presented themselves. Through the information gleaned, a description of a potential web-facilitated instructional model of the teacher as a guide emerged. This model consists of five components: planning for varied learning, convey expectations, student-driven learning, reciprocity/cooperation, and feedback. This model places teachers in the role of guide and supports student-driven acquisition of knowledge.

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CHAPTER 1: INTRODUCTION

Technology is indispensable and shapes how the world operates. With so many technological tools available, a myriad of uses, both inside and outside the classroom, emerge. The presence of online education continues to grow. The Sloan Consortium's 2006 report of the state of online education indicated that each year several million students are accessing courses and curriculum online and these numbers are increasing substantially each year (Allen & Seaman, 2006). The increase in online education has been accompanied by an increase in the use of educational technologies (Alexis, Chapman, & Platt, 2009), including the use of web-facilitated learning. The immersion of technology in the educational environment has the potential to influence structure and the learning environment. According to Lowther, Ross, and Morrison (2003) the online environment acts as a vehicle for greater student engagement, participation, and higher order thinking; all of which leads to increased interaction. With the possibility that technology stimulates more active teaching and learning, it would seem logical that students who use technology in the classroom might achieve better than their counterparts in more passive learning contexts (Lowther et al.).

A study by Cengiz and Demirtas (2005) regarding the impact of technology immersion is directly linked to the focused inquiry of technology use in education. The results of this study demonstrate that after one year students in the treatment group showed significantly higher achievement in norm referenced tests for language arts and mathematics (Gulek & Demirtas, 2005) than students in the control group. The immersion of technology in the educational environment not only influences many facets of students' academic learning, it also affects teaching. For example, teachers who use technology in a dynamic way hold their students' attention. In addition, students who were engaged and participated through the use of classroom

technology demonstrated greater content mastery (Gulek & Demirtas, 2005).

In today's digital world, students must develop needed technological skills to be prepared and competitive both in the classroom and in their future. The rapid increase in technological advances has created an interest in the utilization of the online environment in the educational arena. Each student in a 1:1 laptop school has access to a large number of resources available on the school's network and the Internet (Meyer, 2007). According to O'Dwyer, Russell, Bebell, and Seeley (2008) the investments in educational-related technology made at the various levels of government and the current mandates of No Child Left Behind require that students demonstrate higher levels of achievement. However, Harwell, Gunter, Montgomery, Shelton, and West (2001) indicate that a common concern among teachers is that technology integration would restructure the classroom learning environment. While this may be the case, classroom restructuring may lead to positive changes in the learning dynamics of the classroom.

Through the integration of technology and web facilitated instruction, teachers can create greater learning and educational opportunities, and, therefore, a stimulated and active learning environment. The influences related to the use of online technology may work as a catalyst to improve learning. As such, the applications of technology in K–12 classrooms will be judged increasingly on the basis of demonstrating success in raising student achievement (Lowther et al., 2003). Educators' use of this knowledge may provide students with a variety of tools to improve their learning as a whole.

According to O'Dwyer et al. (2008) and Mouza (2008) the use of online learning in the academic classroom indicates that through the use of technology students engage in a variety of learning strategies. Such strategies may include student engagement and participation in lessons and enabling students to apply their active learning in a variety of other academic tasks.

According to Gulek and Demirtas (2005); Hopson, Simms, and Knezek (2001); and Mouza (2008), the incorporation of technology into the classroom enables students to benefit in the following ways: (a) increased access to information, (b) greater collaboration among students, (c) intrinsic motivation, (d) student directed learning, (e) greater use of higher order levels of thinking, and (f) greater content mastery.

With academic accountability being a concern in education, schools have been driven to provide tangible results for their technology initiatives. As such, Hopson et al. (2001) determined the relationship between technology and higher order thinking. The findings demonstrate statistically significant differences in scores for fifth grade subjects' Texas Assessment of Academic Skills (TAAS) results between the treatment and control groups.

The Research Problem

The use of technology and its integration has dominated discussions of educational practitioners and has become an essential element in the classroom. "This new report, evaluation of evidence-based practices in online learning, reinforces that effective teachers need to incorporate digital content into everyday classes and consider open-source learning management systems, which have proven cost effective in school districts and colleges nationwide," said U.S. Secretary of Education Arne Duncan, in a statement released to coincide with the publication of the report (Nagel, 2009, para. 4).

It may appear that new knowledge regarding course technology integration has reached its maximum levels. This is not the case. Researchers have neglected to examine how teachers utilize the online learning environment in a web facilitated instruction. An unexpected finding made by the United States Department of Education was the small number of rigorous published studies contrasting online and face-to-face learning conditions for K-12 students (Means,

Toyama, Murphy, Bakia, & Jones, 2009). Once we understand how exemplary teachers utilize the online environment as an educational tool, we will begin to see the answer to the problem of how to use this ever changing medium in the academic arena.

Purpose of the Study

The purpose of this qualitative multiple case study was to provide a description of potential web facilitated instructional models in a large high school setting. A multiple case qualitative design was used, a design type in which different but complimentary data were collected. In this study, observations, interviews, researcher journaling, and document data were used to explore the relationship between strategies and instruction that positively influenced web-facilitated instruction of three teachers in two large Midwestern high schools. Concurrent with this data collection, qualitative interviews explored the planning process for teachers in large Midwestern high schools. The driving factor for conducting this multiple case study with this rationale was to generate knowledge for educational practitioners who currently are or will be working with students.

Study Overview

The qualitative research previously conducted on the subject of web-facilitated instruction is often inadequate and does not properly explore the relationship between the web-facilitated environment and the traditional face-to-face classroom. The design of this study was a single phase, qualitative methodology design. Qualitative data were collected in the same time frame; each case was of equal importance for addressing the purpose of this study. Diagram A provides a graphical representation of the research process implemented in this study.

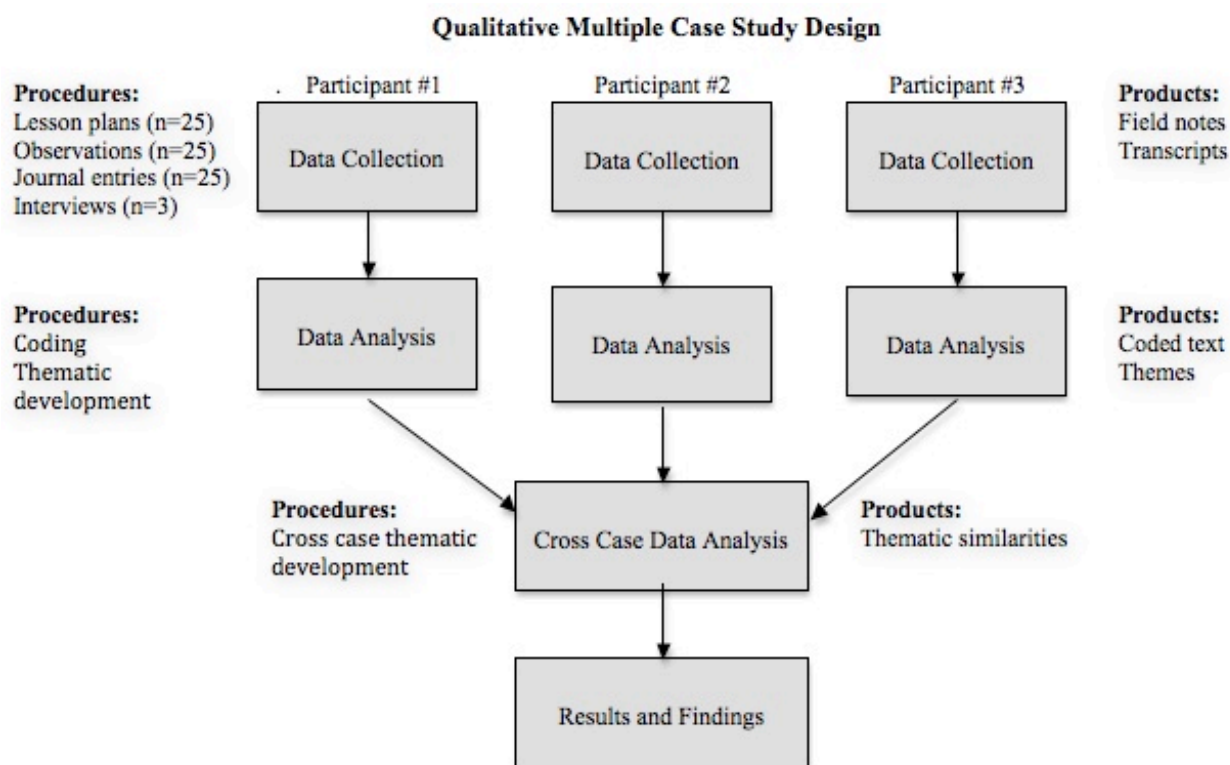


Diagram A. Visual Flow Chart of the Procedures Utilized in this Qualitative Multiple Case Study

Research Questions

The aim of this inquiry was to aid in the development of an understanding of how to use web-facilitated technology as a component of instruction. Based on this study's literature review, important questions need to be asked to facilitate knowledge and address the deficiencies of research in web-facilitated instruction. Previous discussion suggests a major question and three sub questions concerning ways to look at instruction will provide needed direction.

Major question:

How does the utilization of web-facilitated technologies influence instruction?

Sub questions:

How do teachers plan and prepare for web-facilitated instruction?

What are the instructional practices of teachers in a web-facilitated classroom?

What are the similarities of exemplary teacher's web-facilitated instructional practices?

Definition of Terms

1:1 laptop initiative - A school based laptop computer initiative that provides one laptop for each student and teacher for use in the classroom and at home (Lowther et al., 2003).

Assessment - Access to feedback and self-checking resources through the Internet (The University of Western Australia, 2005).

Blended/Hybrid - Course that blends online and face-to-face delivery. Substantial proportion (30 to 79%) of the content is delivered online (Picciano & Seaman, 2007).

Communication - Includes but is not limited to Email, wiki, discussion/bulletin boards, chat rooms, e-conferencing, frequently asked questions (FAQs), projects with other students (on campus, off campus, or remote/international), interaction with unit coordinator/tutor, interaction with discipline experts from other institutions etc., special event contact with tutor and other students, online socialization, information exchange (The University of Western Australia, 2005).

Delivery of Content - Access to learning resources through the Internet (The University of Western Australia, 2005).

Digital Native – “Students who are considered ‘native speakers’ of the digital language of computers, video games and the Internet” (Prensky, 2001).

Exemplary Teacher - According to USC § 7801(19) an exemplary teacher is “a teacher who:

1. Is a highly qualified teacher such as a master teacher;
2. Has been teaching for at least 5 years in a public or private school or institution of

higher education;

3. Is recommended to be an exemplary teacher by administrators and other teachers who are knowledgeable about the individual's performance;
4. Is currently teaching and based in a public school; and
5. Assists other teachers in improving instructional strategies, improves the skills of other teachers, performs teacher mentoring, develops curricula, or offers other professional development” (Cornell University Law School: Legal Information Institute, 2009).

Interactive learning activities - Interaction with learning materials and projects (The University of Western Australia, 2005).

Online - Course where most or all of the content is delivered online. Defined as at least 80% of seat time being replaced by online activity (Picciano & Seaman, 2007).

Online Support for Learning - Access to various resources and details through the Internet (The University of Western Australia, 2005).

Resources- Access to learning resources through the Internet and students contributing resources and material to the website (The University of Western Australia, 2005).

Web-Facilitated - Course that uses web-based technology (1 to 29% of the content is delivered online) to facilitate what is essentially a face-to-face course (Picciano & Seaman, 2007).

CHAPTER 2: REVIEW OF LITERATURE

“Researchers cannot know what a study will add to existing knowledge if they do not know what that knowledge is” (Plano Clark & Creswell, 2010, p. 114). The North Central Regional Educational Laboratory (NCREL) notes that research in higher education is growing rapidly in regards to e-learning and its programs, theory, and procedures (Blomeyer, 2002). However, researchers agree this is not the case in the swiftly evolving K-12 e-learning educational environment (Brennan, 2003; Mishra & Koehler, 2006; Smith, Clark, & Blomeyer, 2005).

The knowledge gained in post secondary technology related learning can be applicable in the K-12 realm. Knowles (1980) concludes that, “adulthood can be defined as the point at which an individual is essentially self-directing” (p. 460); therefore, self-directedness is not reliant on the age of the individual in question (Gibbons & Wentworth, 2001). This premise lays the groundwork for the idea that higher education and adult educational theory, framework, and teaching strategies are relevant in secondary education, particularly in the 9 through 12 grade environment.

Educating the Net Generation

Despite a lack of direct research in secondary education, the call for technology use and e-learning is still being made. In 1996, through President Clinton’s Call to Action for American Education in the 21st Century, he challenged the nation’s educational system to use educational technology. His initiative was built on four pillars:

1. Modern computers and learning devices will be accessible to every student.
2. Classrooms will be connected to one another and to the outside world.
3. Educational software will be an integral part of the curriculum – and as engaging as

the best video game.

4. Teachers will be ready to use and teach with technology (US Department of Education, 1997)

President Clinton's pillars, coupled with California State Superintendent of Schools Delaine Eastin's prediction that "technology is an essential part of education. Ninety percent of the jobs created from this moment on will require advanced technological training" (Cuban, 2001, p. 33), should drive how teachers use technology to instruct. Teachers themselves must evolve along with the technology to insure students are current with technology.

It is the digital native generation that will drive the technology revolution; this is the generation that was born in the 1980s and later (Oblinger & Oblinger, 2005). The digital native is generally more comfortable, knowledgeable, and literate than their adult counterparts about technologies that are central to how the world now operates (Tapscott, 1998). They have grown up with technology; it has become an inherent part of their lives and is woven into all aspects of everything this generation does. Such a natural and inborn use of technology has inspired Marc Prensky (2001) to coin this generation as digital natives. Jones (2002), in his study regarding digital natives going to college, said that by the time these students reached the age of 16 – 18 all of them were using the computer. Jones further elaborates that 20% of college students in 2002 began using computers between the ages of 5 and 8.

Digital natives have been digitally exposed and connected since they were in diapers. According to the Kaiser Family Foundation's 2003 study, nearly half of the 1, 065 children surveyed ages 6 and under were using computers and 30% of these children were exposed to a variety of electronic media. This study goes on to find children age zero to 6 spend as much time with TV, computers and video games as playing outside. In a survey conducted by Tapscott

(1998), it was found that two thirds of the children who took part in the survey responded that they were more proficient at using a computer than their parents, and “teenagers emerged as the ‘family guru’, the resident technician, teacher and occasional tyrant” (p. 66). These results further establish the technological supremacy of digital natives as a product of their environment and finds technology has shaped how they think, behave and act (Oblinger & Oblinger, 2005).

Exposure to technology since infancy is not enough to ensure growing up digitally literate. The Kaiser Family Foundation (2010) found that out of the 2,002 respondents age 8-18, 76% owned an iPod/MP3, 66% owned a cell phone, and 29% owned a laptop; however, those results do not include laptops that have been supplied by schools. The Kaiser Family Foundation’s study cited on a typical day participants spend an average of 10 hours and 45 minutes of total media exposure; 29% of that time was spent multitasking with various forms of other media. The digital native is accustomed to instant access to everything, and has developed a preference for graphically oriented data and digitally associated social interaction (Tapscott, 1998; Weber & Dixon, 2007).

Technologically integrated environments coupled with massive amounts of digital interactions may cause children to think and process information differently; however, such digital use and its subsequent processing are dependent on many factors (Prensky, 2001). If a child does not have sufficient access to technology, the deficiency may play a role in regards to the child’s development of technology related skills; this deficiency has been termed the participation gap (Noll, Older-Aguilar, Ross, & Rosston (2001). The impression that technology and computer access is readily available to many is not always accurate. Research has shown that computers in the home, Internet connectivity, and technology adoption is greater for those who come from a Caucasian, Asian American and Pacific Islander background; as well as those with

higher earning potential, and education levels (Tapscott, 1998).

The U.S. Census Bureau (2004) reported that 61.8% of households had computers; however, only 19% of those reporting to have internet access were of African American or Hispanic ethnicities. This trend continues when we look at the numbers comparing computer use and internet use by income: 85% or greater of K-12 students whose family has a medium income of \$50,000 or more per year use the computer and internet at home. However, when we look at the same age range of student whose family has a medium income of \$25,000 or less per year, that number drops to just 41%. Data continues to demonstrate these trends year after year; ethnicity and socioeconomic status play a key role in the participation gap (Noll et al., 2001).

“Digital Darwinism” developed even as the digital divide shrank; the participation gap has the potential to cause those afflicted to be unable to fully develop technical skills and subsequent competencies (Long, 2008). According to Jenkins (2008) this participation gap creates a chasm between what can be done with 24/7 access and what can be done by students who have limited computer availability, connectivity, filters, storage, and other limitations. Those without 24/7 access may suffer effects of the participation gap; student learning environments, as a collective, may be dramatically influenced and effectively robbing the digital world of a variety of views (Jenkins, 2008). Palfrey and Gasser (2008) further argue that by not making attempts to bridge this gap the Digital Natives will continue to contribute to the digital world, the digital have-nots will be left behind; however, both will be negatively affected.

Jenkins et al. (2009) found that for children with limited access to technology, even a computer is not enough; they must be educated on how to use technology and develop a proficient level of computer fluency. Shields and Behrman (2000) state “the fluency to use computers is expression through creative means, to reformulate knowledge, to synthesize

information, and to adapt to continuous technological change” (p. 13). In response to the need for children to know more about technology, the International Society for Technology Education (ISTE) developed the National Technology Standards or NET·S. The goal of this project was to ensure that children possess the knowledge and ability to learn effectively with technology and live productively in a digital world by ensuring that all students in grades K-12 are fluent in technology (ISTE, 2007).

The NET·S standards and performance indicators created by the ISTE defined the fundamental concepts, knowledge, skills, and attitudes for applying technology in educational settings. For each grade level K-12, standards covered six basic categories of skills: (a) creativity and innovation; (b) communication and collaboration; (c) research and information fluency; (d) critical thinking, problem solving, and decision making; (e) digital citizenship; and (f) technology operations and concepts (ISTE, 2007).

An expansion of the essential skill sets that are required by such a participatory culture have been recommended by focusing on the further development of communication and collaboration standard. In a 5-year study by the MacArthur Foundation (Jenkins et al., 2009) which focused on determining the needed skills and competencies, the following essential literacies emerged: play, performance, simulation, appropriation, multitasking, distributed cognition, collective intelligence, judgment, transmedia navigation, networking, and negotiation. Long (2008) found students who are information rich have already developed some of the aforementioned skills; however, those students who are information poor have to play catch up due to their lack of technological contact and experience. Long further asserts the same students who are already struggling with technology will have to contend with those students who have developed a higher repertoire of skills and comfort level with the computer. Jenkins et al., (2009)

feels that digitally literate students may technically dominate the classroom. In order to address the possibility of digital dominance, classroom teacher may need to demonstrate proficiency in fundamental concepts, knowledge, skills, and attitudes for applying technology in educational settings (ISTE, 2008). Without that essential knowledge Prensky (2001), feels “digital immigrant instructors, are speaking an outdate language (that of pre-digital age) and are struggling to teach digital native students that speak an entirely new language of technology” (p. 2).

Teaching in the Digital World

Cuban (2001) reasons that many school systems feel it is imperative to wire their classrooms and populate them with computers; however, this may be an inefficient way to ensure students will be able to share in the technological revolution. Hooper (2002 as stated by Beyers, 2009) advocated educators must redesign their educational system and teachers must be trained to use and design the use of technology. A focus group held at the University of Pittsburgh – Johnstown indicated that dramatic changes are needed in teaching methodologies; they are essential to educating our digital native students on both sides of the gap (Oblinger & Oblinger, 2005). According to a poll conducted at Pennsylvania State University the following themes emerged regarding technology expectations among students: What is considered technology by this generation is not confined to simply computers or the Internet: (a) technology is viewed as any electronically based application or piece of equipment that meets a need for access to information or communication; (b) technology is something that adapts to their needs, not something that requires them to change; and (c) technologies that are often considered to be novel and very new by many adults are a basic part of this generation daily lives. (Roberts, 2005)

Clayton-Pedersen and O'Neill (2005) found that given the differences between available technologies, the limited application of technology by teachers, and students' expectations

regarding technology, it is not surprising that students expressed a depressed outlook for the use of technology in the curriculum they are being taught.

Transitioning from training with technology to teaching with it, perhaps teachers fall short of addressing the unique intricacies of digital natives (Beyer, 2009). Despite both successful and rocky attempts at integrating technology, the impact may be less than stellar; as such, Yelland (2007) recommends that both curriculum and classroom practices may need to be renegotiated. Tapscott (1988) finds “innovative technologies cannot make up for educational professionals who lack innovative methods and merely replicate learning models that don't work” p. 262). Jenkins et al. (2009) found a systemic approach may be needed and technology literacy should not be taught as a separate course, instead it must shift the manner in which teachers are utilizing the digital environment in their teaching models.

Oblinger and Oblinger (2005) suggest that instructors may make a paradigm shift from their current classroom practices by rethinking and reinventing how they are introducing and engaging their students. Jenkins et al. (2009) suggests that classroom practices may be updated to employ the digital environment by:

1. Encouraging students to play with technology by using free expression and open speculation.
2. Manipulating and interpreting simulations, virtual and physical environments by constructing their own explanations based on their experiences.
3. Utilizing technology to promote multiple styles of presentation as a means to identify with others from multiple perspectives.
4. Encouraging appropriation by scrutinize, changing, or remaking concepts through the development and operation of multiple mediums.

5. Allowing students to utilize multiple directions while monitor multiple tasks.
6. Utilizing and experimenting with new technology with both old and new course related content.

Plafrey and Gasser (2008) suggest that by allowing technology to influence student creativity, self expression, communication, and innovation instead of stifling it, teachers will aid the digital have-nots and know-nots by increasing their digitally related skills and experience.

The International Society for Technology Education created a set of technology standards with an emphasis on higher order goals that are essential for effective pedagogy with technology as stated by Mishra and Koehler (2006). ISTE refreshed National Educational Technology Standards may provide an updated and relevant framework for teachers to use during the transitioning of schools and classrooms to a digital place of learning. The ISTE (2008) NETS•T and Performance Indicators for Teachers include the following standards:

1. Facilitate and Inspire Student Learning and Creativity
2. Design and Develop Digital-Age Learning Experiences and Assessments
3. Model Digital-Age Work and Learning
4. Promote and Model Digital Citizenship and Responsibility
5. Engage in Professional Growth and Leadership

While standards may potentially aide in facilitating digital learning, Cuban (2001) contends that through the use of computers students may demonstrate their knowledge, computers may not be the most appropriate tool for a particular learning task. Teaching and learning goals of the teacher as well as standards are potentially what drive the manner in which content is taught and in what capacity technology should be used.

Many experts agree (Gunn, 2001; Hutchins, 2003; Kearsley & Shneiderman, 1999;

Knowlton, 2000; Morrison, 2001; Shrivastava, 1999) a student-centered framework should be used when developing and facilitating classes. What exactly comprises that student-centered framework varies greatly among available research. Mishra and Koehler (2006) argue that technological pedagogical content knowledge (TPCK) is an emergent form of knowledge that goes beyond all three components (content, pedagogy, and technology) and should be considered when developing and implementing content. Mishra and Koehler (2006) argue that “TPCK is the basis of good teaching with technology and requires an understanding of the representation of concepts using technologies; pedagogical techniques. The use of technologies in constructive ways can help teach content; knowledge of what makes concepts difficult or easy to learn and how technology can help redress some of the educational issues that students face. Furthermore, the understanding of students’ prior knowledge of how technologies can be used to build on existing knowledge or to strengthen previous experiences can dramatically impact the course of instruction” (p. 262).

Brennan (2003) points out that “reality generally does not match the assumptions of teaching and learning, which are that individuals ‘construct’ new knowledge as they integrate new experiences and modify existing patterns” (p. 6). Barnett and Hodson (2000) also identify content as one of the required components of a potentially successful framework. Gunn (2001) found information is necessary for a successful framework and should include academic, professional, classroom, and pedagogical content knowledge. Furthermore, Illinois Online Network and the Board of Trustees of the University of Illinois (2010) recommends that when planning, curriculum, goals, and objectives must be considered first and then teachers may determine the manner in which technology can best meet instructional objectives and activities.

Another research based framework emerges as an instructional model based on both

cognitive and behavioral learning theories (Kearsley & Shneiderman, 1999). Morrison (2001) recommends incorporating both approaches into good instructional design and curriculum planning in order to address multiple learning styles (Frizell & Hübscher, 2002). As Kearsley and Shneiderman (1999) suggest, it may be advantageous to incorporate the following into the instructional design process:

1. Provide structure to the learning process
2. Provide a foundation for learning
3. Specify learning objectives
4. Encourage student participation
5. Give feedback and guidance
6. Provide support aids
7. Encourage student expression and reflection
8. Design for interactivity
9. Build learning communities
10. Include authentic content and activities
11. Provide problem solving activities
12. Provide multiple perspectives and representations

In an effort to accomplish good instructional design practices, the possibility exists that teachers may need to change their pedagogy. Illinois Online Network and the Board of Trustees of the University of Illinois (2010) found this change may result in teachers becoming a facilitator of learning while at the same time guiding their students to meaningful solutions. Shrivastava (1999) advocates for the use of learning communities as the backbone for the design of curriculum. By developing a community of learners, students may take an active role in their

learning and potentially develop a deeper understanding and application of the content (Knowlton, 2000; Shivastava, 1999).

Hutchins (2003) feels the development of collaborative instruction and learning is a direct about face from the traditional face-to-face classroom approach of planning and instruction. Conventional approaches may have inadvertently separated the teachers from their colleagues and students (Cuban, 1984). Teachers in the past may have designed their instruction based on teacher-center practices where from beginning to end the teacher is in charge of information, which is then disseminated at their sole discretion (Cuban, 1984). The introduction of the learning community may change the role of instructor to that of facilitator and mentor of resources, knowledge, and student learning (Hutchins, 2003).

Chickering and Ehrmann's Seven Principals are potentially relevant when using technology as a part of instructional practices (Hutchins, 2003). In the application of the Seven Principals, Chizmar and Walbert (1999) demonstrated:

1. Using technology, such as email and messaging, to enhance communications between teachers and students and students and other students.
2. Making active learning an integral part of the course through the use of a course website.
3. Giving feedback and responses to questions and assignments within a few hours of posting.
4. Giving students the opportunity for publishing work online.

Teachers may potentially facilitate change to motivate and encourage students in an effort to use technologies as a possible component of learning. Gunn (2001) found by doing so teachers may aid student's learning and perhaps overcome the students' and teachers' fears of technology.

As teachers begin to incorporate technology and online components, learning becomes more collaborative, contextual, and active (Illinois Online Network and the Board of Trustees of the University of Illinois, 2010). Chizmar and Walbert (1999) strongly caution teachers that “technology should not be used for the sake of using technology” (p. 258). Technology changes at a remarkable rate and new technologies have the ability to change the makeup of the classroom (Mishra and Koehler, 2006). Cuban (2001) argues that, “vendors sell machines and software each year that are bigger, faster, and flashier but have little to do with what teachers want for their students” (p. 165). Bates (1995) further emphasizes that better technology does not equate to better education for students. In most schools and classrooms the technology available is not cutting edge and can be quite the opposite, although it is slowly improving (Gunn, 2001).

Improvement in available technology has the potential to give teachers a variety of tools for supplementing their current instructional practices, an opening for learning about and incorporating innovative ideas (Bishop, Dinkins, & Dominick, 2003). The way in which teachers change how they teach has been coined as the slow revolution by Cuban (2001), due to the “small changes that accumulates slowly and steadily and will eventually create a gradual transformation in how teachers teach” (p. 152). Chickering and Ehrmann (1996) argue that in regards to the use of technologies “any given instructional strategy can be supported by a number of contrasting technologies (old and new), just as any given technology might support different instructional strategies. But for any given instructional strategy, some technologies are better than others” (p. 3). Mishra and Koehler (2006) found that, due to the variety of courses taught and the multitude of views on instruction, the possible integration of technologies should potentially consider technology, content, and pedagogy, not in isolation, but rather within the dynamics of the teaching and learning environment.

Brennan (2003) argues that technological and facilitation skills may be a necessary as teachers begin to make changes to the traditional teaching methods they have used in the past. One such example of a potential technological facilitation skill may be in the practice of incorporating the myriad technological possibilities into student centered learning environment. Such facilitation could possibly serve as a catalyst for technological teaching practices. “While a great many early childhood educators already incorporate technology into student centered teaching methodologies while only a very small percentage of high school and university faculty have implemented this style of teaching with technology to foster pedagogy and their subsequent methodologies” (Cuban, 2001, p. 134).

The Technological Downside

As technology is placed in the classroom, it has the possibility of becoming outdated in 18 to 24 months. The prediction was made by Gordon Moore (1965) that the number of transistors on a chip will double about every 2 years. Moore’s law has become a self-fulfilling prophecy and is still as accurate today as it was in 1965 (Ceruzzi, 2005). With computers becoming outdated at a rapid pace, researchers (Cuban, 2001; Healy, 1998; Oppenheimer, 1997; Stoll, 2000) argue the manner in which some school districts are spending their money on technology may not be the most cost effective or educationally relevant.

The process of determining network compatibility and setting up, configuring, and adding new hardware to existing infrastructures has the potential to be complex with a variety of options, each dictating use of specific hardware, cabling, and software (Clements, 1999). The difficulty level may be made more challenging when schools do not employ an adequately staffed and experienced technology department. According to Moses (2008), “Sixty-five percent of K-12 schools do not have enough staff to integrate tech into classes. Two-thirds do not have

enough staff to plan for new technology. More than half do not have enough staff to maintain their tech applications. Many schools lack even a single support person, or are severely understaffed. One such example is a large district like San Francisco Unified Schools reporting the equivalent of one tech support person for every 3,000 students” (Tech support by the numbers section, para. 1).

Some school systems have considered varied options in trying to solve their technology support woes and have explored the potential of involving their students. “Schools in Chicago, New York, and California train their students to be their school's tech troubleshooters -- installing operating systems, setting up printers, performing hardware-related tasks, and learning industry-standard processes for resolving support requests. Schools that use a Mouse Squad can save thousands of dollars each year in tech support” (Moses, 2008, Students to the rescue section, para. 4). “Educators are worried that the educational system, and in turn the classroom, are becoming a training school for the high tech world” (Healy, 1998, p. 31) and may sacrifice education by doing so.

Many schools and teachers are rethinking their use of technology, both in the classroom and district as a whole. One school in western Massachusetts ended its laptop program after administrators discovered that more effort was being expended on troubleshooting and repairing the laptops than on professional development for teachers to utilize the laptops in their classroom practices (Hu, 2007). Furthermore, many teachers found that functionality, unreliability, and the lack of support of technology further undermined their desire to utilize technology in their classrooms; even tech savvy teachers who are ardent users of the computer cited having to have back-up lesson plans due to technological dysfunctions (Cuban, 2001). Stoll (1999) argues that many teachers are possibly frustrated and have stopped using computers as a part of instruction

because the computers themselves have become a hindrance rather than an aid in the facilitation of learning. “Teachers simply don't use technology -- not just the advanced stuff, but basic items like classroom computers” (Moses, 2008, Bad, and getting worse section, para. 2). Cuban (2001) found that technological and other computer issues may potentially be related to the small percentage of teachers integrating technology into curriculum and teaching practices.

Cuban (2001) expanded on this theme by noting that while teachers are becoming increasingly interested in technology and utilizing it as a part of their curriculum, they do not do so because they are not given time to learn how to use the computer. “Proper teacher preparation takes time, money and effort; all of which is considered the holy grail of successful technology initiatives” (Oppenheimer, 2003, p. 306). A lack of commitment to technological staff development is alarmingly apparent, a mere 1 to 3% of resources are spent on technology related training. This is echoed by educational policy maker’s monetary indifference throughout the country (Oppenheimer, 2003). With very little money earmarked in the budget for technology staff development, many districts are piling more responsibilities on their technology staff and teachers. This is being accomplished by “encouraging” both technology people and teachers to take on the roles of technology troubleshooter and trainers (Oppenheimer, 2003). Researchers (Cooley, 2001; Moses, 2008; Oppenheimer, 2003) note that both technology staff and teachers are already highly overworked, and by adding these additional responsibilities school administrators have set up teachers, technology support, and ultimately technology to fail.

Cuban (2001) found that a majority of teachers are using technology as little more than a “tool” and therefore are only sustaining their current methods of teaching rather than being innovative in their utilization and practices. Healy (1998) feels that as a part of the process of putting technology into schools, an assumption was made that by giving connectivity and student

access it would transform them into better students and also allow them to use the information appropriately; the students would somehow develop these essential skills along the way. Stoll (2000) further argues there is a gap between having access to information and students developing the ability to critically analyze and interpret what they are being exposed to while online. Such confusion further warrants Rushkoff's (1996) belief that because of the way today's students are utilizing the technological environment they are inadvertently changing the manner in which they think and how they operate in their daily lives.

Potential risks to children in regards to their visual acuity as well as displacement of normal physical activities and the effects on the developing mind are exacerbated by the extended use of computers (Healy, 1998, p. 112). It is even more concerning that as children develop problems, they possibly may not recognize that they are experiencing a problem and therefore not tell anyone that they are having difficulties of any kind. As children spend more and more time on the computer, the increase in problems is inevitable (Sava, 1997).

As computers are used in the classroom the impact of such usage on children's eyesight is called into question. Alexander (1994) estimates that 50% or more of people that use computers regularly may experience some measure of visual deterioration. Furthermore, as children read, their eyes are moving rhythmically from side to side; however, this is not the case when reading from an electronic text (Healy, 1998). Students stare at the computer, eBook reader, iPod, etc. in a fixed and unmoving manner. This difference makes it very difficult to transfer between technology and the printed word (Wilkins, 1995). Furthermore, a child's selective attention, response organization, and sustained attention may be damaged and at the mercy of visual stimuli they gain from media (Healy, 1998).

Research directed at the relationship between brain function and physical activity has

demonstrated the positive effects of spontaneous play on learning and memory; sitting stationary at a computer or other technology may not provide the needed physical stimulation (Healy, 1998). Furthermore, technology may potentially take away the need for a person to move around and perform other physical needs; by doing so technology may negatively influence comprehension capabilities and problem solving (Calvin, 1998). Some experts agree that technology is changing the way in which children process information (Healy, 1998; Oppenheimer, 2003; Stoll, 2000; Tapscott, 1998). The use of technology may result in children's thinking becoming scattered and parallel rather than sequential or linear (Oppenheimer, 2003). Technology is designed to capture children's attention; while this may seem harmless, it has the potential to be damaging (Calvin, 1998).

The introduction of technology and the readily available access students have to computers may potentially result in some disconcerting reverse effects. As students delve into the world of net-neophytes, they may be exposed to some inappropriate things and possibly even commit some questionable actions themselves (Tapscott, 1998). As students utilize the Internet they may be exposed to a barrage of information and distractions. Stoll (2000) found that computer use by students for instructional purposes has potentially become a secondary objective, while the primary focus is that of media and entertainment. It is estimated by the Kaiser Family Foundation (2010) that the average child age 8-18 spend 1:29 per day on a computer, 2:31 listening to music, 1:13 playing video games and 1:35 texting, and 29% of that time cited is spent multi-tasking with multiple mediums. With so much time spent educationally off task, it is possible that computers have become little more than entertainment. Researchers (Cuban, 2001; Oppenheimer, 1998; Stoll, 2000; Tapscott, 1998) argue that students should not have such unabashed obtainability of technology. Jenkins (2009) feels "the computer is

discussed as a magic black box with the potential to create a learning revolution (in the positive version) or a black hole that consumes resources that might better be devoted to traditional classroom resources (in the more critical version)” (p. 7).

CHAPTER 3: METHODOLOGY

Introduction

This chapter presents a rationale as to why the qualitative case study design is an appropriate methodology to explore web-facilitated instruction. Furthermore, the concept of the case study is explored in an attempt to illuminate the need to utilize this methodology. In addition, an in-depth description of the study is presented, including sampling and participant selection, data collection, data analysis, and data validation.

Case Study

The case study can be difficult to identify due to varying practices utilized by researchers in multiple disciplines (Stake, 1995). However, Schramm (as cited by Yin, 2003, p. 12) generalizes the concept of the case study as “the central tendency among all types of case study, is that it tries to illuminate a decision or set of decisions: why they were taken, how they were implemented, and with what results.” Case studies are used to “contribute to the knowledge of an individual, group, organizational, social, political, and related phenomenon” (Platt, as cited in Yin, 2003 p. 13). Furthermore, a case study strategy is “preferred when circumstances and research problems are appropriate rather than an ideological commitment” (Platt, as cited in Yin, 2003, p. 13).

A case study approach was selected as the appropriate research methodology for this study due to the desire to increase understanding through research conducted in the field. According to Stake (1995) the conduct of research in the field provides the opportunity to objectively understand events being observed while analyzing the significance and validating the meanings derived. In this study a multiple case approach was preferred to an individual case due to the desire to ascertain unique view points from multiple perspectives; each providing a look

into their individual instructional worlds, while providing a foundation for determining common themes exhibited by each participant.

Participant Selection

Research sites were selected from large public schools in a Midwestern state as determined by that state's school activities association in the state where the school resides. In order to achieve the largest class rating the enrollment assigned by the state's school activities association indicated a projected high school enrollment ranging from 851 to 2,029 students for the 2010-2011 school year (National Center for Education Statistics, 2011). Each of the 13 school districts that comprise the large school category was sent a research proposal and the required district specific forms. Of the 13 districts and 27 high schools from which permission was requested, two sites granted research approval. After approval was received from the district and high school the primary building administrator aided in the selection of participants. Potential participants were determined through purposeful sampling; the utilization of selected "information-rich cases whose study will illuminate the questions under study" (Patton, 1990, p. 169). The following determinants were used during the purposeful sampling process:

1. Teachers were identified as being exemplary instructors in their field by fulfilling the legal code definition of an exemplary teacher, USC § 7801(19) (Cornell University Law School: Legal Information Institute, 2009).
2. The participants were selected by their building administrator as a teacher who utilizes technology in an exemplary manner.
3. The building administrator provided a rational as to why that teacher was selected.
4. The researcher selected each participant based on the rational given by the administrator.

After the primary-building administrator recommended their site's potential participant(s) an enhanced selection process was used as a final determinate. The following questions were asked by the investigator of each recommended participant:

1. Is the participant's utilization of web-facilitated instruction relevant to the major question of this study? In what ways?
2. Is the participant's web utilization diversified? How?
3. Does the participant provide valuable prospects to learn about the web-facilitated instruction and its utilization?

The answers determined by the investigator narrowed the participant field from five potential participants to the final three. The names of each participant have been changed in this study and will subsequently be referred to as John, Joe, and Ruth to provide anonymity and ensure actual representation of the use of the web-facilitated environment.

Data Collection

The collection of data occurred through observations, interviews, document review, and researcher journaling. Data collection began with the collection of documents, researcher journaling, and classroom observations between January and February 2011. Participant interviews were conducted at the conclusion of the final observations in February 2011. Each interview was recorded and transcribed by the researcher.

Documents

Documentation was gathered regarding district, school, and participant's web technology usage, and lesson plan requirements. Documents containing information in reference to the above data consisted of district/school websites and faculty handbooks. Each item was available for public use and required no additional effort from participants. In addition, participants were

required to provide a copy of daily lesson plans for the class periods observed to the researcher. Participants provided lesson plans to the researcher via email.

Journaling

The researcher documented her reflections of what was observed during classroom observations and participant interviews. Each reflection included insight into the thoughts feelings, and general impressions of what was said or seen during that period of time.

Observations

The researcher observed each lesson as an open, non-participating observer. The students in each course were made aware that the researcher's presence in the classroom was an effort to gather observation field notes. Detailed field notes were taken to enhance reliability of the data collected (Creswell, 2007). Participant observations consisted of eight to nine observations per participant, where each class period was 45-90 minutes in length. Observations were conducted utilizing an observation/lesson plan protocol (Appendix D) to ensure both reflective and descriptive notes were taken (Creswell, 2007). The observation and lesson plan protocol notes were used to create a formal record of both the descriptive observations and reflective journaling.

Interviews

Each participant was interviewed at a time and location of their choosing. For John this occurred in a multifunction room located near his office during a free period. Joe and Ruth both opted to be interviewed in their classrooms during lunchtime. The duration of each participant's interview was approximately 35- 40 minutes. Interviews followed the IRB approved interview protocol (Appendix C). Participants were informed of their ability to view any of their data at any time or remove themselves or their data from the study without penalty of consequence. Each interview was recorded and transcribed by the researcher. After transcription each

participant received a copy of their transcribed interview to verify the data collected to ensure accuracy and that no misrepresentation existed (Stake, 2004). The interview consisted of 36 questions asking participants about their planning and instructional strategies when using web-facilitated technology. Specific topics included: (a) planning and preparation, (b) goals, (c) objectives, (d) prerequisites, (e) materials, (f) lessons, (g) closure/conclusion, (h) follow-up lesson/activities, and (i) assessment/ evaluation.

Data Analysis

All data collected from John, Joe, and Ruth was analyzed for context, description, single within case theme, and cross-case theme analysis (Creswell, 2007, p. 172; see Diagram B).

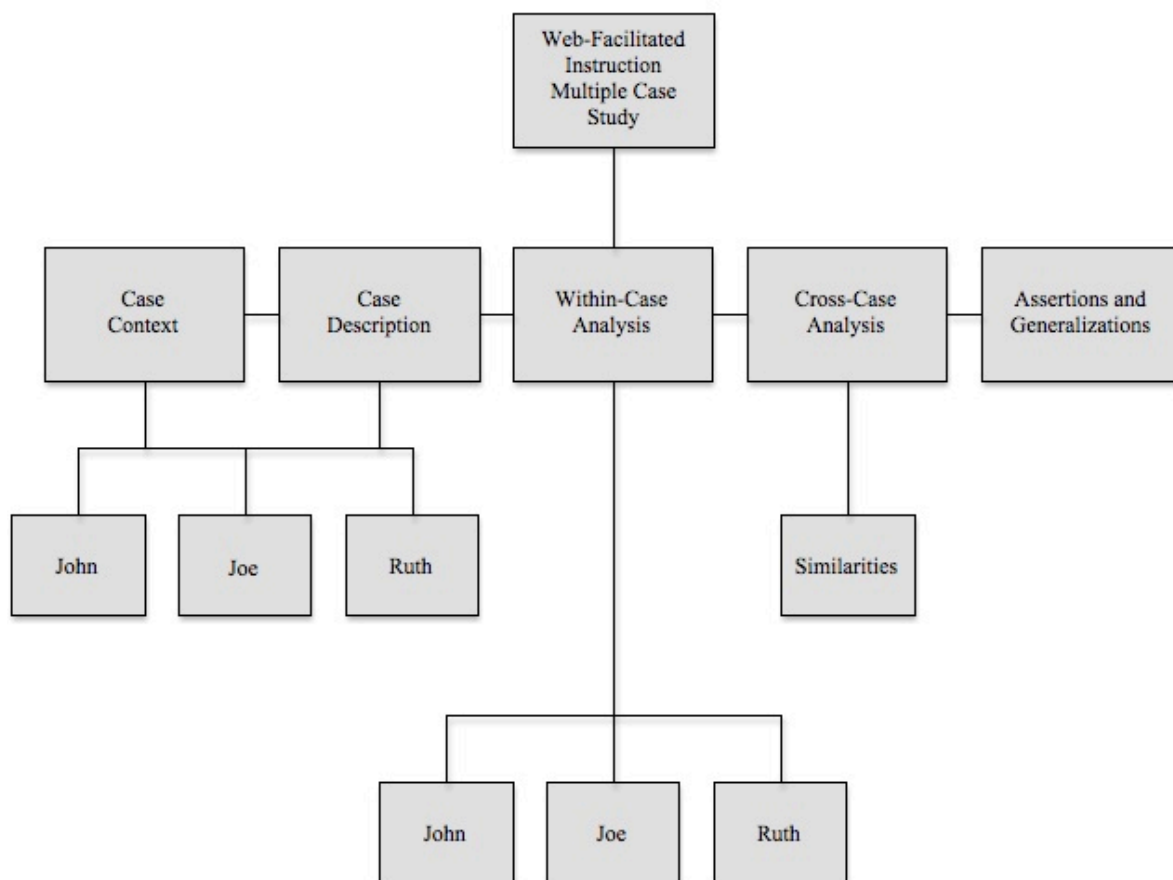


Diagram B. Multiple Case Data Analysis Procedures Diagram

Formal records were created from each reflective journal, observation, and interview transcript. Each record was created directly after the conclusion of data collection using MAXQDA data analysis software. The data analysis followed Creswell's (2007) model of data analysis and Stake's (2004) model of multiple case analysis.

Individual Case Analysis

Each data record was created or imported into MAXQDA for further reflection and individual case analysis. In an effort to ensure each individual case was coded for both descriptive and thematic data (Creswell, 2005) each data record was read and notes were taken to gain a better understanding of the information gathered. Descriptive codes were developed based on the initial impression received by reading each passage of the record. For passages that were difficult to code or were of greater importance, the passage was read several times and with great care (Stake, 1995). As a greater number of codes developed they were reviewed and combined until the researcher was satisfied that each code correctly mirrored what the data was indicating. At the completion of coding each individual case's codes were grouped into themes. Interpretation of themes provided a descriptive framework of the findings presented by each case.

Cross-Case Analysis

The cross-case analysis followed Stake's (2004) cross-case analysis procedures. Stake's procedures allowed for each case, individually, to retain the general situational and contextual meaning; while at the same time allowing for the understanding of theme based assertions across multiple cases. This was accomplished by reviewing each individual case's notes and findings

for the prominent themes of each case. Each theme was further reviewed to determine its utility in reference to the research questions being asked and the relationship posed across cases. Each assertion was scrutinized for its typical or atypical findings that contributed to the understanding of each theme. After each cross-case assertion was identified and corroborated through the evidence of findings the narrative framework was determined based on the cross-case themes and the assertions that were developed. After the framework was created all cases were coded based on the identified cross-case themes.

Validation

In an effort to ensure credibility, four validation procedures were utilized to ensure a high degree of accuracy among the data collected. Prior to the start of data collection, the IRB observation protocol and interview questions were field tested through a pilot study. The pilot study was conducted with two exemplary teachers who utilize Web-facilitated instruction. Furthermore, “the triangulation of multiple and different data sources provide corroborating evidence to support researcher’s analysis” (Creswell, 2007, p. 208). “Triangulation across cases” (Stake, 2005, p. 77) occurred through the process of comparing data from multiple sources and viewpoints. In addition, member checking was utilized and allowed participants to verify the accuracy of the data collected. Member checking ensures accuracy and that no misrepresentation exists within the data collected (Stake, 2005). Participants were emailed accounts of researcher observations, transcripts of their participant interview, and document analysis to confirm the analysis was an accurate representation. Finally, the use of rich, thick descriptions of the data collected allowed for “transferability and shared characteristics” (Creswell, 2007, p. 209).

CHAPTER 4: FINDINGS

Individual Cases

John: Classroom Setting

John, an English teacher in a large metropolitan high school, was recommended by his high school principal to participate in this study. He was in his 15th year of teaching and had taught in his current position for 4 years. The school district in which John teaches was located in a large metropolitan Midwestern area; the enrollment during the 2010-2011 school year exceeded 6,000 students in grades K-12 and his high school had an attendance of greater than 1,400 students.

Technology had been made a priority throughout the district as evidenced by its numerous technology initiatives. In 2004, a 1:1 Apple laptop initiative for all students in grades 9-12 was rolled out. In pursuit of the 21st century learner, the district adopted the web-based Blackboard Learning Management System and it was integrated into classroom instruction and provided content delivery and course management. In addition, PowerSchool, an online student information system, provided teachers, parents, and students the ability to access grades, attendance and other school information.

John's classroom was a unique room that was once home to an industrial technology department, but now served as an English classroom. Despite its new purpose a few industrial machines still had a place live. In addition, an Igloo cooler and a hard plastic kiddy pool could be found in the back. The room had the appearance of a catch all of some sort. Despite a few odd items a typical instructional configuration existed in the heart of the room. Twenty desks were arranged in a half circle facing the front. The teacher's desk was located in the front of the room in observance of the students. A mounted projector was fixed in the middle of the ceiling and

focused directly at the pull down screen also located at the front of the room. John had his school issued laptop set up and configured to work directly with the projector and a set of portable speakers. On the far side of the room was a bookshelf with a variety of paperback novels, several of which were utilized by John and his American Literature class.

The first time I met John he was waiting out in the hallway for his students to arrive for class his first American Literature class of the day. Like many teachers, both past and present, he was giving directions of what they needed to have out and ready for that day's lesson. As a visual reminder, he provided his expectations via a projected image on the classroom's pull down screen. The image read:

- Go to forum. Make new conflict post based on ending of book. Start new topic OR reply to one that is there.
- Don't forget to turn in your GD. Make up GD Saturday, Monday after school and Tuesday, Watch for email alerts.
- Get out yellow and purple sheets. Show me your final revised theses. Start a new document for your essay.

Students immediately got out their school issued laptops to work on the day's expectations. The students appeared well trained and needed very few reminders regarding the procedure. As with each lesson I observed, John appeared to be in full control and orchestrated his instruction with little effort and a great deal of ease.

During my observations with John he guided students through John Steinbeck's *Of Mice and Men*. While to many this book might seem like a standard topic of instruction for a junior level literature course; this classic was taught in a way to reach the digital native. John was a recent graduate of his state's writing project, which aided in his use of the web as a tool of

instructional technology to enhance communication, stir ideas, guide students through the writing process, and produce products.

Collaboration as a Culture

For John, creating lesson plans was an exercise in teamwork. For the first three years of teaching he was required to turn in lesson plans to a teacher supervisor. Each lesson plan would contain an objective, the instructional strategy, and the intended outcome. Beginning in his fourth year that procedure ceased and John was no longer required to construct such a plan. However, despite the lack of mandate he formulated an instructional plan as part of a department team and a professional learning community.

The department had regularly scheduled large group team meetings that met once a week and regular team meetings that occurred directly after. Each meeting was conducted by virtue of an agenda and meetings were typically curriculum and student driven. According to John, at these meetings members determined where instruction should be chronologically and what objectives needed to be obtained. Such decisions were made through questions such as: “What have these students done before and what do we want them to do with this lesson that they are working on now? So teachers get a broad scope of all 350 juniors that we teach and we are able to say: Where are they? Where should they be?”

Even with the best-laid plans not all students are going to master all of the concepts presented all of the time. Unfortunately, the curriculum timeline was extremely rigid for John and allowed no room for curriculum adjustments. As such, the modular scheduling provided students with opportunities to rectify the situation. John elaborated that the school “provides open mods. We don't have study halls so that any time a student has an open mod they have an opportunity to come to that teacher directly and work with them one-on-one. So if students are

backed up they can come see me and we will work out a plan.” In addition, the team also created an extra tutoring session, where Saturdays were allocated for additional student help. Teachers could assign students to attend the Saturday session. Each team member took a turn to work a Saturday and provided another level of assistance to ensure success.

As a team, John and the other members worked together to develop interventions or alternatives for students in need of additional help. John professed that these interventions or alternatives often take the form of a secondary option for them to work on instead of the intended class work. An example John gave of one such instance in their current *Of Mice and Men* unit (Document A) is, “One of the team members figured out, she put together a list of the passages that the students had to know in order to understand the book. Some students opted to just read the parts of the book they had to read, rather than the whole book. So, we do some of those alternative lesson plans and strategies for them to accommodate those kinds of learners.”

Collaboration was an integral part of John’s planning and was naturally extended to his students. While John admitted that having students work with each other is something that he has his class do regularly, technology has put a new twist on the old way of doing things. During John’s *Of Mice and Men* unit students utilized the writing forum on <http://www.nebwp.org> (Image A).

Of Mice and Men
Chapter 3 Text Selections

Directions:

1. Highlight the conflict(s) in each passage.
2. Identify which type of conflict you've highlighted.
3. Add a comment explaining which characters are involved AND how the conflict impacts them.

Summary: Chapter 3 begins with George and Slim coming back into the bunkhouse after delivering a litter of puppies. They are discussing Lennie's affection for the puppies and George wonders if Lennie will even come back into the bunkhouse to sleep. Both men remark about Lennie's unbelievable capacity for hard work.

Excerpt 1: (Page 39)

Slim moved back slightly so the light was not on his face. "Funny how you an' him string along together." It was Slim's invitation to confidence.

"What's funny about it?" George demanded defensively.

"Oh, I dunno. Hardly none of the guys ever travel together. I hardly never seen guys travel together. You know how the hands are, they just come in and get their bunk and work a month, and then they quit and go out alone. Never seem to give a damn about nobody. It jus' seems kinda funny a cuckoo like him and a smart little guy like you travelin' together."

"He ain't no cuckoo," said George. "He's dumb as hell, but he ain't crazy. An' I ain't so bright neither, or I wouldn't be buckin' barley for my fifty and found. If I was bright, if I was even a little bit smart, I 'd have my own little place, an' I'd be bringin' in my own crops, 'stead of doin' all the work and not getting what comes up outta the ground." George fell silent. He wanted to talk. Slim neither encouraged nor discouraged him. He just sat back quiet and receptive.

Summary: George continues to explain why he travels with Lennie. Lennie used to be cared for by his aunt Clara, but when she died George took responsibility. George tells Slim about how he used to play jokes on Lennie and mistreat him. Once, he told Lennie to jump into a river to impress some other guys. Lennie did and almost drowned. After that, George stopped being mean to Lennie. George continues to explain how Lennie is not mean but he is a nuisance and gets into a lot of trouble.

Person vs. Self			
Forum rules When are characters at odds with themselves? Look for those life-changing internal conflicts in the book. Discuss them. This is your chance to ask "what would you do" style questions. Include page numbers and comments for debate.			
NEWTOPIC* <input type="text" value="Search this forum..."/> <input type="button" value="Search"/>	Mark topics read • 11 topics • Page 1 of 1		
TOPICS	REPLIES	VIEWS	LAST POST
 Lennie VS. Self Pages 100-102/3 by [redacted] » Fri Jan 28, 2011 12:19 pm	0	5	by [redacted] » Fri Jan 28, 2011 12:19 pm
 lennie vs self pg 100 by [redacted] » Fri Jan 28, 2011 12:14 pm	0	4	by [redacted] » Fri Jan 28, 2011 12:14 pm
 McCulloh P v. S by [redacted] » Tue Jan 25, 2011 9:16 am	3	14	by [redacted] » Fri Jan 28, 2011 11:36 am
 Crooks vs. Self by [redacted] » Fri Jan 21, 2011 11:33 am	2	10	by [redacted] » Fri Jan 28, 2011 11:33 am
 George vs. self by [redacted] » Fri Jan 28, 2011 11:33 am	0	5	by [redacted] » Fri Jan 28, 2011 11:33 am
 Cody Andrews by [redacted] » Tue Jan 25, 2011 1:21 pm	0	2	by [redacted] » Tue Jan 25, 2011 1:21 pm
 Curley Vs. Himself by [redacted] » Tue Jan 25, 2011 1:21 pm	0	9	by [redacted] » Tue Jan 25, 2011 1:21 pm
 Billups Person vs. Self by [redacted] » Tue Jan 25, 2011 9:15 am	1	5	by [redacted] » Tue Jan 25, 2011 11:25 am
 Taylor McCoy by [redacted] » Fri Jan 21, 2011 12:14 pm	1	10	by admin » Sun Jan 23, 2011 8:23 pm
 Crooks Pgs. 66-83 by [redacted] » Fri Jan 21, 2011 11:32 am	0	3	by [redacted] » Fri Jan 21, 2011 11:32 am
 Crooks and people by [redacted] » Fri Jan 21, 2011 11:32 am	0	0	by [redacted] » Fri Jan 21, 2011 11:32 am

Image A. *Of Mice and Men* forum

In this forum John turned the exercise of communicating student questions regarding conflict and character into a means of sharing and expression, as well as a means to allow students to have the opportunity to blog regarding different *Of Mice and Men* topics. The utilization of this blogging forum was an ongoing activity that gradually progressed as the unit unfolded. At the start of each chapter, students were encouraged to pick a conflict and reply to an existing conflict (Image B). Each post and reply helped students connect and organize what the students deemed as the most important conflicts in *Of Mice and Men*. John often employed the strategy of peer discussion as a means to brainstorm potential posting options and the impact such posting could have on student essays.

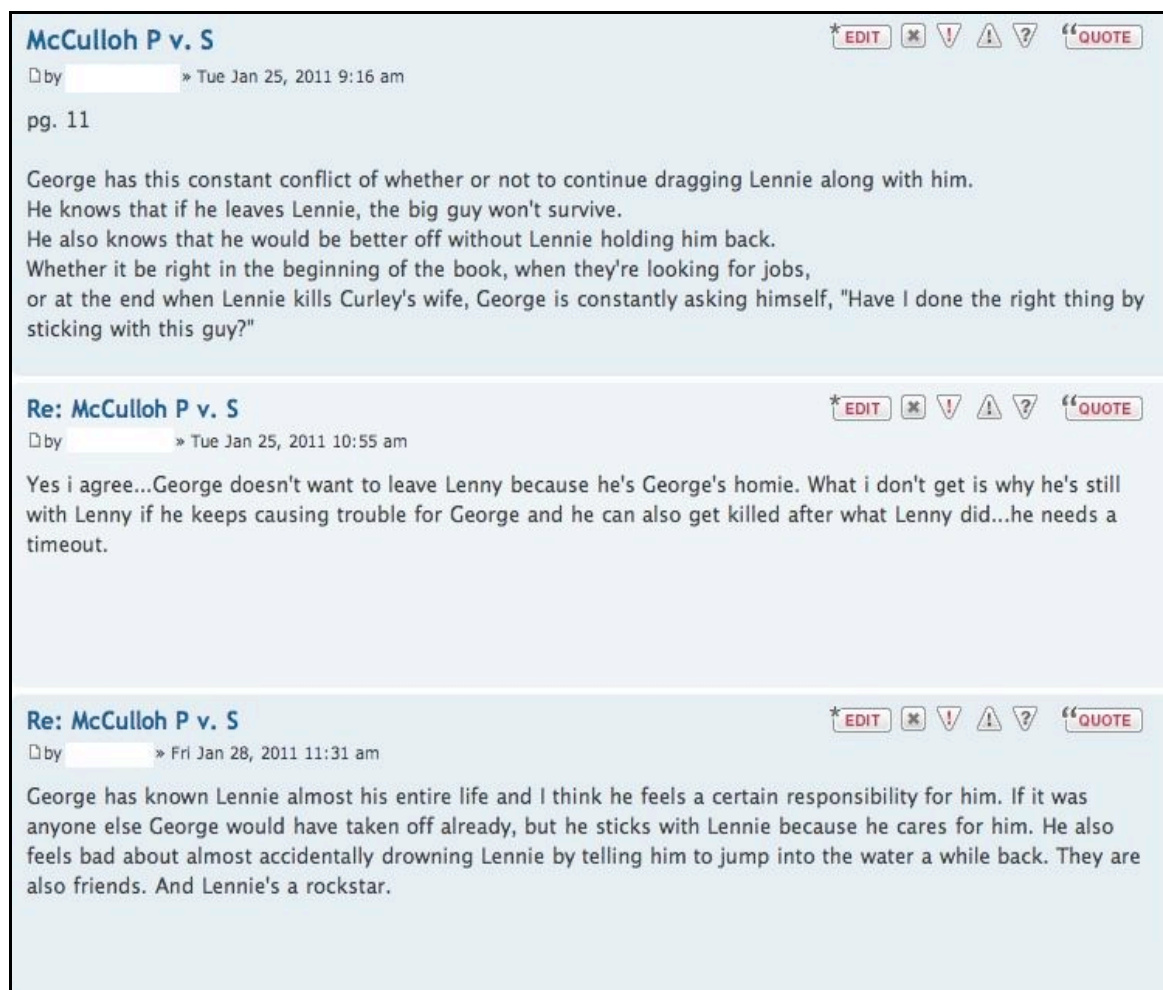


Image B. *Of Mice and Men* forum conflict postings

John did not end the collaboration process after the blogs were completed and the essays had been written. The collaborative process now kicked in as a means to provide a peer review component to the editing processes. John and his English department began using the peer review module of <http://www.turnitin.com/> for the first time during the spring of 2011. John said, "There are two things you can do on the peer review. Click anywhere on the paper and type your comment. The owner of the paper can view those comments. However, that is not required. Students must answer questions on the left sidebar of the site. Students have to have a minimum of 25 words per question in order to submit" (Image C). After completing the online component

of the peer review students were instructed to continue their review with face-to-face interaction. John encouraged students to talk to their peer reviewers about how they organized their papers. In addition, students were notified that they must discuss the comments they received with their reviewer. The result of peer involvement as a major component of the writing process was a well thought out and thoroughly explored essay on character conflicts.

Getting From Point A to Point B

As a part of the English department, John had a prescribed curriculum timeline that he generally adhered to. During his individual planning and preparation for each of his courses John mapped out how he intended his class to unfold each day. That map began with his expectations/agenda for the day. The mounted projector and pull down screen was always set up and ready for students as they began to trickle in during the passing period. The projected Microsoft Word document told them exactly what they would be doing for the day and what was expected from them. An example of an agenda for John's American Literature course is as follows:

1. Get out yellow sheets, open your laptops and have your essay ready to go.
2. Today will be a writing lab. By the end of the mod, you should finish 3 full paragraphs of your essay.
3. Tomorrow have a hook ready for your intro. The RD (rough draft) is due at the end of the mod tomorrow... Open up the forum just to remind your selves what you are writing about. I will come around and look. You will get 4 points if you have a complete paragraph. As I am checking paragraphs work on point 1,2, 3. We will work on inclusion tomorrow. I should see yellow sheets.

John further discussed his thoughts about his posted agenda: "This is what I need you to get ready for. I usually have some sort of thing telling the kids what we are going to do that day

so I have that ready in my mind and they have that ready in their mind. I tell them right at the beginning of class and say this is what I expect.”

As John’s class progressed throughout instruction he strove to keep all of his students occupied during the lesson. John said that it is important that students are doing something as he is talking. “For instance when we went through the steps on Blackboard of what they needed to have in their final draft; I had them each read one. Then everybody had to say yes or no that they did it. So they were doing some sort of oral or vocal participation or on their desks they are writing something or on their computer they are highlighting something or doing something as I am talking. So there is that interactive kind of thing that I try to do so that I can see they are doing whatever we are supposed to be doing so they are engaged in what I am saying.”

John declared that he uses a direct instruction strategy while teaching. When he is in front of the room and guiding students with that day’s instructional concept he said, “I tell them step by step what we’re doing what we’re going to be doing.” However John said, “I have an idea of where we are going, sometimes it will shift and change. So, I am prepared to change the lesson, if I need to right then and there.”

John spent a great deal of time checking to ensure students had an understanding of the concept that was taught. John utilized a variety of strategies to provide students with important feedback. He had students produce a tangible product that could be assessed. John said, “The forum feedback I can write directly to them on their posts.” For example, students utilized the online forum to make posts and comments to synthesize an essay regarding character conflict. While students were working on their essays John was talking to each student, reading their essays, and providing with them additional help to ensure they were on the right track. In addition, once students had turned in their initial rough draft to <http://www.turnitin.com> John

provided each student with personalized feedback. John said, “ I can write on their paper and write on it and make comments and that sort of thing. They can go there and see what I have said about their paper.” Finally, John took advantage of all students having email accounts. He took the opportunity to provide email feedback as well. “Email feedback, you know that is a lot of it is where a student contacts me directly and then I contact them directly. When we go back and forth by email.”

For those students who were struggling John aided them with additional assistance both inside and outside of class time. John made himself available before class, after class, and during open mod time for questions and further assistance. It was a priority for John to make sure his students were ready academically for what comes after high school. He confesses: “I think about the future and I think about where they, these students are going to go after high school and the world outside of school and the kind of technologies are going to run into. When I explain to students where we are going and what we are going to do. I kind of rationalize it to them. I say okay so and the forums (Image A and B) are a great example of that. The second thing is that I tell them when you've got out into the real world, forums and online discussions most colleges will use some form of that for their classes. You will be taking classes online, you have to be able to do this online community thing. And so this is going to prepare you better for that world as well.”

A Push for the Evidence of Learning

Schools and educators are feeling a pressure to produce evidence of student learning. At John’s school many of the curriculum-based assessments were decided on and set as a team. One such assessment that John was especially fond of was graded discussions. “After we read a text the students come with some prepared discussion ideas and we have a discussion for a class

period.” Although the assessment itself was decided as a team, each individual teacher planned their own distinct way to prompt the activity itself. John preferred to utilize a variety of approaches to learning. “Obviously writing is a major summative assessment that we do. We do essays, and those sorts of things, and we do maybe one or two projects a year.” John continued that he had several favorite formative assessments that he liked to utilize as a means to determine where his students were in the learning process. “I do lots of like forum, posts, Blackboard things, and then some in class observations of things that they do. I hate worksheets and I hate busy work. Anything that does not feel authentic and there is a purpose to it I don’t like to do.”

John talked about his instruction and he designed it in a way that in some shape or form he could measure student learning at that time, in accord with what they were working on, and what objective that he planned for them to be able to meet. John further enhanced this concept by looking for some sort of tangible evidence of learning. This could take many forms, however. “In some way, shape or form they are showing me that they have done in learning, and whatever we have set that they are suppose to learn.” John gave an example of how he has his students produce a product. “Students working on the essay and so each day they need to be in a certain place with that essay. So to know if they've completed it; so for example last week they were supposed to have one paragraph written by the end of the mods. That I could go around and just observe to see which didn't have a paragraph completely done by the end in which students had. I could directly see. Second step was to write that rough draft so I went around on and check to see if they have a rough draft done and put in on turnitin.com and I can just go through each one and see whether or not they have achieved that. There is some sort of project there. I can see student by student what they have accomplished.”

Regardless of what his American Literature classes was working on, John maintained the

importance of “everything that we do in class is to get them to whatever objective that I have in my mind that they need to get to.” As John planned his instruction, it was his goal to use his formative assessments as building blocks. Each activity was a means to build layer after layer of knowledge. In the end, the culmination of all of John’s instructional activities was a final authentic product that equated to some form of a summative assessment. “When we wrote this essay we had a forum and on that forum they had to write that thesis statement down. To it is very authentic because they are going to be using that later. They are going to be using that thesis statement when they are going to be writing their paper. The students can see the value of what they are doing immediately. It’s not ethereal someday where this is going to be important so you had better pay attention. This is going to lead to the next thing we are doing.”

John gave an example of one activity he had planned for his class’s next book, the *Catcher in the Rye* by J. D. Salinger. John had his class create a reader’s notebook; this notebook could be a hard or electronic version. John said, “Some sort of way of keeping track of the content and I have them do this because I say at the end of this you are going to decide whether or not what Holden’s doing is normal or not normal.” However, the notebook was more than just a “journal” of the book. John instructed students that, “You are going to keep track of some of the things he does that you think are considered abnormal or considered dangerous or considered risky behaviors.” The intention was that by the end each student would have a compilation of what students view as abnormal conduct. Each new entry built on the one previous. “When they write the final essay and do their summative project they already have stuff ready.”

The utilization of assessment to ascertain a student’s learning still comes down to numbers. John confessed that as far as student learning attainment goes he continued to “go by a percentage of students who did whatever was asked them to do. So a lesson is successful, in my

mind if 80% of the students in the room can do whatever it is we're doing. If 50%, then I'm like I need to rethink this. I need to change something I'm doing to make it better."

Technology: Behind the Times

"That is exactly the problem with education. We are always five steps behind where the real world is," John said with frustration. From hardware and training to access, John indicated the lack of total commitment is a hindrance in for teachers and students. An example given was an incident that occurred 2 years ago when his school's 1:1 laptops were replaced; however, the network infrastructure was not updated. "Every student got a new laptop, they got rid of the old ones. The whole network crashed. Just because these laptops were working on a different GHz with the receivers; so they took up too much bandwidth. It brought the whole network down. So for two months we couldn't get online or if we could get online it was very sporadically." Although this issue was eventually remedied, John continued to question the impact of administrative technological decisions on instruction.

Internet filtering in schools does more than simply keep students off inappropriate websites; John explained how his instructional practices have been affected by the lack of access. "Every technology conference I have been to in past couple of years texting, video games, Facebook, Twitter, YouTube use these strategies to teach. But how many schools actually give access to those things? Very few. Some of the most powerful technology tools that we have in our society kids can't access in schools. It keeps that technology from being used to its full potential. It's aggravating." John indicated how the restrictive nature can be a barrier and therefore "We are still not doing what students will actually be able to do in the real world." John further explained how he was able to utilize an online texting activity in his class during the previous year. "One day last year, I did a thing where I think it was an online poll. Where you

could text in and do an online poll. Man they loved it. They just ate that up because it was different. It was texting and it was something that they are used to.” Although the lack of access could be frustrating, John continued to look for a variety of ways to reach his students.

Another technological hurdle voiced by John occurred with how his students use technology in classroom and how that influences instruction. “They all take a class called Info Tech (Information Technology) as freshman when they come here. So they have been given a laptop. They've had this class Info Tech (Information Technology). So my expectations are set by. I know that they've had this training on the pieces of software. So they should be able to do these things.” However, students had a varying range of skills and John had to occasionally rethink how he presented his lesson and what strategies he would use. “When I introduce something new that they've never done before then I have to think about what experience they have. So then I need to know the steps I need to get them to that point in that technology.” If students are still struggling with the technology John said, “Usually I do it one-on-one. For example you see me walking around the room and I can just go to somebody struggling. I can just stop there and say this is how you do this. If it's something that's going to take longer than that I will schedule them for a mod.”

As with any classroom there will always be a few students whose technological skills are more advanced than their teacher's skill set. However, for John he admitted that he is proud, “I usually congratulate that student and show me how you did that.” He continued to use every teachable moment to his advantage. John explained one such time, “A student accidentally got into a place in peer mark that he could see the reviews in a different place then I had showed them and I didn't know you could do that. So I thought wow that's great. Now let's show everybody.” John continued to say that this student technological expertise happens all of the

time and he encourages his students to share that knowledge. "That happened on the forum where I would have a couple kids who would be really savvy with that because they have done video gaming and been on the forums. They knew how to do signatures and put up graphics and all of this stuff. I am like show other people. Share that let's get this out there so everybody can see how to do this."

Joe: Classroom Setting

Joe, a history teacher in a large rural high school, was recommended by his high school principal and the high school's media specialist. Joe was recommended because of his progressive usage of technology in his courses of instruction. He is in his 36th year in teaching and has taught at his current position for 34 years. The school district in which Joe teaches is located in a large rural school district in the Midwest. The enrollment during the 2010-2011 school year exceeded 3,600 students in grades K-12 and high school attendance was greater than 1,100 students.

The high school did not have a 1:1 laptop initiative in place; however, a multitude of technology was available for student and teacher use. The school had two laptop carts that contained Apple Macbooks and Macbook Pros. In addition, a central computer lab, a kiosk of iMacs and a green screen area was located in the IMC. The school district had adopted the web-based School Fusion Learning Management System that had been integrated into classroom instruction and provided content delivery and course management. Joe's school utilized PowerSchool for their online student information system which provided teachers, parents, and students with the ability to access grades, attendance and other school information.

Joe's Classroom was patterned in a way that every student was seated in a desk. Each desk had been placed into neat forward facing rows. Joe's desk was set off into a corner facing

his students. An LCD projector was mounted to the ceiling and configured to project on a pull down screen at the front of the room. The classroom had a bank of windows that ran the full length of the room. Beside the windows were built-in shelves containing various books, student assignments and other materials. Joe had a Macbook Pro that he personally purchased; however, he used it for instruction. The room was equipped with an integrated sound system that enhanced the use of instructional media.

My first meeting with Joe was before classes started for the day and Joe was in the hallway outside of his classroom performing morning hallway duty with other teachers. Joe informed me that his classroom is located beside the “most used” stairwell in the school. He appeared to be well versed in his duties and performed his required morning supervision with ease. While students were walking into class Joe explained the school utilized a block scheduling systems. The day was broken down into four main blocks and each block was further divided into an A and a B section. In addition, classes were one semester long; in Joe’s case, his U.S. history class that used to last for the entire school year was now taught in only one semester.

Experience or a Lack There Of

Joe had accumulated an extensive wealth of pedagogical and content knowledge due to his expansive 36-year career as a social studies teacher. As such he made planning and instructional decisions that influenced the flow of learning. “I know the most important ideas to include or those ideas not to include. I have an idea of what I think they should know at this point in time and what they are capable of understanding at this point in time. It's based upon my experience of working for 36 years with this age group of kids.”

Joe continued to expand on how his experience lent itself to his ability to be flexible with instructional strategies. “At this stage of teaching I can do most things on the fly anymore.”

Much like a chess player that refers to previously played matches to enhance their current play, Joe relied on his vast repertoire of lessons that have been taught in prior years. “Now, at this stage of my teaching career I already know a lot of different ways to go there and sometimes it's just this way is going to work today. I already know what may have three different ways to teach this lesson.” One such example was the lesson Joe taught on the bonus Army during the Great Depression. He said, “The Bonus Army: there's a video Bonus Army, there's a reading on the Bonus Army, we could go to research on the computer on the Bonus Army. I've got all of that stuff. Now I just have to pick out which way I'm going to do it this time.” For the lesson observed Joe selected to utilize a reading found on <http://www.historynet.com>.

Joe's experience also lent itself to adjusting his lesson when he saw that students were not grasping the material presented. “If you have taught for as many years as I have there is probably a plan B, and a plan C sitting out there somewhere.” Joe's ability to utilize alternate lessons or parts of lessons to ensure students successfully learn intended content was one strategy that was often employed. “If I don't think we've gotten it as a group or we have taken a quiz and I think we don't understand this I will resort to some plan B activity to make sure we understand that particular idea.” An illustration of this point occurred during Joe's original lesson involving a reading on the Bonus Army. Once Joe gathered his students did not comprehend the important aspects of the article he modified his instructional approach. “I put three people up there (the front of the classroom) to talk about the story.” As the students up front told their stories participant gave the students prompts to help them include important information that they left out of their retelling.

Joe strove to incorporate the Internet and various technologies into his courses of instruction. Despite his vast teaching experience, he admitted that his technological skills were

somewhat less than exceptional. Joe confessed, “Fifteen years ago I probably didn't turn on the computer.” However, despite Joe’s less than stellar technological start, he gained experience from those around him. Joe admitted, “I had to learn as I go; I actually had to learn from my own children.” Joe’s technological experience was rooted in what he was most familiar with. “I have used what’s available through Apple because that's the type of computers that we have had. So the technological skills that we are dealing with probably have come from the type of computers and what they have available on.”

Despite Joe’s effort to acquire technological skills that he utilizes in his courses of instruction, he occasionally found that he needed an expert to help in areas of deficiency. Joe relied on his building’s media specialist “to help teach whatever prerequisites are needed. To help troubleshoot anything that comes up that is beyond my knowledge.” In addition, Joe relied on his media specialist to keep him up to date on the technologies. John acknowledged, “I need her to kind of guide me through some of this stuff.”

Expectations

Joe’s district had a picture of what a graduate should look like academically once they had completed the prescribed graduation requirements. Joe explained how this picture of a graduate interrelated to his courses of instruction. “Our characteristics then should relate back through and work their way down through your area, which is social studies and back to your specific course which would be US history.” When planning, Joe felt that his instruction was somewhat dictated by the district’s picture of a graduate and his curriculum. “That's the stuff that they give you minimizes the time that I can spend on maybe things that I want to talk about. So it forces me to keep everything in a perspective of I have eight days to teach this lesson, this unit, and because if I take 10 days that I can get to that objective that’s down the line in April. I won't

be able to get to that objective then and I will not have really fulfilled what district standards are for what I should be teaching within this classroom.”

Joe’s lesson planning was further dictated by his high school’s requirements. He turned his plans in once per month; however, those plans were very broad in scope. Joe described his plans as containing, “the objectives, and all they really ask for on the lesson plans when I turn them in.” Although that met his high school’s requirements, Joe made a more detailed plan for each week in two ways, “I will build into my mind, and I will write up a little list of what I am doing and how far I’m going to get.” It was from that list that Joe was able to keep his lessons on track and make sure he addressed the required standards. Joe said his lists tell him, “How far I’m supposed to get all of these different days and certain objectives. There is another list that says I’m going to do this little portion of a video, then this point in time I’m going to do this PowerPoint, or we’re going to do this reading exercise.” From all of these lists Joe was able to check off each item as he went, meeting required standards and essential curriculum.

Joe’s lists extended beyond instructional planning and were utilized with and given to students. Joe gave all of his students an objective list at the beginning of every unit. Throughout the unit Joe and his students referred back to that list as important events and concepts were taught. The objective lists were in chronological order and Joe said, “I follow the objectives right down the line.” The importance of objective lists was to provide students with his expectations, “I think it tells them this is what you need to know.” Joe also utilized the objective list as a study guide, “First of all, they should recognize what the objective was. Number two; I think they should be able to do whatever the lesson of objective dictated to them. So if the lesson said that they were supposed to know four specific reasons for the Depression then they should be able to know those four specific reasons. I tell them at the beginning of every unit what the essay

question is. I tell them what the projects are, so they know what they're supposed to be working on, etc. and that.”

Joe was very forthright and upfront about what he expected students to be able to do. In addition to providing his objective lists he told them directly and in no uncertain terms. “I think I’m pretty open in front of them and say this is what I want. On their essays I tell them this is how I want them to write the essay. This is what I want the essay to contain. This type of information and this is how I would like it to be on there.” In addition to verbally telling them, Joe included step-by-step instructions to ensure that all students were able to perform said task in the manner in which he expected them to. “I think anything that you want out of them you got to explain it to them, teaching and then make them do it over and over and over again. So that becomes something that is important that they can do.” One such example was how Joe expected students to compose essays. “I teach that initial essay writing portion on the first unit and I have that expectation that I will see that each unit from then on.” After Joe’s tutorial on essay writing students were required to put pen to paper on every unit test. Each test consisted of essay questions that were from Joe’s objective list. For example, “If I’m teaching about the progressives, the question is: How do you decide if somebody is a good leader? Then my expectation is that they can when they get to the final be able to write out Teddy Roosevelt a great leader because... then they find different things to do that. That's the one and only thing, that if they walk away with nothing then that.”

Joe’s expectations were high for both his students and himself. “I really am trying to achieve 100% of the students to be able to understand and be able to use the objective.” It was because of his striving for objective obtainment for all that no student of Joe’s was left behind. “If I see someone that I don't think is staying with it or catching on I will try to bring them back

into the fold and see what we can, you know where they are and what they don't know.” Joe utilized a variety of ideas to reach his differentiated learners.

Variety in Instructional Strategies

In an effort to reach all of Joe’s students, he tried to enhance his curriculum by integrating a variety of mediums into his instruction. Joe smiled as he said, “I try not to be predictable. I try to give a little bit of this and a little bit of that. I try to use a variety of things.” Joe found his new ideas to present information in a plethora of ways. “I have been to NETA a couple of times, I have presented at NETA. I find things online, just sitting around with my computer while I am watching basketball games or baseball games I am always on my computer at the same time. I look for different things that come up. If I see something that I like then I kind of look into little more.” Joe stressed how important it is to find instructional ideas that will be interesting to students. “Juniors in high school are easily bored. They want Flash and things like that so it will be a PowerPoint one day, I will try technology wise to use something different all the time.”

Joe also stressed how important it is to know your students. He accomplished this by having students tell him about themselves. “I have students write me a letter to begin every semester; the letter introduces them to me. They tell me about themselves, what they like, what they don't like.” Based on that learned knowledge Joe had the ability to incorporate student interests into his instruction. “If something comes up that fits that I can try to drag that in there. That gives me an opportunity to bring that type of thing back into class and things like that. I'm always trying to tie things back into it was like this.” One such example was with the recently taught unit on the counter culture of the 1960’s. Joe required each student to select a topic and conduct inquiry-based research on his or her topic of choice. Students were given a list of very

broad topics to consider, like influential people, music, and so on. From that broad topic, students were required to narrow down their subtopic. Joe utilized the Internet heavily, including the site <http://kclibrary.lonestar.edu>, as a springboard for student exploration and discovery.

Another strategy Joe had incorporated into his curriculum was reenactments. The impact of having students participate in reenactments brought the history home to students. Joe said, “We reenact shooting President Kennedy or Ronald Reagan's assassination attack because reenactments make them your Ronald Reagan. You know they participate and they feel part of it.” Joe had added a technology enabled feel to reenactments by requiring students to conduct Internet-based historical research on events or persons of historical value. One example of this technique was during Joe's unit on the 1920's. Each student selected their most influential person of the 1920's and conducted Internet research to compile data. Using a Photobooth, a green screen, and iMovie, students created a videography based on their findings. As students shared their videography with the class, Joe tried to enhance the learning experience through dialoguing with students regarding each video. What did they see? Why did the person do that? How did they accomplish this? Joe also tried to include interesting anecdotes about each person. For example, “Charles Lindberg actually fell asleep while making his transatlantic flight. Could you (students) stay awake for 33 hours, without an iPod?” Or Joe discussed with students Harry Houdini and his famous tricks. “Harry's tricks are famous. He performed with a straightjacket or Chinese water torture trick. His most usual trick was in Detroit under the water in a frozen river. Harry Houdini is like Chriss Angel of today.”

Joe tried to impress the importance of “trying to be active and making sure that they are staying focused on what they need to do and that type of stuff.” This was often accomplished by Joe's effort to “try to provide them something that has an interest to them. I try to not stay

static.” Often times this came in the form of “group activities at some point in time, come up with a video that's worthwhile to watch, come up with a discussion of some sort.” One such activity Joe had incorporated into his unit on the Great Depression was based on an article researched on the bonus army from <http://www.historynet.com>. After the article has been read the participant asks his students to provide a written synopsis of what the student's have read. After a completion of the synopsis students hold group discussions about what they wrote. As a culmination to the activity three students are selected to go up to the front of the room and tell their bonus army "story." As the students up front tells their stories participant gives the students prompts to help them include important information that the students left out of their retelling.

Joe confesses he is flexible and experimental when it comes to incorporating new instructional ideas into his curriculum. “I am a person that will try a lot of different things.” However, when I try new ideas some work and some do not. “If I see the result that I like I will say that’s good and I will try to replicate. If I don't see the results that I want to see at the end of that I will go back and say I am not going to do that again.” However, ideas and activities do not always translate between class and groups of students. Joe elaborates by saying; “You don't always get the same response with different groups. One group will love it and another group will hate it and whatever.” Due to that fickleness, it is imperative that a variety of instructional strategies are utilized as a part of the curriculum. “I try to do things that are educational enough for them but variety wise, because again they are not assembly line workers. They can't focus on the same thing over and over and over.”

Guidance

Joe utilizes the strategy of probing students and gaining their attention to guide students within the concept that was being taught. As a component of the unit on the Great Depression,

Joe shares with students America: The Story of Us from <http://www.historychannel.com> on Herbert Hoover's public works projects. Joe questions student about what they think of the Hoover Dam. Students respond with it is impressive and other similar responses. Joe probes further and asks, "What the Hoover Dam says to America?" Joe appears to be unhappy with their responses so he brings up the urban myth about workers falling into the concrete to gain students attention. Joe admits, "I try to sometimes find the grossest or most unusual story or something like that that will catch their attention. All of a sudden they will go, 'Oh geez that's terrible!' That way I know I have their attention." After the story students perk up immediately and appear interested in the discussion.

Another similar strategy that Joe uses to guide students with the complex structure of American history was that of comparing historical persons and events to those of today, ones in which students can relate to. One such example was Joe's lesson on Herbert Hoover's response to the struggles of the American people's plight during the Great Depression. The discussion focuses on how Hoover does not think poor people should be given money. Joe probes students on the concept by asking their feelings on that belief. A unified class indicates they can understand his position. Then Joe makes the concept feel real to students by asking how they would feel if their parents had a lot of money, but did not give them any. Joe had the class's full attention; then begins to use famous rich people like Warren Buffett and Paul McCartney who are giving their money away and does not give it to their kids. A heated discussion ensues and students decide they would not be happy about that. From this exercise, Joe makes students understand both sides to the difficult concept of Hoover's political beliefs and the needs of the economically challenged public of the Great Depression.

Joe employs project-based learning as an alternate approach when introducing content to

his students. While students are in charge of their learning during this process, Joe utilizes a low-key tactic for guiding students through the acquisition of knowledge. One such project on the culture of the 1970's Joe has individual and small group discussions with students to act as a catalyst for learning. By using this approach, student's attention was being gently directed about a time period where they never lived in and are doing so like they were actually there. Joe's style for conducting student discussions varies from sitting down with his students to peering over a student's shoulder to provide gentle feedback that was impactful for a student's project. Joe's discussion covers a wide range of topics with students from the Dallas Cowboys, Jane Fonda, Vietnam, boom boxes, and the Black Dahlia. After Joe's dialogue with students, they continued their Internet-based research that will enhance their learning and subsequent project.

As students complete their project, Joe voices gentle reminders for them to save their PowerPoint packages to the class's fire wire external drive. Joe then provided directions as to where on the drive they need to save. The process appeared to be as simple as dragging and dropping their files to the drive. As a fail-safe, Joe recommended that the student take the external drive to another computer and run through his/her presentation on the other computer. Even when Joe had the students working on a project that required skills beyond his skill set, Joe recruited colleagues to guide students in their areas of expertise. One such occasion occurred when students worked on a project in reference to the counter culture of the 1960's. The participant and the media specialist worked together to aid students in their finalization, saving, and transfer of the students' projects, as Joe spent much of the class going to each student to ensure questions were answered in regards to project requirements and concept ideas. Joe scheduled the media specialist to assist students in the process of embedding music and saving their project as a package.

A secondary component of the 1960's counter culture project occurred when student presented their creation to the class. As presentation day progressed students were provided with a rubric that contained a grade and feedback to guide them on where they excelled and the areas that were in need of improvement. Joe said, "I will write back to them I think you need to look this and I think you need to look at that. When I am grading their projects I write back on them. I like their usage of music and speaking together or I didn't really like the fact that you sat down while you talked this morning. I tried to put both positives and negatives on there." By providing guidance Joe was providing tools that would aid students with future projects and other forms of assessment.

Joe used assessment as a means of checks and balances to guide students through historical events. Joe confessed that, "As everyone else I use testing. Of course, my tests are usually somewhat different." The differences in Joe's assessments stemmed from his preference to guide students in the direction of meaningful learning and self-discovery. "I think that that I will find out if you know something or if you don't know something based on the fact that I just asked a broad enough question. In class, I just tried to use that thorough questioning and asking people what do you think about this or whatever." One way in which Joe accomplished this was through the use of an over arching unit question. For example, "In this unit right here that I have been teaching on the Depression and the New Deal the question was: How much should the government controlled economy? That's the one and only thing, that if they walk away with nothing then that. They should have an understanding about that the government does control the economy at times. Is it good? Is it bad? Is there experiences that are bad, that the government has to step in and do something or should we let things rise and fall based upon the purism of capitalism?" Based on Joe's direction and inquiry, he was able to perceive students'

understanding of the objective. “I try to make sure that I get a feel that they are headed in the right direction.”

Joe paid special attention to how students understood the content that was being assessed. “Student remediation is based upon what objective they didn’t get. With that in mind I need to sit down and talk to them and I’ll find out what it is that they don’t understand.” After Joe determined that additional intervention was needed, he reevaluated his curriculum and created an additional “activity where they will get something positive out of it.” Through such guidance Joe insured that his students had a solid foundation in American history.

Ruth: Classroom Setting

Ruth, a science teacher in a large rural community high school, was recommended by her district’s executive director of technology, high school principal, and the high school’s media specialist. Ruth was recommended because of her innovative use of technology in her courses of instruction. She was in her 10th year in teaching and had taught at her current position for 10 years. The school district in which Ruth taught was located in a large rural school district located in the Midwest. The enrollment during the 2010-2011 school year exceeded 3,600 students in grades K-12 and high school attendance was greater than 1,100 students.

The high school did not have a 1:1 laptop initiative in place; however, a multitude of technology was available for student and teacher use. The school had two laptop carts that contain Apple Macbooks and Macbook Pros. In addition, a central computer lab, a kiosk of iMacs and a green screen area were located in the IMC. In the science department, Ruth also had access to Mobi wireless tablets and clickers for instructional use. The school district had adopted the web-based School Fusion Learning Management System that had been integrated into classroom instruction and provided content delivery and course management. Furthermore,

Ruth's school was using PowerSchool as their online student information system, providing teachers, parents, and students the ability to access grades, attendance and other school information.

The first impression of Ruth was one of dedication to her students and a deep passion for teaching. Ruth clearly possessed a drive to make her class and subsequent instruction fun and exciting. She demonstrated the unique ability to make difficult concepts a fun and enjoyable experience for her students. Ruth was able to flawlessly juggle many things at one time. Students were reviewing as she was guiding students, providing tech support, using a myriad of technologies, and teaching all at the same time. She reminded me more of an orchestra conductor masterfully coordinating learning than a traditional instructor of curriculum.

The Influence of Standards and Testing

Ruth met regularly with her departmental colleagues to plan for science course requirements. It was through such planning that the science department set course guidelines that must be adhered to as a school, department and as an individual classroom teacher. Ruth explained, "We decide as a department and as a school based on what people previously have had issues with. For example, if a kid in my biology class can't take general chemistry if their math scores aren't going to be comparable. We as a department set guidelines for our own and what we need to be successful." One important part of the course development process was look at what other districts and schools are doing. "We do look at what other schools have been successful with or unsuccessful with in that regard." Based on what was learned from their inquiries Ruth and her colleagues utilized those finding to enhance their courses of instruction.

Another major component that played into the development and subsequent instruction of Ruth's science courses were state standards and testing. "We have set the end goal in mind and

now with the NeSA testing that's going to shift a little bit.” Ruth admitted that the science department had found itself having to revise curriculum in order to address the requirements. “That will now be our shift. We wrote our curriculum. We as a district are really changing into key concepts and ideas. So we are going into a flow pattern of, these are the essential concepts for the department and for each grade level.” The essential concepts that Ruth spoke about are key elements to the newly created curriculum guide. This guide provided each subject/course with a road map. “These are the activities that you use to reach those curriculum goals. These are the state standards that are attached to that. So we kind of have a curriculum guide.”

As with any guide or road map, in order to get where you are going you must follow the prescribed path. Ruth admitted, “With the state standards and the NeSA testing there are certain things that we have to cover.” However, the rigidity of mapping out every nuance can have a negative effect on your student’s journey. “It does tie your hands a little bit as to what you can in addition do. It doesn't mean you can't do it. But you can't spend a whole semester on genetics, which kids always love.” Ruth gave an example of how her instruction had to be balanced in order to meet the requirements of state testing. “We spent a good chunk of time on genetics, but we can't spend the whole semester on it. We still have to cover photosynthesis and respiration, which kids don't necessarily like. But it’s on the NeSA test and it's an objective. So we try to tie it into something that makes sense to them.”

Planning and Preparation

As with course and curriculum planning, Ruth worked collaboratively with her department to develop lesson plans. “They (administration) desire for lesson plans to be collaboratively designed with teachers. First thing we write our lesson plans. On those lesson plans you outline your student objectives, your activities that you are integrating, and your

reading activity.” Ruth noted that, “Reading is one of our school district’s goals. In our case, science, our ACT practice activities or PLAN test activities.” In addition, state standards must also be listed for each content area that Ruth had addressed in her lesson. “How we do that is we just list them as state standard. My case for example, we just finished the cell unit, 12.4.1 is being addressed in those areas.” After the initial plan had been written, “then we look at what content we are going to cover, both as a department and as a teacher.”

Lesson plans were required to be turned into each teacher’s supervising principal and were in two formats, “One teacher submits them weekly for lesson plans and the other does them more of a broad monthly scope of lesson plans.” Ruth confessed that in the near future, her school hopes to make instructional plans available to students and parents via the school’s website. “I think technology makes it a little bit easier for kids to have access to those objectives continually and to refresh those.” In addition, “It makes it (objectives) available to them where before maybe they didn’t write it down or they didn’t listen. Being able to put it onto something of technology, it is there.” Through the utilization of posting curriculum and lesson plans online, students and parents had 24/7 access to what has been, currently is, or what will be taught in the future.

As Ruth planned instruction she admitted, “For me my biggest challenge in preparing my lessons was getting the time to say okay this is what I’m going to do?” Ruth extended her collaborative practices outside of her department to other members of her sphere of influence. “You talk to a teacher who maybe you went to college with. So I use this or check this website out. Hey I use this website and I saw something on there for science. It is a lot of sharing and collaboration. It is really just a lot of searching and finding various things.” Ruth attended technology related conferences and workshops to see what other were doing. “I attend the NETA

conference every spring and come away from there with a bazillion ideas of things that we could do.” However, Ruth admitted her use of technology, as a part of her instruction, was secondary. “At this point what I consider it a resource or ancillary material. It is what technology could I bring in as an ancillary to the content that we need. It is in addition to something else. It doesn't ever take away from the true content, it is suppose to enhance the content.”

Ruth often found that her lessons were routinely revised and she went through a second round of planning. Ruth sometimes asked herself the question, “Okay what didn't work?” Her initial query stemmed further evaluation in regards to “whether or not the right integration activity or project for that particular material” was selected. Ruth often continued to ask, “Was it the fact that they didn't know the material or was it the fact that they didn't have enough guidance?” Based on those assessments, Ruth made instructional decisions that influenced her students’ content acquisition. During the lessons observed, Ruth experienced such an issue where she was prompted to reevaluate and revise the instructional strategies used for her lesson on genotypes and phenotypes. Ruth began her initial lesson by modeling for students how to set up a Punnett Squares, setting up a chart for genotype ratios, and then proceeded to have her students practice their knowledge on a genetic cross lab. When Ruth graded her student’s lab work, she decided to reteach the lesson on genotypes and phenotypes. Her new lesson was a review of the initial concepts and two lab assignments. The assignments differed by utilizing a hands-on approach. In the first assignment students created their own Reebop creature based on the random flipping of a coin to determine the creature’s genetic traits. As students worked, Ruth walked around to each student to determine their understanding of the concept based on her observation. The second assignment was posted on Ruth’s SchoolFusion website and was to be completed at home. The assignment called for students to use Microsoft draw tools to manipulate

a smiley creature using the page on Smiley Genetics.

Guide on the Outside

At the beginning of all classes Ruth provided her students with a brief overview discussion of what was going to be covered for the day. “(I) make sure that that is there for them orally each period. You know we have a lot to cover today. We are going to start with this.” In Ruth’s general biology course, “sometimes I will list it on the board.” However, this method was not consistent because, “We do float rooms a little bit so it makes a little more difficult to make sure that what you have this period is going to be put there for the next period.” For Ruth’s advanced biology course, “We use a calendar inside the room so they know each week what we are doing. We also give them an objective sheet for the unit.” In addition, Ruth shared that she had plans to, “post the objectives or the goals of what we are going to do each day on our website.”

By providing an outline of the objectives and lesson overviews Ruth felt that this provided students with the opportunity to, “go back and reference what they were supposed learn.” The end result was that Ruth had given students the tools to determine through Ruth’s communication, “Here is what I expect you to do. This is going to be on your test. The question that you're going to see is going to be.” By putting the information out there and making it available for students, Ruth felt that she was letting them take control of their learning through communication and guidance. Ruth often used the phrase that she is, “just a guide on the outside.”

Ruth strove to create instruction that was more than the traditional face-to-face lecture, where the instructor speaks and the students take notes. In her lessons she was looking for, “activities that are going to engage those learners and keep them active. One of the shifts that we

had tried to focus on during the lesson now is to shift to more of a learner's based activity; rather than them just sitting there and taking the information in. What students should be able to do during the lesson, more interactive." One example was the lesson Ruth utilized on the stages of mitosis and meiosis. Ruth conducted a brief discussion on the various stages. She then moved her class to the computer lab where they logged into <http://www.scilinks.com> for an interactive activity where the students could view definitions, images and manipulate each stage of mitosis and meiosis. After a completion of the Internet activity students were brought to the classroom lab where they completed a lab activity using microscopes and slides of each stage. Students identified the stage on the slide and Ruth in turn walked around the lab to verify their accuracy.

Ruth admitted integrating technology and creating engaging lessons can be a challenge, she found herself asking, "What are your student's capabilities? Why do you have available to use? What can you get to? How can you integrate that into lesson?" Ruth looked to other schools as a guide; occasionally she found herself thinking, "I need to do a better job of integrating that." One of the examples Ruth would like to implement was blogs and wikis; however the current school filter blocked this type of social media. She wanted to utilize this tool as a place, "where kids can get into and straight out ask a question in an open forum. I may know the answer but somebody else might know the answer in a different way. Maybe they may have the same question but didn't ask it. By allowing them to have access to something like that we would allow kids to not only ask the question but learn and teach each other." The utilization of this tool would impact her instructional strategies by giving her students the ability to expand their inquiry.

Ruth referred to herself as "a guide on the outside helping and pointing them in the right direction." She became very excited as she spoke of the possibilities that technology and the web

brings to the classroom. “After being at Apple I learned a couple things. I had a kid this morning say for example, kind of a side question about a topic we were studying but he said what does this mean. I said I don't know, why don't you look that up. He said, how am I going to look that up? Well do you have a cell phone? Oooh! Cell phones are not allowed in the school. But after being at this conference I felt comfortable being able to do this today. He said yea. Does it have Internet access? Yes. I said well get it out and Google it. Look it up. What does it mean? We can do that? I said well right now you can. Being able for the kids to have a role in what they are actually taking away. If I tell him is he really going to remember it? I don't know. But he looked it up and then thought about it and processed it. With how he looked it up it's going to see a little bit better than my just saying this is what it means.” Ruth felt that integrating technology and the web in a way that was part of the student’s world would result in a shift in how teachers are getting and keeping their student’s attention. Furthermore this would aide in “keeping them focused.”

As lessons and their corresponding activities were completed students did not always master the material that is presented. “Some of the kids may not have got when you brought it to them or have the ability to be able to see it. There are so many things out there now that allow kids to revisit and hear it two, three, and four times. As a teacher I think we are just starting to touch on that, on the capabilities to provide additional opportunities or other ways to provide follow-up.” This was a concept that Ruth was just beginning to utilize with her classes. She posted notes, reviews, and activities for student access.

Another way in which Ruth addressed the lack of recall of previously covered material was through concept review. “I do think as we move into more of a technologically advanced world giving feedback is going to be a lot easier because you're going to be able to see that

mistake. In some sort of, hey everybody missed this question or everybody has been writing this word.” Ruth had embarked on utilizing her new student response system as a means to follow-up and review. Her inaugural lesson occurred with a new concept she is using called L to J. “L to J is a concept that we lay out the concepts that we cover throughout the year and you (the student) are going to be expected to know. For me L to J is a big thing. L to J allows us to say hey when we covered that objective you should know this material because we had evaluating not only L to J but L to J in terms of what concepts are preview, current, and review. She teaches her lesson based on the expectations of prior mastery. They overlap from year to year so really the permission to forget things is not allowed.” Ruth went on to explain that for the material covered from prior years students are expected to take the initiative to relearn what they have forgotten. Ruth said, “You had better review them and if you need extra help then you need come in and see me or we need to get you caught up on this.” However, “If 20/30 kids missed it I have got to evaluate did they learn that objective? Or was it just a fluke that they missed it? So to me that is a good evaluation.”

Adaptability When Using Technology

Despite the best instructional planning, preparations, and strategic intentions, when technology is involved problems will occur. Ruth’s technical issues began as a part of her planning process. One of the challenges that she faced while researching new web-related materials to utilize as a component of her instruction was whether or not she could access them at school. She asked herself, “Will what I find at home work in my school?” Ruth explained, “We are filtered pretty heavily. So I may find something that’s completely relevant but I can’t get it here.” If a site that Ruth would have liked to use was blocked, she had to make a request to the IT department to have the site unblocked. While this may sound like a simple matter, Ruth

assured it can be quite the contrary. “This year we have done a better job of being able to put up a request to open a site; which before it was like pulling teeth to do. So I spent a lot of time at home on my computer; then I come here and try to make sure they work the same.” Ruth continued that the prospect of sites working was uncertain, “Sometimes they do and sometimes they don't.”

During one such website inaccessible instance in class Ruth became frustrated and took an impromptu poll with her students. She asked how many students had cell phones with data plans. The results indicated that 11 out of 23 students had phones and they were swiftly asked to take out their phones. Ruth instructed students to look up incomplete dominance. Within one minute all of the students with phones had a definition and begin sharing what they found with their classmates. After the lesson I asked Ruth about the use of cell phones; she admitted, “Cell phones are not allowed in the school. But after being at this (technology) conference I felt comfortable being able to do this today.”

A secondary planning issue that Ruth experienced was the availability of technology. Ruth’s school did not have a 1:1 laptop initiative in place and she was required to schedule her computer lab and laptop cart usage with the IMC. Ruth stresses, “I have to schedule lab and laptop time weeks in advance. In some classes I schedule months in advance because little changes.” This issue was further aggravated by the need for certain programs to have the same student at the same machine for each lesson. Ruth explained, “The availability of technology, with iMovie for example you have to be on the same computer. The way that iMovie 10 or whatever version we have here it has to be the same computer that you are at. So, getting your hands on that same computer when we have three labs that will use it appropriately and be productive for 1100 students is difficult.” Ruth often wondered if this was one of the reasons that

many teachers actually did not use the lab or laptops that are available.

In spite of Ruth's advanced planning for the use of labs and laptops, she occasionally found herself in the situation of technological glitches beyond her control. One instance that illustrated this difficulty occurred during Ruth's general biology course. Students were given a laptop to log into class work on the district's SchoolFusion website. The students and Ruth were both unable to log into the site after several attempts and the utilization of different laptops. Ruth cautioned her students that the SchoolFusion had been experiencing network issues and if the interruption continues they will complete the task together as a class. Ruth became tech support for her students and aided them in troubleshooting, logging in, and answering questions. After waiting for almost 10 minutes to get all of the students logged on, students were to load and view the intended PowerPoint. A frustrated Ruth gave up and instigated plan B. She pulled the PowerPoint up on her desktop and began reviewing as a class.

Ruth continued to experience technical glitches that impacted her instruction and spurred immediate restructuring of her intended lessons. During Ruth's advanced biology course she had originally planned to have her students review the different stages of mitosis and meiosis by creating/ drawing a model or creating a flip book using the instructions posted on the district's SchoolFusion website. However, due to the computer lab experiencing Internet issues preventing students from being able to get online Ruth turned her intended lesson into homework. Ruth adapted the instructions to include the option of completing the assignment using iMovie, podcasting, iPod apps such as Flipit or some other graphic. However, Ruth stressed, "No PowerPoints." With the intend lesson turning into a homework assignment, Ruth had turned her review into a lab where students were now creating a valentine card thanking parents for their genes and genetics. The content reviewed remained unchanged; however, Ruth utilized different

strategies then she had originally planned to achieve the same outcome.

Despite technical glitches Ruth continued to utilize new technologies. One such example was with the new student response system that Ruth was utilizing as a tool for assessment. For the initial use of the system Ruth tried it out on the instructional concept called L to J which was a preview/ review of curriculum where Ruth “lays out the concepts that we cover throughout the year and are going to be expected to know.” Ruth began her student’s initial introduction to the system by providing step-by-step practice with the clickers. As Ruth has students enter a short answer response, the system froze and did not allow user input. After several attempts to move on to another question, Ruth restarted the system. Restarting the system did not fix the non-responsive issue so Ruth attempted to troubleshoot the problem. Ruth got the multiple choice questions to respond; however, short answer did not operate correctly. Ruth made the decision to adapt her lesson by conducting the L to J using a PowerPoint from a previous session. The students were directed to take out a pencil and paper and record their responses on their paper.

Cross-Case

The utilization of a multiple-case study approach provides the advantage of assessing web-facilitated technology as a means of influencing traditional face-to face instruction across cases. It is imperative to emphasize the importance of issues within individual cases that contribute to the understanding of the complex whole (Stake, 2005). This is accomplished by displaying the unique situations and themes within each case and following up with a cross-case analysis to find common themes and findings across all cases as a whole. The cross-case analysis employed extensive examination of the themes from John, Joe, and Ruth’s individual case analyses. Each theme was rated for ordinariness and estimates of manifestation of the theme within each case. The merged findings were translated into assertions and further rated based on

the importance to the overall phenomenon.

The cross-case analysis conducted derived four merged findings that were constant within the three cases involved in this research study. The merged findings determined through analysis were: collaboration as a part of the instructional process, expectations involved in teaching and learning, the instructional guide as a strategy, and technological difficulties. For each merged finding presented, relevant representations from each participant have been asserted to provide insight into the embodiment of each finding. This assists in emphasizing the manner in which each individual case, despite differences, has similarities.

Collaboration

The act of collaboration played a significant role in both the planning and instructional process. Despite the different routes that each participant used to collaborate, the same themes resulted. Each participant utilized collaboration as a means to strategize curriculum and lesson planning, explore potential web technologies, work in cooperation with technical colleagues, and student as teacher.

Collaboration as a means to strategize curriculum and lesson planning was achieved in varied methods for John and Ruth; however, the end results attained were similar. John met as a department and attended scheduled weekly PLC sessions that rotated by semester based on the subject taught, while Ruth met with her department weekly. Both participants during their interview discussed the intended generalized product of their cooperative partnerships as a means to provide a forum for discussion and other agenda items related to curriculum and instruction. Such agenda items included curriculum guidelines, curriculum mapping and corresponding timeline for instruction, state standards and testing, district goals, lesson development, and student intervention planning. The meeting agenda varied each week and was developed based

on items identified as in need of discussion and review.

The exploration of potential web-technologies was a source of great excitement among John, Joe, and Ruth. Each participant noted the attendance of the state educational technology conference as a method used to gain a wealth of knowledge through collaboration. In addition, it was noted to be an important way to see what other schools were doing and what was new and upcoming. Another unanimously used approach was to talk to people you know; use your sphere of influence to find out what they were using in their classes. Each participant noted the importance of their students as a resource for technology. As Ruth stated, “there are a bazillion things out there”; however, it is a matter of finding what is available. The location of potential web-technologies by all three participants was accomplished through searching, finding, sharing, and collaborating.

Working in cooperation with the participant’s technology staff was imperative as an instructional resource. The media specialist at the school where both Joe and Ruth taught played the dual role of media specialist and technical resource. Her time could be scheduled to provide technical assistance during class periods. Joe noted that he used his media specialist “to help teach whatever prerequisites are needed. To help troubleshoot anything that comes up that is beyond my knowledge. She's probably our most invaluable tool we have in order to deal with many of the technology. I need her to kind of guide me through some of this stuff. I need the tech person to always keep me up-to-date with what I can do.” Ruth shared ideas and discussed future technology prospects with her media specialist. During Ruth’s interview she elaborated on this idea with a recent trip that was made to Apple by a group of teachers, administrators, and her media specialist. Ruth disclosed “A big question that we asked our entire group. How do you determine what are our students should know and as a teacher how do I determine what they do

know? In terms of technology. They know way more than we think they know. Where teachers, some people sometimes I am not very often because that's how I am, fearful of the unknown. The students know more than we do and we look at that as we will learn together and use it as a benefit.”

All participants in this study agreed that students often know more technically than teachers often give them credit for. Each participant noted with zeal that they were eager to learn from their students when a technical deficiency on their part presents itself. In such cases the roles were reversed and the student became the teacher. John noted, “I usually congratulate that student and say show me how you did that. That happened on the forum where I would have a couple kids who would be really savvy with that because they have done video gaming and been on the forums. They knew how to do signatures and put up graphics and all of this stuff. I am like show other people. Share that let’s get this out there so everybody can see how to do this.” Joe continued on with a reiterated interest that he often had in students who are “so much more well-versed, I honestly believe in some cases the kids have more technology then I have.” Ruth took her interest a step further and asked them instead of waiting for the technical ah ha moment to occur. “I personally ask them. I just bought an iPad and it is new to me. I have to students who have iPads that I know of. I said to them today, hey I want to know what you have already and that you use and you like. I want to see. I just asked them. How do I do this? I don't know how to do this. They like the idea that you ask them. They will show you and they are teaching at the same time, even though they don't know that. You both are learning.”

Expectations

Participants spoke of the manner in which they communicated their instructional expectations to students. John described how vital such information was to students. “I think

anything that you want out of them you got to explain it to them, teaching and then make them do it over and over and over again. So that becomes something that is important that they can do.” During observations and subsequent interviews each participant demonstrated their particular method(s) utilized; approaches included verbal statements, calendars inside their classroom, written objective sheets, projected daily plan and online postings.

John began each class with a word document projected on to a screen at the front of the classroom. The document contains a plan of the expectations for the day. John expanded on this by conferring his intentions for such a display. “I usually have some sort of thing telling the kids what we are going to do that day so I have that ready in my mind and they have that ready in their mind. I tell them right at the beginning of class and say this is what I expect.”

Joe also provided his students with expectations in advance; however, he used a dual format that included the verbalization of his expectations and a unit wide objective sheet. It was provided to each student at the beginning of said unit. Joe expanded on his intentions of such articulation. “I think it tells them this is what you need to know. I tell them at the beginning of every unit what the essay question is. I tell them what the projects are, so they know what they're supposed to be working on, etc. and that. I think I'm pretty open in front of them and say this is what I want. On their essays I tell them this is how I want them to write the essay. This is what I want the essay to contain. This type of information and this is how I would like it to be on there.”

Ruth utilized several methods to provide her students a better understanding of what was expected of them. Ruth provided her students with “an oral discussion of what we are going to cover each day” as well as “here is what I expect you to do. This is going to be on your test. The question that you're going to see is going to be. You're going to cover your artistic lab or whatever.” Furthermore, in Ruth’s accelerated class she used “a calendar inside the room so they

know each week what we are doing. We also give them an objective sheet for the unit.” During the last week of observations Ruth admitted that she was going to begin posting her daily objectives online for students to be able to refer to.

Participants also held a secondary set of expectations that are communicated in a less than overt manner. Each participant discussed their views on what they expected their student’s technology related knowledge to be upon their arrival in their courses of instruction. Each participant acknowledged a set of technology expectations derived either on a district, school, or personal level. These expectations took the form of a required freshman course, a set of school guidelines, or broad understanding of student interests. For the use of technology that students lack understanding of or familiarity with, each participant took the task to hand and provided instruction themselves or utilized the expertise of others.

John confided a feeling of confidence that all of his students who entered his class did so with a basic understanding of productivity software. When questioned about his expectations, he assured that his certainty was based on the required course, Information Technology. “I know that they've had this training on the pieces of software. So they should be able to do these things. So for example when I asked to open up Microsoft Word and do whatever we're doing with the Word. They should all be able to do that without any direct instruction from me. My expectations are set. They should all be able to do that.” John’s high school course handbook provided a brief understanding of the skills each student would possess upon the completion of the course. According to one research site’s course guide students will learn: Advanced Microsoft Word, database operations, Excel spreadsheet, and application integration.

Although it was recommended by the handbook that students complete this course during their freshman year, it was open for students in grades 9-12. The course was offered in the

traditional face-to-face format and online through Blackboard. However, for the use of technology outside of the prescribed Information Technology course, John's expectations were less than certain. As John discussed his experience using web technology that was new to students, he admitted his expectations were low and approached his instruction as such. "I need to know the steps I need to get them to that point in that technology. So basically I just have then to go back and just say what have they done. And if they haven't done it to really think about my lessons a little more as far as direct instruction goes."

Joe and Ruth's high school did not have a required technology skills course. However, an elective course, Keyboarding/Input Technologies, was available. The description of the course included in the school's course guide states the course "Emphasizes keyboarding skills. Students will be introduced to the Windows 7 operating system and Word 2007 features to build personal and business computer skills (Course Guide, 2011)."

Joe had far less clarity regarding his students' technology related abilities. He admitted often "the technological skills that we are dealing with probably have come from the type of computers and what they have available on." John clarified that his students possess a wide variety of skills. "We have students that are recent immigrants who have very little skills and a large portion of our kids have fairly satisfactory skills in terms of understanding the basic things like PowerPoint and other stuff like that." For the students in need of additional instruction to bring them up to technological expectations, Joe and his school's media specialist "help teach whatever prerequisites are needed."

Ruth described her expectations in regards to her students' technology related knowledge as based loosely on her school's guidelines called technology expectations. The basis of these expectations, according to Ruth, were developed 10 years ago and were outdated and in need of

updating. “I think that it's going to be, completely revamped because the technology expectation 10 years ago is not a technology expectation now. But really it will probably be irrelevant before long with the way they integrate technology and how they use it.” Ruth’s theory of technology expectations was further expanded on when she said, “Students know more than we do.” However, if students did not meet her expectations she provided the necessary remediation until they were able to perform the required tasks.

The Guide

Ruth’s adage regarding her strategy as an instructor was “you are just a guide.” This saying appropriately represents how each participant conveyed their instructional approach through both interviews and during observations. Throughout the learning process participants took on the role of subject matter expert and guide, providing students with the benefit of their experience and knowledge. Participant’s guidance as a strategy in web-facilitated instruction led students to be actively engaged in their learning. This engagement was achieved by participants using the web in conjunction with the strategies of collaboration, inquiry, and discovery, resulting in students taking on a more active and principal role in their learning.

John’s use of online collaborative tools increased student’s engagement and interest in Steinbeck’s *Of Mice and Men*. John had found that students like to “get involved in the discussion.” In one example regarding the use of online forums, John admitted that he would assign a particular number of posts; however, “I will always have two or three who I will say five posts a week on the discussion. They will do seventeen or twenty.” When asked what John thought about this, he responded with, “They just go above and beyond. So that gives them an opportunity to do some independent kind of work and kind of show their mental muscles.” Such forum posts provided a spring board for John to guide students in their discovery of character

conflicts. This was accomplished via a two-prong methodology. First John engaged students' interest by encouraging student collaboration by requiring students to respond to each other's posts. John provided students with his insight through responding with his thoughts on their posts. The second stage of John's guided discovery occurred through his use of the website <http://www.turnitin.com>. Students uploaded their completed essays on the character conflict in *Of Mice and Men* to <http://www.turnitin.com>, where collaboration and feedback between peers began. John encouraged students to make comments and provide feedback on each others' essays. After students had the opportunity to work in partnership he provided his own comments and support.

Joe also strove to incorporate web technologies as a means to engage and guide students in their academic endeavors. For his U.S. history class, Joe developed activities based on student inquiry and discovery regarding historically important events and people. Instead of John lecturing on how and why various people or events are historically significant, he guided his students to learn independently. One such activity observed required students to select important people during the decade of the 1920's. Students were given free rein to research the person who most interested them during that time period. To take the activity to a higher level of understanding, students were asked to report their findings in the first person, as if they were the famous/ infamous person themselves. From this activity students could recall every small detail about the person they were portraying.

Joe had taken his instructional guidance in inquiry and discovery based learning to a new level at his school. He had designed an entire course on popular culture around the web. Each unit was centered on a new decade where Joe provided a brief introduction to the culture of that decade. From Joe's opening students began inquiring into the topic that most interested them and

began to research. Student's Internet-based research included music, video, and culture. Joe's guidance continued by discussing decades and events that he himself had experienced. During one class period observed he discussed a wide range of topics with students from the Dallas Cowboys, Jane Fonda, Vietnam, and the Black Dahlia. With Joe's guidance, students were developing their own meaningful learning through self-discovery and inquiry-based learning.

Ruth continued with John and Joe's strategy of guiding students by expanding on learner-centered activities. Students were given a more involved role in their learning through the incorporation of SchoolFusion and content specific websites. Ruth explained that she had tried to engage learners by involving students in interactive learner-based activities instead of the traditional lecture and note taking lessons of the past. Ruth felt it was these kinds of activities that "allow kids to not only ask the question but learn and teach each other. You are just a guide on the outside of helping and pointing them in the right direction." This shift from teacher-centered to student-centered instruction was evident during course observations. Ruth designed her lessons so at least half of each, and in some cases the entire class period, was devoted to interactive activities to enhance student inquiry and discovery.

Participants questioned how their instructional guidance will play a role in their students' future education. Each teacher agreed it is imperative to teach with web-based technologies that their students currently use in their daily lives. By utilizing these technologies participants are guiding students in regards to their experience, both inside of high school and beyond. John admitted that he often thinks about "where these students are going to go after high school and the world outside of school and the kind of technologies they are going to run into and have to be able to access and use." Ruth said it is an "interesting philosophy I have now because after seeing what's available and where we are probably going to be going with the way they integrate

technology and how they use it.” John found himself discussing with his students, “when you've got out into the real world, forums and online discussions most colleges will use some form of that for their classes. You will be taking classes online, you have to be able to do this online community thing. And so this is going to prepare you better for that world as well.”

Technological Difficulties

The introduction of technologies, such as those that are web-facilitated, has been communicated by participants as slow coming in their educational environment and even slower to be utilized. Furthermore, the three participants in this study identified that the inclusion of technology into instruction can lead to difficulties in planning and the execution of lessons. The participants also noted during interviews and through observations that technical issues lead to instructional adaptability, as well as the occasional abandonment of activities.

Each teacher in this study identified their school as being behind in the adoption and utilization of web related technologies. John commented that this was a problem with education. “We are always five steps behind where the real world is.” John’s comment was evident during the lesson observations conducted. Each participant was labeled by an administrator as being a teacher who utilized technology in an exemplary manner. However, the web technologies that were integrated into instruction were technologies that had been available for a lengthy period of time. Furthermore, the technologies that the students were using as a part of their daily lives were not being used. The following chart outlines the web technologies utilized per observation and by whom:

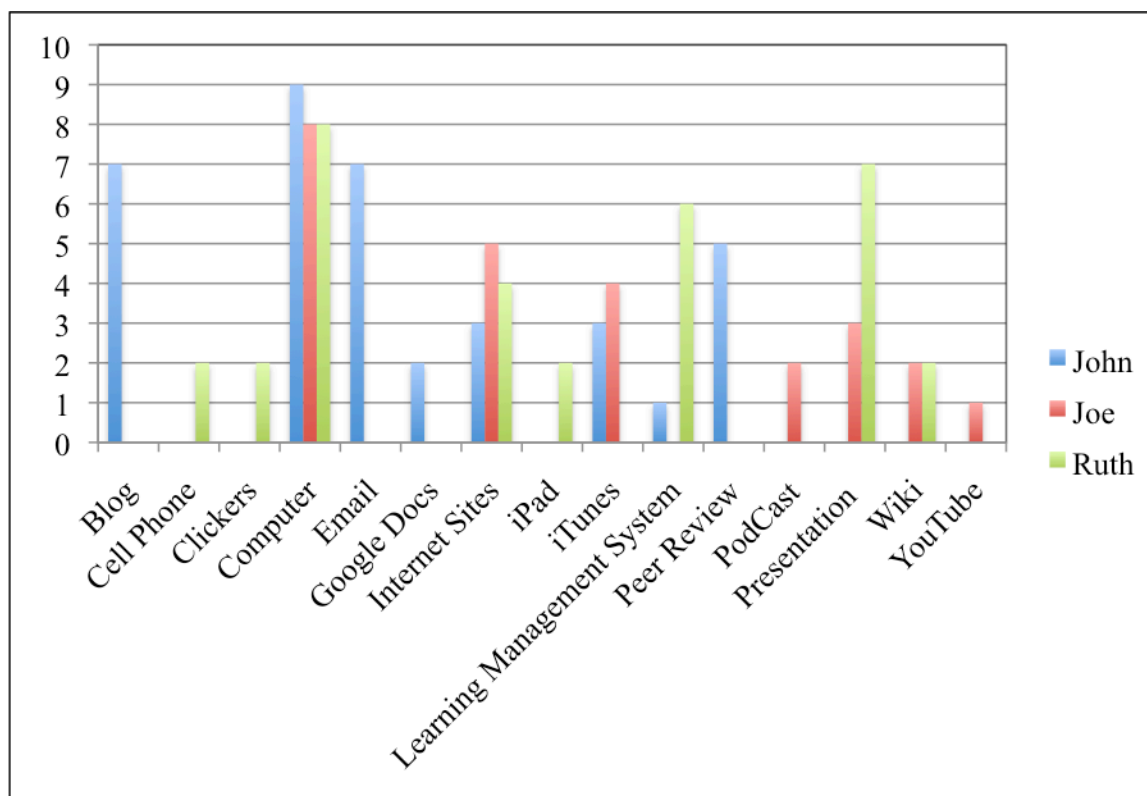


Chart A. Web Technology Usage by Participant

John verified that the web-technologies used by students outside of class were some of those not allowed by schools during his interview. “Every technology conference I have been to in past couple of years texting, video games, Facebook. Using these strategies to teach. But how many schools actually give access to those things? Very few. Kids aren’t allowed on Facebook. They aren’t allowed on Twitter. They aren’t allowed on YouTube. Some of the most powerful technology tools. The problem with those technologies is that social media technology is you can’t. Most schools will tell you do not be friends with your students on Facebook. Do not be friends with your students on Twitter.” Ruth concurred with John’s thoughts on the subject of ‘taboo’ technologies. During one of her lessons she had her students get out their cell phones to use during her instruction as a means to access the internet when computers were not available. Ruth admitted, “Cell phones are not allowed in the school.” However, many of her students had

them in their pockets, purses or bags, despite the ban. John summed up the frustration, “It is really hard to get any of that engagement because the rules and regulations. It becomes a barrier to all of the access we could have.”

As required by CIPA regulations, each school/district must have a filter in place to regulate the Internet content that students have access to while at school. Each participant grappled with the effects of heavy filtering that adversely affected their ability to instruct. John and Joe voiced their frustrations with the inability to access relevant content that they would have liked to share with students, in addition to the lack accessible web technologies that their students use in their daily lives. Ruth concurred with John and Joe’s assessment and felt that her instructional planning could be largely thwarted when her instructional plans were developed at her home.

Despite the filtering, each participant had developed their own coping mechanism with occasional over enthusiastic filtering. Ruth had found that she would use two approaches to address her lack of website access. First she checked each site located at home when she got to her school’s network to verify accessibility. If a site was blocked she contacted her district’s technology department and requested the site to be unblocked for instructional use. Ruth admitted, “This year we have done a better job of being able to put up a request to open a site; which before it was like pulling teeth to do.” Joe taught an elective course where he assigned students discovery-based projects in which the students were accessing websites that were often filtered. Joe took a more under the radar approach and directed his students to access content at home. He informed the researcher during one such lesson that, “Students brought their own music on a thumb drive because the school’s filter blocked their access to iTunes and other music sites.” Finally, John’s method was to take it all in stride. He jokingly said, “If it doesn’t

work, we'll be okay.”

The frustration of technological glitches was a shared aggravation among the participants. During observations, each participant experienced such ill-timed technical issues that impacted the planned course of instruction. Ruth always experienced more than the other participants. The table below identifies the number of issues experienced in addition to the types of problems that were endured.

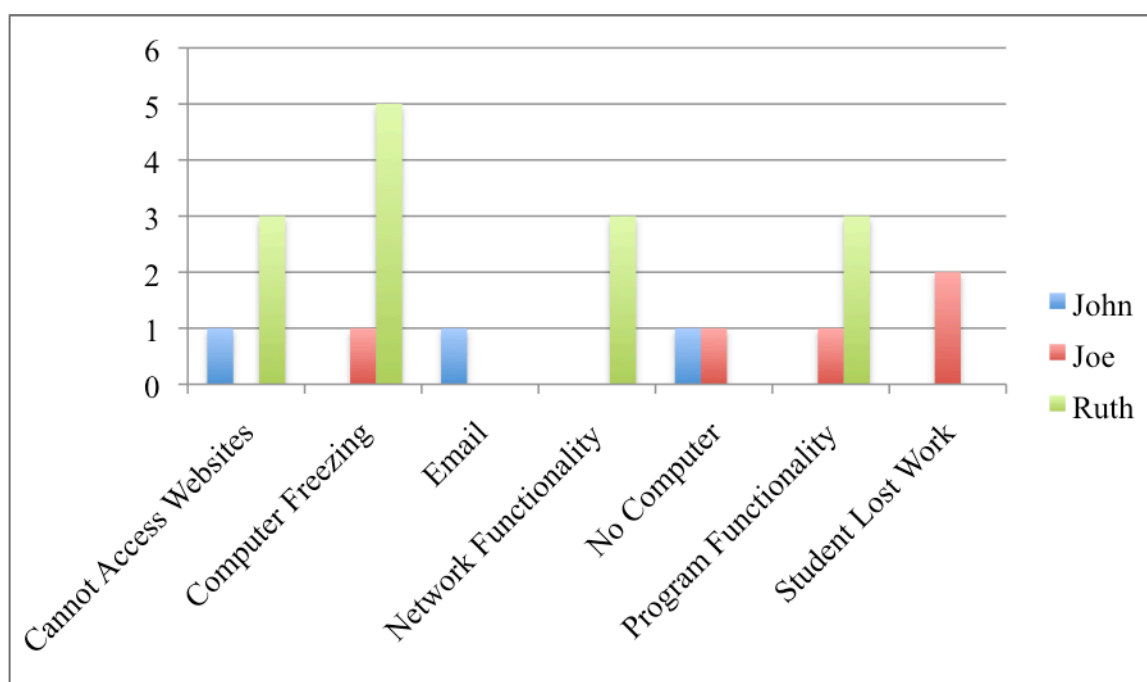


Chart B. Technology Issues Experienced by Participant

Each participant coped with their technical glitches in one of three ways: solve the problem on their own, use the technical advice of others, or adapt the intended lesson. The following table illustrates the myriad of strategies utilized by each participant:

Table 1

Strategies to Solve Technical Issues by Participant

	John	Joe	Ruth
Cannot Access Websites	Called technical support	Students access at home	Troubleshooting on own Restart hardware Restart browser Students login again Adapt lesson without using website
Computer Freezing	N/A	Requests media specialist's help	Troubleshooting on own Restart computer
Email	Resends email Requests students to recheck their email	N/A	N/A
Network Functionality	N/A	N/A	Adapts lesson to not include website
No Computer	Brings in personal desktop for student use	Plans lessons in advance to ensure availability	Plans lessons in advance to ensure availability
Program Functionality	N/A	Restart presentation Imports presentation again	Troubleshooting on own Restart hardware Students login again Adapt lessons
Student Lost Work	N/A	Requests media specialist's help Student starts project over	N/A

Each participant adopted these strategies out of need and frustration. John provided insight into his feelings on the problems associated with the use of technology and in the classroom. “Whatever we are doing, there's always a glitch. So I expect there to be something to go wrong. I know that something will go wrong. So I have then in my mind, this will not work perfectly.”

Unique Themes

The previous four themes were evident and manifested themselves across each participant's case as a component of the cross-case analysis. However, in contrast, the following theme exhibited themselves as a distinct difference between cases.

Joe's level of teaching experience was significantly greater than that of John and Ruth. He relied on experience when developing and adapting students to meet standards and the needs of his students to a much greater extent than the other participants in this study.

John was the only participant that had student access to laptops at every class period taught. This was due to his school having adopted a 1:1 laptop initiative that provided Apple Macbooks to every student in grades 9-12. The effect this had on his web-facilitated technology usage is unknown.

Each participant in this study taught different subject matters and therefore, different courses. A glaring disparity between Joe and the other participant's was that one of his courses of instruction was an elective, while all of the other courses involved in the study were required core courses.

CHAPTER 5: CONCLUSION

Discussion

The manner in which teachers integrate and utilize technology as an approach to instruction has the potential to become a compelling force within the educational community. Despite its promise, a limited amount of research has actually been conducted in the K-12 arena to shed light on this important topic (Brennan, 2003; Mishra & Koehler, 2006; Smith, Clark, & Blomeyer, 2005). The way in which digital native students use technology and the web environment affects the methods with which they are instructed (Jenkins et al., 2009). As such, this shift may necessitate teachers' utilization of technology, the web component of their model of instruction, and subsequent instructional strategies (Jenkins et al., 2009). It is through the prospective alteration of paradigms that practices can reflect how teachers rethink and reinvent their instruction (Oblinger & Oblinger, 2005).

As greater understanding is developed regarding exemplary teachers' use of web-facilitation as a potential tool, educators will embark on the journey of discovering how to utilize this medium in their courses of instruction. The purpose of this qualitative multiple case study is to provide a description of a potential web-facilitated instructional model. This study included three participants; each selected by their building administrators as an exemplary teacher, based on the legal code definition of an exemplary teacher, USC § 7801(19), who are using web-facilitated technology. The participants in this study agreed to the collection of data through observations, interviews, document collection, and researcher journaling. All data collected was analyzed for context, description, with-in and cross-case themes.

At the conclusion of the cross-case analysis involving each individual case's data, four themes became apparent. The themes that developed were: collaboration, expectations, the

guide, and technological difficulties. The previously mentioned themes directly addressed the research questions being asked in this study:

Major question:

How does the utilization of web-facilitated technologies influence instruction?

Sub questions:

How do teachers plan and prepare for web-facilitated instruction?

What are the instructional practices of teachers in a web-facilitated classroom?

What are the similarities of exemplary teacher's web-facilitated instructional practices?

As this discussion progresses the meaning of the findings in relation to the research questions asked will potentially provide greater understanding to aid teachers in lesson development and instruction.

Collaboration

The utilization of collaboration with other educational professionals presented itself as an essential element to both planning and the implementation of instruction. Prior to the initial formulation of instructional plans participants regularly meet with colleagues to foster their curriculum, instruction, and their own learning. McLaughlin and Talbert (1993) found when teachers themselves use collaboration and the knowledge gleaned from it they expand understanding and share their own experiences and perceptions. This occurred regularly with participants through meetings with teachers in their department, individuals identified as a technology resource, and other colleagues.

It is through a diverse collaboration between each participant and their colleagues that resulted in the development of curriculum, guidelines, instructional ideas, and student intervention proposals. The use of group sharing and decision making (Darling-Hammond,

1996) became a factor in the transformation of instruction and the role teacher's play in the classroom. Each participant ascertained a degree of valuable knowledge which they made use of to increase their instructional effectiveness. This effectiveness presented itself in the form of trying out new instructional strategies. This observation was substantiated by Rosenholtz (1989) who determined that when a teacher was more effective they displayed a greater tendency to implement new approaches. In this study new approaches utilized by participants were those related to the use the web and other technologies.

Expectations

The degree to which students possessed digital literacy and technical knowledge proved to be an area in which participants had relatively low expectations. Healy (1998) noted that in the process of putting technology into the schools the assumption was made that by giving connectivity to students they will be able to use information appropriately and they will somehow develop essential technology related skills. While one participant's school required students to take a basic software productivity course, the other participant's school offered no required course. The outcome is from this is only 1 out of 3 teachers in this study could be sure of what technical skills are possessed by their students. Unfortunately, even those skills taught cover only the most basic of skill sets. Jenkins et al. (2009) advocated to insure teacher expectations are met student's technological literacy should not be taught as a separate course, instead the shift must occur where teachers are utilizing the digital environment as a part of their instructional model.

Participants also indicated they expressed their expectations to students through forms both written and verbal. Furthermore, these expectations included objectives, lesson plans, and other course related materials. Oblinger and Oblinger (2005) found it is important for teachers to

shift from their current practices by rethinking and reinventing how they are introducing information to their students. In doing so, teachers should consider how technology could best meet their instructional activities and objectives (Illinois Online Network and the Board of Trustees of the University of Illinois, 2010). One such shift beginning to take place with this study's participants was the move to posting the expectations of objectives, lesson plans, and other course materials online. According to one participant this shift puts the information out there, making it available for students to take greater control of their learning and making the teacher the guide.

The Guide

Participants' instructional strategies adapted to meet the utilization of the web and other technologies, and so too did their technology related skills. Brennan (2003) found that technological skills are imperative as teachers begin to make changes to the traditional teaching methods that they have used in the past. This web and technology facilitation served as a potential catalyst for web-facilitated instructional strategies. Illinois Online Network and the Board of Trustees of the University of Illinois (2010) agrees that this type of paradigm shift with the teacher becoming a facilitator of learning while at the same time guiding their students to meaningful solutions is essential to good instructional design practices.

Participants in this study were moving toward the potential inclusion of the web and other forms of technology as a strategy of instruction. Each participant's strategy produced a similar product, one generally collaborative in nature. Illinois Online Network and the Board of Trustees of the University of Illinois (2010) found that, as teachers incorporate the web and other technology, students' learning becomes more collaborative, contextual and active. This was apparent in each lesson observed; students became dynamic, self-motivated, and eager to gain

knowledge. Essentially, participants created a small community of learners where their collaborative and active learning allowed for a deeper and more extensive understanding of content (Knowlton, 2000; Shivastava, 1999). An example of this strategy included giving students the freedom to research their own content topics of interest and following through with their learning by presenting what they learned utilizing various forms of technology. This strategy is a direct change from the traditional face-to-face classroom approach of planning and instruction in relative isolation, where the teacher is in charge of the information which is then disseminated at their sole discretion. The teacher is no longer an instructor, but a facilitator and mentor of resources, knowledge, and student learning (Hutchins, 2003). Essentially, the teacher has become an instructional guide.

As an instructional guide, participants demonstrated Chizmar and Walbert's (1999) web-based learning's seven principals of good teaching practices. However, based on participants instructional practices Chizmar and Walbert's practices could potentially be adapted to the following five practices to reflect the teacher as instructional guide model:

1. Planning for varied learning: Participants utilized collaboration and experience as a means to research and plan options and ideas for web-facilitated instruction. This planning included the planning for technical problems that occur with the use of technology. The web and a variety of technology were used in such a manner to meet the varied learning styles and talents of students. The culmination of this method of planning resulted in participant's becoming the instructional guide where support for students through individual attention, collaborative groups, self-direction, and instructor led. The technologies planned for included: Internet, blog, writing forum, email, student response system, student learning system, computers, creative, and

- productivity software.
2. Convey expectations: Communicated verbally by each participant through the introduction of objectives, plans, and other materials. Expectations were written and verbal in nature; made available in the classroom and online.
 3. Student-driven learning: A driving factor of each participant instruction. Students were engaged and in charge of their own learning. Instructional practices included the use of web-based research, blogging, online peer review, first person movie making, and interactive student response.
 4. Reciprocity/cooperation: This mutual exchange and collaboration of ideas occurred while student's blogged, created/ discussed their peer reviews, research based student and teacher collaboration, and the reversing of roles as the student became the teacher.
 5. Feedback: Achieved by participants providing responses to students through email, online posts, and face-to-face. However, the simple task of the giving and receiving of feedback was quickly transformed into an integral active learning through the process of requiring students provide and discuss their feedback. Students utilized blogging, and online posts to create a positive collaborative community.

Technological Difficulties

Each teacher discussed their concerns with the speed at which their school was adopting and implementing the use of the web and other technologies. Two of the three participants described how the lack of adequately available hardware influenced their planning and the delivery of their instruction. However, researchers (Cuban, 2001; Oppenheimer, 1998; Stoll, 2000; Tapscott, 1998) argue that students should not have such unabashed obtainability to

technology. Possible deficiencies in accessibility coupled with the challenge of web filters have off-putting consequences to teachers. Each teacher discussed strategies they utilized to “get around” the filter to access educationally relevant content. Despite the problems created by fervent website blocking, participants’ perceptions of web utilization as an instructional strategy was at odds with current research (Tapscott, 1998) regarding student exposure to inappropriate sites while using the Internet.

A secondary concern voiced by participants was the actual functionality of technology and the impact it has on instruction. Each participant in this study displayed adaptability within their role as a teacher and as a part of their instruction. Such role adaptability was accomplished through teachers taking on the role of technology troubleshooter (Oppenheimer, 2003). However, by adding these additional responsibilities teachers, technology support, and technology are potentially being set up for failure (Cooley, 2001; Moses, 2008; Oppenheimer, 2003). Three main strategies participants employed were a result of technological triage: solve issue independently, consult building technology expert, and modify and/or adapt lesson. Lesson adaptability was frequently the direction taken, due to the instructional unknown participants routinely had alternatively ready for use. Cuban (2001) found that with technological dysfunctions tech savvy teachers who are ardent users of the computer typically have an instructional back-up plan.

Implications

Public Policy

In accordance with the Children’s Internet Protection Act (CIPA) regulations enacted by Congress require that any school that receives federal E-Rate funding to pay for Internet access is required to create and enforce an Internet safety policy. This policy must address:

1. “Access by minors to inappropriate matter on the Internet.
2. Safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communications.
3. Unauthorized access, including so-called “hacking,” and other unlawful activities by minors online.
4. Unauthorized disclosure, use, and dissemination of personal information regarding minors.
5. Measures restricting minors’ access to materials harmful to them” (Federal Communication Commission, 2011, What CIPA requires para. 3).

This policy was developed in 2001 in an effort to ensure students were safe while online. However, as demonstrated by participants’ instructional web access and electronic communications, what constitutes the measures to restrict access to harmful materials is relatively subjective. Further study on how schools are addressing this policy is warranted. It is recommended that regulation revisions be made based on how schools are interpreting and implementing their CIPA derived policies.

School Policy

Policies developed and implemented by school districts and their schools to meet the requirements of CIPA include the filtering of student and faculty access to the Internet. As indicated by participants of this study, filtering can inadvertently hinder the planning and instructional process. Furthermore, Ruth exhibited through the use of mobile technologies and Joe demonstrated by requiring students to access websites at home, ways in which school policy and Internet filtering can easily be circumvented by teachers and their students if desired. In addition, all participants questioned the manner in which over-zealous filtering impedes the

possibilities of social networking as an instructional tool.

In an effort to continue the forward movement of web-facilitated instruction, school districts and their schools must review web-filtering policies to ensure CIPA regulations are met and teachers' instructional practices are not being stifled. It is recommended that committees be developed in an effort to alleviate concerns such as those communicated by John related to the fear of Internet use by faculty, administration, and parents; as well as to meet the instructional and strategic creativity of teachers. This committee should potentially include members of administration, the technology department, faculty from various disciplines, and a parental presence. The membership of this committee represents stakeholders of the school and will aid in dispelling the trepidation and frustration of a web presence as a part of instruction. As a committee they should make decisions regarding web accessibility for instruction and how to best address the increasing presence of social networking and mobile technology as a viable instructional tool in their district and school.

A secondary implication of this study's findings is the need for a culture of collaboration as a part of the instructional process. DuFour and Eaker (1998) recommend it is essential that administrators provide teachers with the time and opportunity to work together. Changing the tradition of teaching in isolation will aid in developing a collaborative culture, which will potentially flourish through the process of "sharing ideas about practice" (DuFour & Eaker, 1998, p. 219). In addition, teachers must take advantage of professional development to expand their repertoire and use technology to "meet the needs of students who learn in diverse ways" (DuFour & Eaker, 1998, p. 276).

Instruction

Traditionally teaching has centered on a model of instruction where the teacher decided

what, when, and how students received information that dictated their learning (DuFour & Eaker, 1998; Oblinger & Oblinger, 2005). The use of web-facilitated instruction resulted in participants altering from the traditional methods of instructional design and teaching. This paradigm shift led to the teacher becoming a facilitator of learning while at the same time guiding students to develop and understand their own findings (Illinois Online Network and the Board of Trustees of the University of Illinois, 2010). Chizmar and Walbert's (1999) web-based learning environments, guided by principles of good teaching, was modified from its original principals by this researcher as a result of the new knowledge acquired by this study's findings. The outcome of this adaptation resulted in an instructional model of the teacher as guide. The model consists of five components: planning for varied learning, convey expectations, student-driven learning, reciprocity/cooperation, and feedback.

The implications from the instructional model of the teacher as a guide change the way in which teachers plan for and facilitate their instruction. The implications of this model for teachers are:

1. Planning for varied learning: In this stage teachers need to rely heavily on collaboration, researching technology, experience, and the knowledge of their students. In addition, they formulate a backup plan for the expected and unexpected technical problems that occur with the use of technology.
2. Convey expectations: What is expected must be conveyed to students. This conveyance should be illustrated both verbally and written. Although the communication of expectations is not a new concept to teachers, in order to meet the expectations of digital native students, the recommendation of making expectations available electronically will be an adjustment for teachers.

3. Student-driven learning: This stage requires the greatest amount of adjustment to instructional practices. The teacher as the instructional leader is no longer applicable. Students are engaged and in charge of their own learning, whereas the instructor takes on the role of guide and facilitator.
4. Reciprocity/cooperation: At this juncture students and/or the teacher initiate a mutual exchange and collaboration of ideas. This may involve the reversal of roles as the student becomes the teacher and the teacher becomes the student.
5. Feedback: This stage requires both the teacher and students to provide positive and constructive responses to students. It is imperative that all students are active and involved members in the process of exchanging views and recommendations. The exchange of feedback aides in further transforming learning into a student-driven, collaborative community of learners.

Future Research

As required by the 2001 Congressionally enacted Children's Internet Protection Act (CIPA) regulations, all schools receiving federal E-Rate funding to pay for Internet access are required to create and enforce an Internet safety policy. Due to the subjectivity and varied interpretations of the required Internet safety policy it is recommend that future research be conducted to determine how schools are addressing the requirements of "a) Access by minors to inappropriate matter on the Internet. b) Safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communications. c) Unauthorized access, including so-called 'hacking,' and other unlawful activities by minors online. d) Unauthorized disclosure, use, and dissemination of personal information regarding minors. e) Measures restricting minors' access to materials harmful to them. In addition, how the execution of

obligatory policy affects instruction and learning” (Federal Communication Commission, 2011, What CIPA requires para. 3).

Participants in this study embraced web-facilitated technologies as a means to supplement and enhance instruction. Through the collection of data participants revealed the instructional planning and strategies that influence their utilization of web-facilitated technologies. The findings of this study indicated that technological difficulties impacted planning and potentially the teacher’s ability to carry out lessons of instruction in the original manner intended. It is recommended that future research be conducted regarding the negative impact on instruction and learning created by the occurrence of technological difficulties on instruction. By generating new knowledge in regards to how and why technological difficulties influence web-facilitated instruction and learning, future research will aid in the development of instructional strategies to plan for and adapt to technologically related impediments.

A final recommendation for future research needed as a result of this study stems from the development of the instructional model of the teacher as a guide. The model consists of five components: planning for varied learning, convey expectations, student-driven learning, reciprocity/cooperation, and feedback. This model was developed based on the research findings from three participants utilizing web-facilitated instruction. A suggestion is made that further research be conducted using a larger participant sample to ensure that with a greater pool of data the model of instruction is directly observed and therefore viable, regardless of school size or the grade level of students.

Strengths and Limitations

The use of a multiple case study methodology was a strength of this study due to the nature of the research design. This design necessitates the types of questions that can be

explored, which is restricted to the how and why of a problem. The researcher utilized four dissimilar sources to provide varying perspectives on the data collected. The sources consisted of observations, interviews, reflective journaling, and documents, all of which provided rich and meaningful data. By utilizing differing sources to gather information, a superior understanding of the facets that influenced participants' use of the web as a component of their instruction was gained.

A secondary strength was from the diversity of the three cases in this study. Each participant taught a different core subject: English, science, or history, providing the study with a multiple disciplinary approach. Furthermore, courses observed were both required and elective courses, presenting the researcher with the opportunity to gather data from both courses that operated under a curriculum developed with state standards in mind and those that were freely developed by the participant. Finally, the amount of teaching experience of each participant varied from 10 to 36 years. Such diversity allowed for the researcher to examine different instructional points of view that develop from various levels of teaching experience.

A limitation of this study was the small number of participants selected and their demographic area, large high schools that had greater than 850 students enrolled. A future study should include a larger number of participants from districts of varying sizes. It is recommended researchers utilize a minimum of 15 cases (Stake, 2005). By doing so the multiple case study will be an "interactivity between programs and situations" (Stake, 2005, p. 22).

Conclusions

The introduction of technology into society has irrevocably altered the educational environment (Stoll, 2000). As more technological possibilities are introduced, the further the educational technology pendulum will potentially swing from the traditional to the student driven

and inspired educational experience. Public policies have decreed “technology to be an essential part education” (Cuban, 2001, p. 33) and congress has enacted Internet safety requirements that schools must address in order to receive funding for the Internet. Districts and schools enforce these CIPA regulation-inspired policies to control access to potentially harmful technology related situations. They have developed guidelines regarding student technology expectations; all while making computers and the Internet widely available. In addition, teachers are shifting away from more traditional teaching models in order to embrace the technology-influenced possibilities. Regardless of the models and strategies being used by teachers, digital natives have the potential to help revolutionize the way in which they are being taught and how they are learning.

This study focused on the manner in which web-facilitated technologies influenced instruction through the planning, preparation, and instructional practices of high school teachers. It was found that while web-facilitated technologies were seen as secondary and ancillary material by participants, they actually played a large role in the adaptation of instructional design and practice. The teacher has shifted into the role of facilitator and guide to their students. This shift, coupled with the findings of this study, resulted in the adaption of Chizmar and Walbert’s (1999) principals of good teaching to develop the instructional model of the teacher as a guide. This model consists of five components: planning for varied learning, convey expectations, student-driven learning, reciprocity/cooperation, and feedback. This model places teachers in the role of guide and aid to their students’ acquisition of knowledge. Students are actively engaged and in charge of their learning.

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Appendix A: Informed Consent



COLLEGE OF EDUCATION AND HUMAN SCIENCES
Department of Teaching, Learning and Teacher Education

Dear Participant,

Exemplary High School Teacher's Utilization of Web-Facilitated Instruction: A Multiple Case Study

I would like to invite you to take part in this study. I am inviting your participation because you have been recommended by your administrator as an exemplary teacher and who is using a web-facilitated instruction to supplement the traditional face-to-face classroom. The study is being conducted purely for research, your school district is not conducting or sponsoring this research project in any way. Your decision to participate or not will not affect your relationship with your high school, school district or the University of Nebraska-Lincoln.

In this study, I will be trying to generate a description of potential web-facilitated instructional models in a large high school setting. By participating, you may gain valuable insight into web-facilitated teaching strategies and potential web facilitated instructional models in a large high school setting. There is no known risk to you or your students in this study. If you chose to participate, you and your subsequent data will not be personally identifiable. A summary of all final research results will be made available to your school district.

While participating in this study, you should continue to teach in your usual manner. Do not make any changes in what you would usually do. For a maximum of 6-10 observation hours, the principal researcher will observe the instruction of your courses. Furthermore, you will be participating in one interview that will take 30-40 minutes. The interview will take place at a time and location agreed upon by you. In addition, a copy of lesson plans, for the class periods observed will be provided to the principal researcher. As a study participant, you may view any of the data collection instruments at any time before, during and after the study. You are free to decide not to participate or not allow your data to be used in this study. You may choose to withdraw at any time for any reason. There are no consequences for you or your students if you choose not to participate.

You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. You may contact the investigators Tracy Platt at _____ or Dr. David Fowler at _____. If you have any questions or concerns about the research, you may contact the UNL IRB office at (402) 472-6965.

Your signature indicates that you have decided to participate in this study after having read and fully understood the information presented. In addition, you agree to audio recording as a part of the participant interview. If you choose to participate, please place your completed and signed form in the accompanying addressed envelope.

Signature of Participant

Date

Tracy Platt, Ph.D. Candidate
Principal Investigator
University of Nebraska-Lincoln

David Fowler, Ph.D.
Secondary Investigator
University of Nebraska-Lincoln



COLLEGE OF EDUCATION AND HUMAN SCIENCES
Department of Teaching, Learning and Teacher Education

Exemplary High School Teacher's Utilization of Web-Facilitated Instruction: A Multiple Case Study

This study is being conducted purely for research, _____ is not conducting or sponsoring this research project in any way. Your decision to allow this research study to be conducted at _____ High School or not will not affect your relationship with _____ School District or the University of Nebraska-Lincoln. There is no known risk to participants or their students. Participants and their subsequent data will not be personally identifiable. A summary of all research results will be made available to _____ School District.

This study will be trying to learn more about how exemplary teachers, teaching a face-to-face course utilizes the web-facilitated environment. In addition, the information gleaned from this research study will be utilized to aid in the development of web-facilitated instructional models in a large high school setting. As a part of this study, I will need your recommendation of exemplary teachers using web-facilitated technology that meet the following criteria:

- Is a highly qualified teacher such as a master teacher;
- Has been teaching for at least 5 years in a public or private school or institution of higher education;
- Is recommended to be an exemplary teacher by administrators and other teachers who are knowledgeable about the individual's performance;
- Is currently teaching and based in a public school; and
- Assists other teachers in improving instructional strategies, improves the skills of other teachers, performs teacher mentoring, develops curricula, or offers other professional development.

This study will be conducted from January 2011 – July 2011, for a 6-10 classroom observation hours. During the study, the principal researcher will need access to the participant's classroom for observations. In addition, the principal researcher will conduct one interview; the interview will be conducted outside of instructional time, and at the participant's convenience. A copy of lesson plans, for the class periods observed will be provided to the principal researcher, by the participant(s). You may view any of the data collection instruments at any time before, during and after the study. You are free to decide not to participate or not allow your high school's data to be used in this study. You may choose to withdraw _____ High School from this study at any time for any reason.

You may ask any questions concerning this research and have those questions answered before agreeing to allow this research study to be conducted at _____ High School. You may contact the investigators Tracy Platt at _____, or Dr. David Fowler at _____. If you have any questions or concerns about the research, you may contact the UNL IRB office at 402-472-6965.

Your signature indicates that you have decided to allow _____ High School to participate in this study after having read and fully understood the information presented.

Signature of School Administrator

Date

Tracy Platt, Ph.D. Candidate
Principal Investigator
University of Nebraska-Lincoln

David Fowler, Ph.D.
Secondary Investigator
University of Nebraska-Lincoln

Appendix B: Email Protocol

Dear

I would like to begin by thanking you for allowing _____ to participate in this research study.

As a part of this study, I will need your recommendation of exemplary teacher(s) using web-facilitated technology as a part of their face-to-face classroom. Each teacher recommended must meet the following criteria:

- Is a highly qualified teacher such as a master teacher;
- Has been teaching for at least 5 years in a public or private school or institution of higher education;
- Is recommended to be an exemplary teacher by administrators and other teachers who are knowledgeable about the individual's performance;
- Is currently teaching and based in a public school; and
- Assists other teachers in improving instructional strategies, improves the skills of other teachers, performs teacher mentoring, develops curricula, or offers other professional development.

Please provide the name of each teacher and a rational as to why each teacher was recommended for this study.

Please email your recommendation(s) and rational(s) to Tracy Platt at _____ If you have any questions regarding this study at anytime please contact Tracy Platt at _____, or David Fowler at _____

Tracy Platt, Ph.D. Candidate
Principal Investigator
University of Nebraska-Lincoln

David Fowler, Ph.D.
Secondary Investigator
University of Nebraska-Lincoln

Dear Participant,

Exemplary High School Teacher's Utilization of Web-Facilitated Instruction: A Multiple Case Study

I would like to invite you to take part in this study. I am inviting your participation because you have been recommended by your administrator as an exemplary teacher and who is using a web-facilitated instruction to supplement the traditional face-to-face classroom. The study is being conducted purely for research, your school district is not conducting or sponsoring this research project in any way. Your decision to participate or not will not affect your relationship with your high school, school district or the University of Nebraska-Lincoln.

In this study, I will be trying to generate a description of potential web-facilitated instructional models in a large high school setting. By participating, you may gain valuable insight into web-facilitated teaching strategies and potential web facilitated instructional models in a large high school setting. There is no known risk to you or your students in this study. If you chose to participate, you and your subsequent data will not be personally identifiable. A summary of all final research results will be made available to your school district.

While participating in this study, you should continue to teach in your usual manner. Do not make any changes in what you would usually do. For a maximum of 6-10 observation hours, the principal researcher will observe the instruction of your courses. Furthermore, you will be participating in one interview that will take 30-40 minutes. The interview will take place at a time and location agreed upon by you. In addition, a copy of lesson plans, for the class periods observed will be provided to the principal researcher. As a study participant, you may view any of the data collection instruments at any time before, during and after the study. You are free to decide not to participate or not allow your data to be used in this study. You may choose to withdraw at any time for any reason. There are no consequences for you or your students if you choose not to participate.

You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. You may contact the investigators Tracy Platt at _____ or Dr. David Fowler at _____. If you have any questions or concerns about the research, you may contact the UNL IRB office at (402) 472-6965.

Tracy Platt, Ph.D. Candidate
Principal Investigator
University of Nebraska-Lincoln

David Fowler, Ph.D.
Secondary Investigator
University of Nebraska-Lincoln

As a component of the research study on exemplary high school teacher's utilization of web-facilitated instruction, your courses of instruction will be observed on . This is reminder to please email a copy lesson plans to the principal investigator, Tracy Platt at . If you should have any questions or will not be in school on that date please contact Tracy Platt at or .

Thank you,

Tracy Platt, Ph.D. Candidate
University of Nebraska - Lincoln

As a component of the research study on exemplary high school teacher's utilization of web-facilitated instruction you have been asked to submit a weekly lesson plan for the week in which you will be observed. This is reminder to please email a copy lesson plans to the principal investigator, Tracy Platt at tracy.platt@unl.edu If you should have any questions please contact Tracy Platt at [4024865211](tel:4024865211)

Thank you,

Tracy Platt, Ph.D. Candidate
University of Nebraska - Lincoln

This is reminder of that we will be meeting at at on to
conduct your participant interview. If you should need to reschedule please contact Tracy Platt
at

Thank you,

Tracy Platt, Ph.D. Candidate
University of Nebraska - Lincoln

Appendix C: Interview Protocol

Thank you for taking the time to participate in this interview. The interview will take approximately 40 minutes. This interview will be audio recorded and transcribed. After transcription you will receive a copy of the transcript to verify the accuracy of the data collected to ensure accuracy and that no misrepresentation exists (Stake, 2003). As a study participant, you may view any of your participant data at any time before, during and after the study. You are free to decide not to participate or not allow your data to be used in this study. You may choose to withdraw at any time for any reason. There are no consequences for you or your students if you choose not to participate.

Questions

How many years have you been a teacher?

How many years have you been with this district?

How many years have you been at this school?

Lesson Plan Requirements

What is this school's lesson plan requirements?

Are there any technology related requirements that must be included as a part of lessons plans?

Are you required to include any information regarding standards? State, local, content, technology?

Goals

How do you determine the objectives, aims, or goals of the lesson?

What are your expectations for students to be able to do by the end of a lesson?

Objectives

How do you determine what students should be able to do during a lesson?

How do you determine the conditions that students' performance be accomplished?

How do you determine the degree or criterion, on the basis of which satisfactory attainment of the objectives will be judged?

How do students demonstrate that they have learned and understood the objectives of the lesson?

Does the technology selected influence the objectives? If so how?

Prerequisites

How do you determine what students must be able to do before a lesson?

How do you determine what technological skills will be required by students and you as a teacher prior to a lesson?

If technology prerequisites are not met by students, how do you address this?

If they are not met by you as a teacher how do you address this?

Materials

How do you select what materials, both technological and non-technological, will be needed?

How do you rationalize what you have selected?

How do you prepare for lessons?

Does this preparation differ if you are using technology?

How do you determine what needs to be done prior to a lesson or what should be done during class time?

Lesson

How do you introduce the ideas and objectives of a lesson?

How does the technology selected influence this decision?

How do you get students' attention and motivate them in order to hold their attention?

How do you tie lesson objectives with student interests and past activities?

How do you communicate what will be expected of students?

How do you facilitate learning and manage activities?

Closure/Conclusion

How do you draw the ideas and concepts taught together for students at the end of the lesson?

How do you provide feedback to students to correct their misunderstandings and reinforce their learning?

Follow up Lessons/Activities

How do you select activities for enrichment and remediation?

How do you determine follow up lessons?

Does technology influence the follow up lessons and activities selected?

Assessment/Evaluation

How do you evaluate if the lesson objectives were achieved?

What types of formative and summative assessments do you use?

What are some examples of each type of assessments?

Appendix D: Observation/ Lesson Plan Protocol

1 Curriculum	
Field	Observation
Subject/ course	
Topic/domain	
Mode of delivery	
Intended learning outcomes	
Context/ level of study	
Prerequisites	
2 Activity	
Field	Observation
General approach	
Learning tasks(s)	
How learners carried out tasks	
Feedback	
3 People Involved	
Field	Observation

Number of students	
Support/ other staff involved	
4 Environment	
Field	Observation
Physical setting	
Social setting	
Tool(s)	
Resource(s)	
Support issues	
Access issues	
Technical issues	
5 Reflections	

This form has been modified from the original template designed by the United Kingdom Higher Education's Joint Information System Committee's program in e-learning and pedagogy (Beetham & Sharpe, 2007).

Appendix E: Images

Person vs. Self			
Forum rules When are characters at odds with themselves? Look for those life-changing internal conflicts in the book. Discuss them. This is your chance to ask "what would you do" style questions. Include page numbers and comments for debate.			
NEWTOPIC* <input type="text" value="Search this forum..."/> <input type="button" value="Search"/>	Mark topics read • 11 topics • Page 1 of 1		
TOPICS	REPLIES	VIEWS	LAST POST
 Lennie VS. Self Pages 100-102/3 by  » Fri Jan 28, 2011 12:19 pm	0	5	by   Fri Jan 28, 2011 12:19 pm
 lennie vs self pg 100 by  » Fri Jan 28, 2011 12:14 pm	0	4	by   Fri Jan 28, 2011 12:14 pm
 McCulloh P v. S by  » Tue Jan 25, 2011 9:16 am	3	14	by   Fri Jan 28, 2011 11:36 am
 Crooks vs. Self by  » Fri Jan 21, 2011 11:33 am	2	10	by   Fri Jan 28, 2011 11:33 am
 George vs. self by  » Fri Jan 28, 2011 11:33 am	0	5	by   Fri Jan 28, 2011 11:33 am
 Cody Andrews by  » Tue Jan 25, 2011 1:21 pm	0	2	by   Tue Jan 25, 2011 1:21 pm
 Curley Vs. Himself by  » Tue Jan 25, 2011 1:21 pm	0	9	by   Tue Jan 25, 2011 1:21 pm
 Billups Person vs. Self by  » Tue Jan 25, 2011 9:15 am	1	5	by   Tue Jan 25, 2011 11:25 am
 Taylor McCoy by  » Fri Jan 21, 2011 12:14 pm	1	10	by admin  Sun Jan 23, 2011 8:23 pm
 Crooks Pgs. 66-83 by  » Fri Jan 21, 2011 11:32 am	0	3	by   Fri Jan 21, 2011 11:32 am
 Crooks and people by  » Fri Jan 21, 2011 11:32 am	0	0	by   Fri Jan 21, 2011 11:32 am

Image A. *Of Mice and Men* Forum

McCulloh P v. S
* [EDIT](#) [*](#) [!](#) [!](#) [?](#) ["QUOTE"](#)

by » Tue Jan 25, 2011 9:16 am

pg. 11

George has this constant conflict of whether or not to continue dragging Lennie along with him. He knows that if he leaves Lennie, the big guy won't survive. He also knows that he would be better off without Lennie holding him back. Whether it be right in the beginning of the book, when they're looking for jobs, or at the end when Lennie kills Curley's wife, George is constantly asking himself, "Have I done the right thing by sticking with this guy?"

Re: McCulloh P v. S
* [EDIT](#) [*](#) [!](#) [!](#) [?](#) ["QUOTE"](#)

by » Tue Jan 25, 2011 10:55 am

Yes i agree...George doesn't want to leave Lenny because he's George's homie. What i don't get is why he's still with Lenny if he keeps causing trouble for George and he can also get killed after what Lenny did...he needs a timeout.

Re: McCulloh P v. S
* [EDIT](#) [*](#) [!](#) [!](#) [?](#) ["QUOTE"](#)

by » Fri Jan 28, 2011 11:31 am

George has known Lennie almost his entire life and I think he feels a certain responsibility for him. If it was anyone else George would have taken off already, but he sticks with Lennie because he cares for him. He also feels bad about almost accidentally drowning Lennie by telling him to jump into the water a while back. They are also friends. And Lennie's a rockstar.

Image B. *Of Mice and Men* Forum Conflict Postings

Appendix F: Documents

Of Mice and Men Chapter 3 Text Selections

Directions:

1. Highlight the conflict(s) in each passage.
2. Identify which type of conflict you've highlighted.
3. Add a comment explaining which characters are involved AND how the conflict impacts them.

Summary: Chapter 3 begins with George and Slim coming back into the bunkhouse after delivering a litter of puppies. They are discussing Lennie's affection for the puppies and George wonders if Lennie will even come back into the bunkhouse to sleep. Both men remark about Lennie's unbelievable capacity for hard work.

Excerpt 1: (Page 39)

Slim moved back slightly so the light was not on his face. "Funny how you an' him string along together." It was Slim's invitation to confidence.

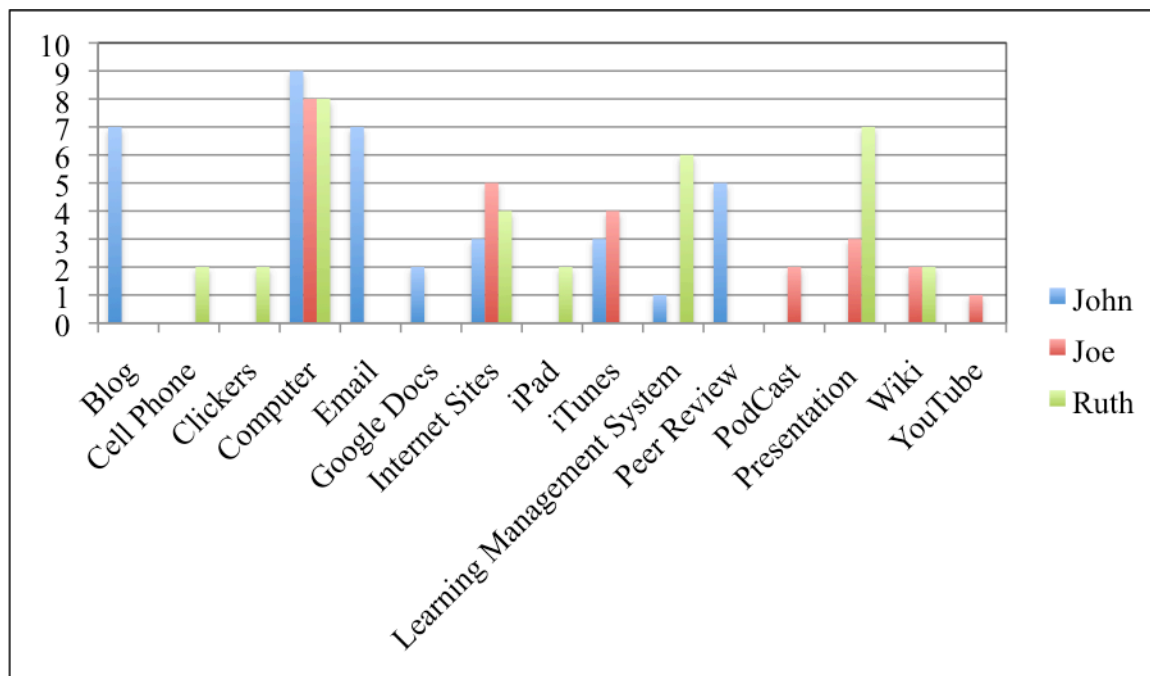
"What's funny about it?" George demanded defensively.

"Oh, I dunno. Hardly none of the guys ever travel together. I hardly never seen guys travel together. You know how the hands are, they just come in and get their bunk and work a month, and then they quit and go out alone. Never seem to give a damn about nobody. It jus' seems kinda funny a cuckoo like him and a smart little guy like you travelin' together."

"He ain't no cuckoo," said George. "He's dumb as hell, but he ain't crazy. An' I ain't so bright neither, or I wouldn't be buckin' barley for my fifty and found. If I was bright, if I was even a little bit smart, I 'd have my own little place, an' I'd be bringin' in my own crops, 'stead of doin' all the work and not getting what comes up outta the ground." George fell silent. He wanted to talk. Slim neither encouraged nor discouraged him. He just sat back quiet and receptive.

Summary: George continues to explain why he travels with Lennie. Lennie used to be cared for by his aunt Clara, but when she died George took responsibility. George tells Slim about how he used to play jokes on Lennie and mistreat him. Once, he told Lennie to jump into a river to impress some other guys. Lennie did and almost drowned. After that, George stopped being mean to Lennie. George continues to explain how Lennie is not mean but he is a nuisance and gets into a lot of trouble.

Document A. *Of Mice and Men* Intervention and Alternative Coursework

Appendix G: Charts**Chart A. Web Technology Use by Participant**

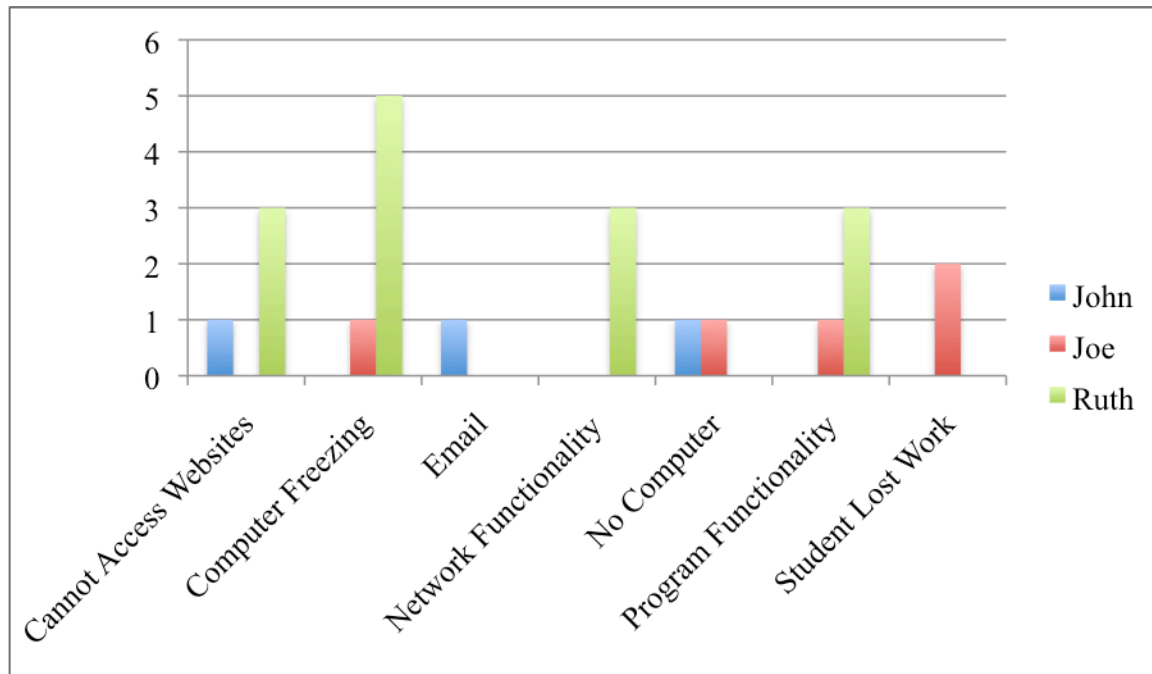


Chart B. Technology Issues Experienced by Participant

Appendix H: Tables

	John	Joe	Ruth
Cannot Access Websites	Called technical support	Students access at home	Troubleshoot on own Restart hardware Restart browser Students login again Adapt lesson without using website
Computer Freezing	N/A	Requests media specialist's help	Troubleshooting on own Restart computer
Email	Resends email Requests students to recheck their email	N/A	N/A
Network Functionality	N/A	N/A	Adapts lesson to not include website
No Computer	Brings in personal desktop for student use	Plans lessons in advance to ensure availability	Plans lessons in advance to ensure availability
Program Functionality	N/A	Restart presentation Imports presentation again	Troubleshooting on own Restart hardware Students login again Adapt lessons
Student Lost Work	N/A	Requests media specialist's help Student starts project over	N/A

Table A. Strategies to Solve Technical Issues by Participant

Appendix I: Diagrams

Qualitative Multiple Case Study Design

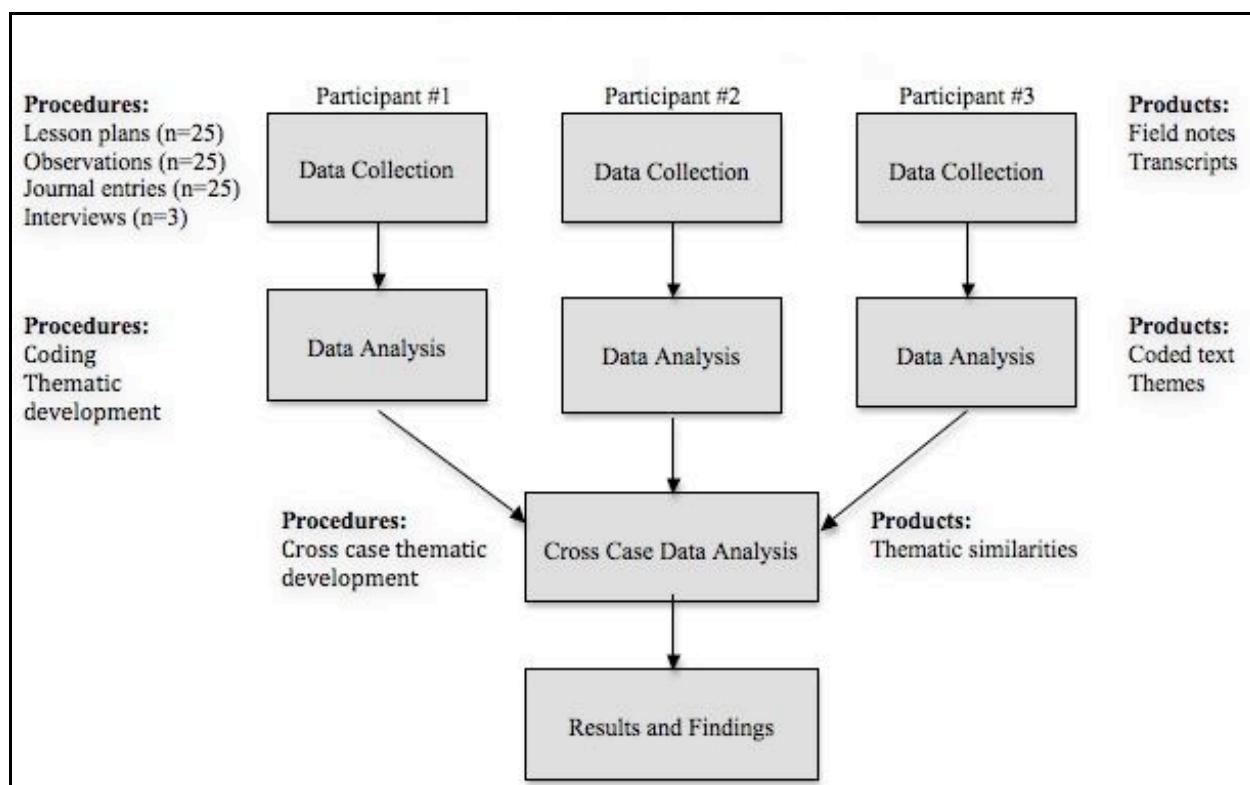


Diagram A. Visual Flow Chart of the Procedures

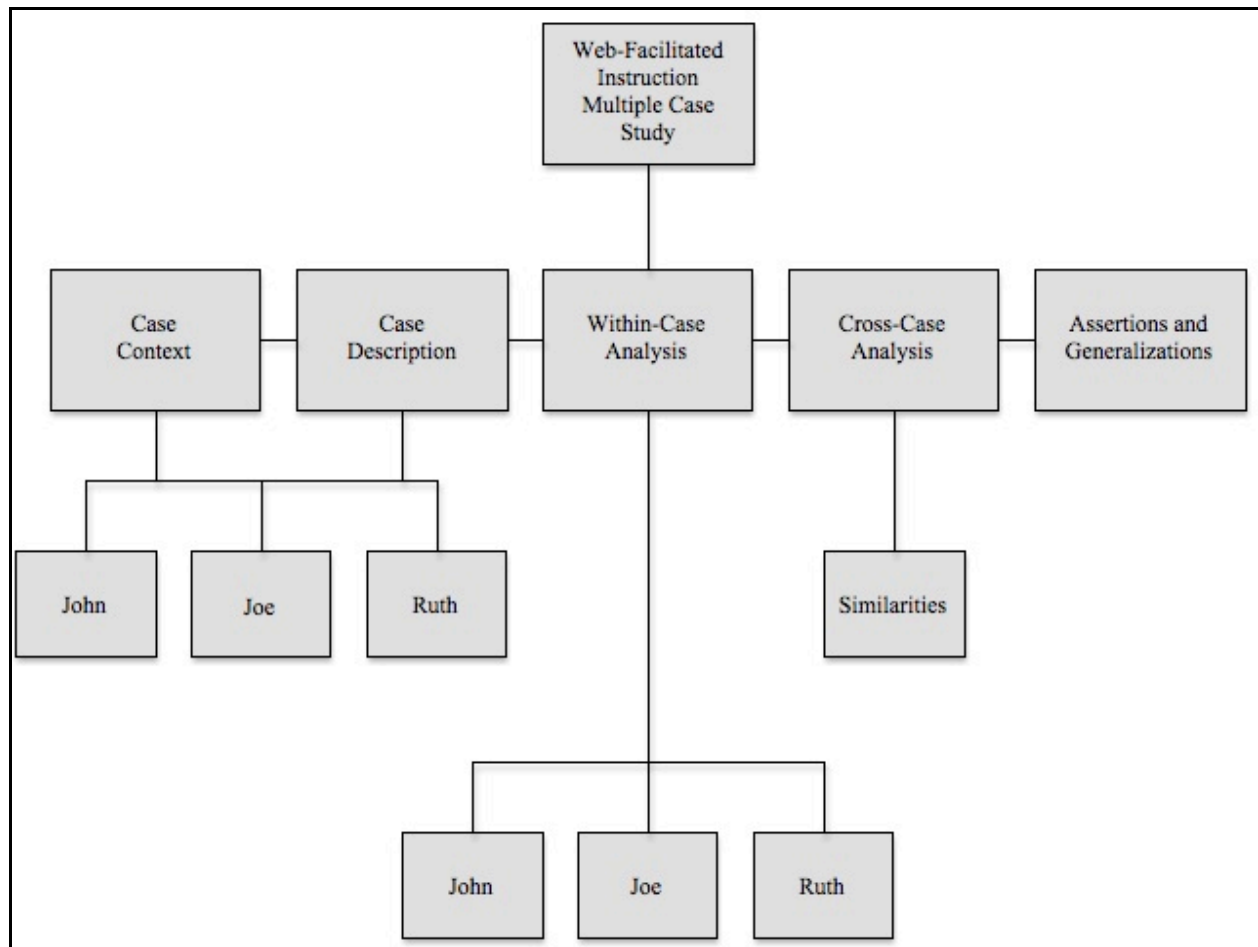


Diagram B. Multiple Case Data Analysis Procedures Diagram (Creswell, 2007, p. 172)