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Books, blogging, and boredom : the impact of one-to-one computing on student engagement and literacy

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Abstract

As one-to-one computing infiltrates education across the United States, stakeholders question the impact this technology will have on all involved. Teachers are realizing the effect that one-to-one computing has on the school, classroom, and curriculum as districts jump on the bandwagon and purchase laptops for every student. Research shows that classrooms, including language arts classrooms, incur many positive changes. One such change is the inclusion of new literacies into the curriculum. These new literacies will change how students read and write. Course management systems have also become common in many classrooms; and teachers, students, and parents are learning to negotiate these technologies. Students are benefiting from one-to-one implementation. Commonly, student engagement and study habits increase with the inclusion of one-to-one, not only with the typical student, but also with those students who have an individualized education plan. Communication on the part of teachers, students, and parents also improves. Literacy practices involving reading, writing, and communicating have undergone changes as laptops become commonplace in the classroom. With these new technologies teachers and students are impacted, and must learn to adapt and make the most of these changes; teachers will need to be educated, too. Professional development including how to integrate technology into the classroom is critical to the success of students and schools. Further research will determine the significance and necessity of these technologies as students graduate into the 21st century.

Books, Blogging, and Boredom: The Impact of One-to-One Computing on Student Engagement and Literacy

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Abstract

As one-to-one computing infiltrates education across the United States, stakeholders question the impact this technology will have on all involved. Teachers are realizing the effect that one-to-one computing has on the school, classroom, and curriculum as districts jump on the bandwagon and purchase laptops for every student. Research shows that classrooms, including language arts classrooms, incur many positive changes. One such change is the inclusion of new literacies into the curriculum. These new literacies will change how students read and write. Course management systems have also become common in many classrooms; and teachers, students, and parents are learning to negotiate these technologies. Students are benefitting from one-to-one implementation. Commonly, student engagement and study habits increase with the inclusion of one-to-one, not only with the typical student, but also with those students who have an individualized education plan. Communication on the part of teachers, students, and parents also improves. Literacy practices involving reading, writing, and communicating have undergone changes as laptops become commonplace in the classroom. With these new technologies teachers and students are impacted, and must learn to adapt and make the most of these changes; teachers will need to be educated, too. Professional development including how to integrate technology into the classroom is critical to the success of students and schools. Further research will determine the significance and necessity of these technologies as students graduate into the 21st century.

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INTRODUCTION

The purpose of this project is to research the impact of technology on the language arts classroom and create a professional development plan that meets the needs of the teachers and students as technology infiltrates the classroom. As a teacher in a district that just implemented one-to-one laptops, I recognize advantages and disadvantages of this endeavor. I have witnessed the struggles and successes first-hand as students' access to technology increased. Education faces many challenges in the 21st century; however, the teaching profession has also been provided with opportunities. Districts are faced with the question of how to best instruct students, and many districts, including Knoxville Community School District, have purchased laptops for every student. By taking on the title of a one-to-one school, districts are in the midst of controversy as educators and non-educators question the allocation of funds, the need for this level of technology integration, and whether or not one-to-one is the best choice. Furthermore, education has been and will continue to be a topic of interest for politicians and those who vote as the government manages its involvement at the federal and state level in education. For all the many different opinions there may be about education and how to best engage students, there are just as many technologies and methods of integration. Despite these struggles, I firmly stand behind the implementation of a one-to-one program as this program supports new literacies, improves student engagement and communication, and strengthens study habits.

I also recognize that with implementation comes a need for professional development that addresses the changing needs of students and staff. Students are more prepared now than they ever have been for the 21st century workforce. Teachers are

overwhelmed with a variety of technology tools that help with instruction, and students are finding ways to use technology not just to entertain but to learn and discover. Figuring out which technologies are best for students and for teachers can be quite a challenge. Each group encompasses a varying level of skill sets, making it difficult to meet the needs of all. Professional development must consider all factors and adjust accordingly. Additionally, professional development must provide ample time for teachers to work and apply the strategies that are being taught. Classrooms will continue to be a place of inspiration, frustration, success, and failure. The inclusion of technology and the one-to-one classroom is just another stage in the evolution of the classroom.

Keywords: The following words are used in the paper, and therefore need to be defined.

1. Blogs: A Web site containing the writer's or group of writer's own experiences, observations, opinions, ect., and often having images and links to other Web sites. (Definition taken from the following website: http://dictionary.reference.com/browse/blog.)

2. One-to-One: refers to a computer for every student which is an initiative created by many companies such as Microsoft, Apple, Dell, HP, and Intel. One-to-one computing means that every student or teacher is given a computer, the Internet and software anytime and anywhere. The term computer is used to mean a personal computer, laptop, netbook, handheld, or tablet. (Definition taken from the following website: http://en.wikipedia.org/wiki/One_to_one_computing.)

3. Turnitin.com: Turnitin is an anti-plagiarism database service that compares student essays to an immense archive of other writings. (Definition taken from the following website: http://articles.latimes.com/2012/jan/29/local/la-me-plagiarism-20120129.)

4. Edmodo: Edmodo is a social learning network and secure micro blogging platform where teachers and students can interact and collaborate online. It has an interface similar to Facebook, however it is much more secure since it is a closed network. Both teachers and students can share notes, links, files and resources with each other. (Definition taken from the following website: http://edmodo-in-the classroom.wikispaces.com/What+is+Edmodo%3F.)

5. Fidelity: Strict observance of promises, duties, etc.; loyalty; adherence to fact or detail. (Definition taken from the following website: http://dictionary.reference.com/browse/fidelity.)

6. Course Management System (CMS): Internet based software that manages student enrollment, tracks student performance, and creates and distributes course content. (Definition taken from Ullman and Rabinowits, 2004)

7. Information and Communication Technologies (ICTs): any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning. (Definition taken from the following website: http://searchcio-midmarket.techtarget.com/definition/ICT.)

8. New Literacies: The new literacies of the Internet and other ICTs include the skills, strategies, and dispositions necessary to successfully use and adapt to the rapidly changing information and communication technologies and contexts that continuously emerge in our world and influence all areas of our personal and professional lives. These new literacies allow us to use the Internet and other ICTs to identify important questions,

locate information, critically evaluate the usefulness of that information, synthesize information to answer those questions, and then communicate the answers to others. (Definition taken from Lue, Kinzer, Coiro, & Cammack, 2004).

9. Digital Native: Our students today are all "native speakers" of the digital language of computers, video games and the Internet. (Definition taken from Marc Prensky at http://www.marcprensky.com/writing/prensky%20-%20digital%20natives,%20digital%20immigrants%20-%20part1.pdf).

10. Digital Immigrant: Those who were not born into the digital world but have, at some later point in our lives, become fascinated by and adopted many or most aspects of the new technology. (Definition taken from Marc Prensky at http://www.marcprensky.com/writing/prensky%20-%20digital%20natives,%20digital%20immigrants%20-%20part1.pdf).

Review of the Literature

It is rare that high school students do not work with and communicate multiple times a day with portable technologies. Be it via smart phones, touch pads, or on-line social networking, the incorporation of technology has become a vital part of communication and education (November, 2010; McCormack & Ross, 2010; Sternberg, Kaplan & Borck, 2007).

Simultaneously, increasing numbers of public and private schools have begun providing laptops for each student as the cost to implement these technologies decreases and the need to prepare our clientele for the 21st century increases (Lei & Zhao, 2008; Wambach, 2006). Laptops, though, are not the only portable technologies being integrated into the daily instruction of students. These other technologies hide behind a variety of labels; notebooks, tablets, pads, and smart phones are also becoming commonplace educational tools. Gura and Percy (2005) state, "Literacy in the 21st century means more than basic reading, writing, and computing skills. Toffler points out, 'The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn'" (p. 105). It is no shock then, that 21st century skills should infiltrate the curriculum of current classrooms. Teachers must include instruction that supports the Common Core, including 21st century skills. Students are changing, and teaching needs to reflect these current needs. As Gura and Percy maintain, "because today's youth is maturing in a technologically shaped world, its education must reflect the profound influence of those technologies" (p. 60). One-to-one implementation is one way to meet the demands of the Common Core in the classroom as these 21st century skills add a significant component to the classrooms of today and the clientele

served there.

Education is at a crossroads: Should education implement these costly technologies into the classroom, and if so, what advantages are stakeholders provided as a result of these technologies? Has our clientele really changed, and do they require a new methodology of instruction? Furthermore, are instructors ready and willing to alter the way things have always been taught?

A substantial amount of literature has been written about this potential change in the delivery of education and its impact on student achievement, student engagement, teacher preparation, and communication. Recent research on literacy instruction has centered around technology and its implementation. Additionally, in Iowa alone, 114 schools implemented a one-to-one program in the 2011-2012 academic year (Grundmeyer, T. personal communication, April 11, 2012). Other states have done the same. As more schools continue to devote more resources to technology, continued research into implementation practices, student engagement cost and results will be imperative.

The New Literacies

Technology and the availability of resources have changed how students understand literacy. Reading no longer is limited to print sources; now reading includes the digital world as well (Schmar-Dobler, 2003; Thomas, 2011). "For students to be fully literate in today's world they must become proficient in the new literacies' practices of information and communication technologies (ICTs)" (Sternberg, Kaplan & Borck, 2007, p. 416). These new literacies as defined by Leu, Kinzer, Coiro, & Cammack (2004) include, "the skills, strategies, and dispositions necessary to successfully use and

adapt to the rapidly changing information and communication technologies and contexts that continuously emerge in our world and influence all areas of our personal and professional lives" (p. 2). Reading and writing using these new literacies is an ever-changing situation, and it will continue to be a moving target. Leu et al. (2004) shares, "New generations of students encounter yet unimagined ICTs as they move through school and develop currently unenvisioned new literacies" (p. 1). Therefore, teachers must understand how these curriculums will change and how to best meet the needs of this new generation of students.

A Different Way to Read. "Educational technologies that support the development of students' reading skills include audiobooks, electronic books, online texts, electronic talking books, and programmed reading instructions" (Holum & Gahala, 2001, p. 6). Each of these technologies is easily implemented with the use of laptops. Whether readers upload texts from the Internet, teachers create podcasts, or students access supplemental texts, all of these tasks are more easily incorporated with the use of one-to-one computing. With these new technologies, however, comes the need for new literacy skills. Now, like never before, students have to multitask as they read from a computer screen. Elizabeth Schmar-Dobler (2003) states the following:

> Per Internet connections, a reader can access innumerable sites related to the original idea or topic of a search. Second, much Internet content has blinking graphics, vivid color, and lots of eye-catching phrases that can guide or distract from the reading. A reader must be able to evaluate all the features of a webpage and quickly decide which one will likely be the most helpful in accessing information. (p. 2)

In addition to having literacies available in a variety of forms, the use of hyperlinks that immediately take readers to other texts providing more detailed information, adds another important dimension to online reading. The use of a hyperlink is unavailable without a computer. According to Holum and Gahala (2001) students' understanding of a text is increased with each connection that is made. Hypermedia makes those connections, allowing the classroom instruction to be enriched by the supplemental information provided by hyperlinks. Now, within seconds, students see a picture of the author; with another click of the mouse students are provided with an artist's rendition of a character, and in another second the student accesses information on the time period and the setting. This opportunity allows for more and better use of instructional time that would never have been available without the use of technology.

A Different Way to Write. Responding to literature in a written format certainly is not a new idea; however, the use of technology may be just the vehicle that students need to see greater value in such an activity, as the traditional journaling method can be limiting. "Moving this instructional practice onto a blog allows us to widen our audience for students, minimize the demands of the classroom teacher, and maximize the comprehension of texts" (Zawilinski, 2009, p. 656). Keeping students interested, improving writing, and increasing comprehension can be a huge benefit of writing on a blog.

As suggested by one of the teachers in Zawilinski's (2009) article, one of the greatest benefits of blogging is the ability of students to be heard. Typically when a piece of writing is created for school the teacher and maybe a couple peers will read that paper during the writing process; however, with a blog, that writing is out there for anyone to

read. Furthermore, when the writing is going public, students tend to create a better product in terms of grammar, mechanics, and overall content (Ramaswami, 2008). In another school, students used blogging as a sounding board during the writing process. As these 11th graders wrote a research paper they blogged, getting input from their peers throughout the entire writing process. "The students commented that blogs helped them organize their thoughts, develop their ideas, synthesize their research, and benefit from their classmates' constructive comments" (Ramaswami, 2008, p. 22). Blogging and the purpose of blogging is certainly about more than just updating a status; it can be an enriching tool for both reading and writing in the language arts classroom. Blogging is merely one possible method of writing students may access through the use of one-to-one computing.

Educational Uses of Technology

With the availability of technology and Internet, teachers are able to incorporate these new literacies into the classroom. Inevitably teachers and students become fluent in these new literacies and are exposed to other modalities of literature. Students with laptops can easily search for artwork, literature, and expository texts increasing the variety of literacies students are exposed to (Barone & Wright, 2008). As Albers, Holbrook, and Harste (2010) stated, just reading the words may not be enough. Having the capability to, "appeal to visual and digital intelligences of students" (Rochette, 2007, p. 45) is what is best for pupils. Laptops and other forms of technology make these resources readily available where they have not previously been.

Social Networking and Communication. As a result of the inclusion of technology, students and teachers have greater opportunities to connect with others.

Rivero (2012) states in his article about the inclusion of technology in schools that educational websites have proven to be a positive social networking experience. Edmodo is used by roughly 60,000 education institutions, and the idea of a Facebook for education is built upon the belief that school environments need to evolve to reflect the connected world in which we live and to provide a safe, secure, and trusted online environment in which to do so (p. 10). When students from Meriden, Kansas--population of 813--are able to connect with others outside of their surrounding area, a positive experience ensues (Dobler, 2012). Those students are no longer limited by the physical inability to travel and experience. The Internet and the computer have obliterated these old obstacles, creating an endless amount of opportunity for students. "Cloud network sync-storage systems such as Dropbox and GoogleDocs allow for the virtually limitless acquisition, sharing, and editing of information" (Abrahms, 2012, p. 485). Social networking and social learning are a significant part of the educational world. Exposing students to as many opportunities to develop these networking skills is critical (Leu et al., 2004, p. 20).

Not only does technology improve networking capabilities, but technology, specifically the inclusion of laptops, alters how communication occurs and its relative importance (November, 2010). Communication inside and outside of the classroom has always been a huge part of the language arts curriculum. As times have changed and technology has altered our means of communication, teachers can use websites as a vehicle to facilitate a safe and meaningful form of communication. Lei and Zhao (2008) researched this aspect of one-to-one education extensively, demonstrating how students and teachers alike used laptops to communicate. Emails were the prevalent form of communication as students found it easier to ask a question in this fashion than to find the

time to hunt down an instructor and have a conversation face to face. Furthermore, if a more personal meeting was needed, email became a way to set up that meeting. If students were not emailing the teacher, they were emailing other students to get answers to their questions. In 2012 email may not be only form of communication, being rapidly replaced by texting and other forms of social networking; however, it is still a noteworthy part of the increased communication in the educational field.

Blogging is one of the newer means of communicating made possible by laptops. As defined by blogger Nibert (2010) a blog is, "…a type of website or part of a website. Blogs are usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video. Entries are commonly displayed in reverse-chronological order. *Blog* can also be used as a verb, meaning *to maintain or add content to a blog*."

Many teachers value blogging as a type of online discussion. One teacher in Lei and Zhao's (2008) article claims:

> It [online discussion] allows for a nice rapport. A lot of these kids are used to knowing everything, so they have a tough time developing the idea that not everything they think is exactly right. So the online critique allowed them to get comfortable throwing their idea out there and then accepting the criticism (p. 109).

Online critique is not the only benefit of such communication. Blogging with others allows students to learn from others. This type of peer sharing is an effective teaching practice (Wang, Lin & Liao, 2012). Jimoyiannis and Angelaina (2012) recognize that even though blogs were not created specifically for educational use,

blogging engages the blogger and encourages the use of higher order thinking skills. Blogging is one such way of allowing students and teachers to communicate not only with those students in the classroom but also with anyone who reads the blog. Teachers may use a blog to post questions about the author or the setting. As students discover information, posts can be made for others to read (Zawilinski, 2009).

Course Management Systems. Course management systems as defined by Simonson (2007) are, "management systems or virtual learning environments…designed to assist in the management of educational courses… by helping teachers and learners with course administration. The systems can often track the learners' progress" (p. vii). Several teachers and students are using course management systems such as Moodle and Blackboard, and many believe that these online classroom organizers are a benefit to any and all courses (Simonson, p. viii; Ullman & Rabinowitz, 2004). One drawback of many of these course management systems is the cost. Because of a lack of funding at the public school level, many schools are taking advantage of free course management systems such as Edmodo, which has recently caught the attention of over six and a half million teachers and students (Borg & O'Hara, 2012). No matter the platform, many agree that, "CMS may be one of the most important technological tools now available to education and training" (Simonson, p. viii).

History teacher Rachel Shepherd is one such educator who has reaped the benefits of communicating via the Edmodo course management site. "'It's made things a lot easier for me to communicate with them [students] through Edmodo,' said Shepherd. 'Now, I can send text messages to students from the IPad, and they'll get it [a message] on their phone that says, 'Hey, you've got a picture on the website that doesn't work, you need to

go check it'" (Orr, 2012, para. 17). Orr (2012) also uses Jan Wells' classroom in Meriden, Kansas an example of using Edmodo as a way to communicate within the classroom. Mrs. Wells set up *Tiger Talk* which is a daily posting for her student to converse about something going on in the classroom or the community.

Course management systems are also beneficial as they teach students to navigate new forms of literacy (Ullman & Rabinowitz, 2004). As Schmar-Dobler (2003) states, students need to, "know how to read and write not only in the print world but also in the digital world" (p.83). Edmodo and other course management systems can assist in this transformation and understanding of digital literacies. One teacher quoted in McKeil's (2011) blog stated:

> This year I have witnessed the amazing transformative powers of Edmodo. It has changed my teaching, my classroom, and my students (9-12 English LA). My students have built digital portfolios of their work throughout the year thus creating positive digital footprints. They have learned to investigate and share with each other… I have been able to provide differentiated small group instruction so all students can get what they need. I have been able to be absent from class without being gone. Absent students have joined us live time in class when important discussions or presentations were taking place. My students get texts about assignments and other class information and so do I. We are a connected community…Students crave social interaction and they are doing it anyway (texting, Facebook, etc.). Why not harness that desire and use it to help them learn and interact in socially positive ways? (para. 6)

With these course management systems in place, students and teachers alike can use technology as a means of quality communication.

Communication with parents can also be improved with the use of many course management systems. Using the website, parents can log on to a secured site and only see what their student and their student's teacher is posting, allowing "a bird's eye view of the instructional activities occurring within Edmodo" (Dobler, 2012, p. 13). Rivero (2012) also articulates the importance that parents have in being involved in all things technology related as it pertains to their students.

One of the main positives of many online programs, in contrast with many course management systems is the lack of a cost. Without spending resources to take a class on a field trip, teachers and entire classes are able to collaborate with and learn from another class during a unit. At one point in time, when a guest speaker spoke to one class, the class at a distance used Edmodo as a forum to ask questions to the guest speaker as well (Dobler, 2012). Course management systems and educational websites have made it possible for teachers to, "raise the roof of their classroom, flatten the walls, and bring voices from communities far and wide into their daily learning" (Dobler, 2012, p. 12). Experiences like this may not be available if it were not for the low cost and increased opportunities which websites provide.

Edmodo is not the only site that offers free educational activities. As illustrated by the *Favorite Freebies* blog posted by Educational Leadership (2011), websites such as *Read, Write, Think* are also impacting curriculum and the classroom. "Two closely related tools-the classroom computer and the internet-are transforming the teaching and

learning of literacy" (Lue & Kinzer, 2003, p. 515). In addition to monetarily costing very little if anything, these resources are making the world an easier place to explore.

Student Benefit from Technology-Infused Classrooms

As computers and other forms of technology permeate all aspects of life, including education, one must question the impact this change creates for students. Educators supporting this infusion of technology see the positive impact it has on students. "Incorporating computer technologies into instruction also increases the positive attitude students have toward coming to school, the class, and learning in general" (Knapp & Glenn, 1996, p. 25). Furthermore, authors such as Elizabeth Schmar-Dobler (2003) state the importance for students to be able to, "access, evaluate, and apply information" (p. 1) in order to be successful at school and in most jobs. Clearly, technology skills are an important part of a successful life.

Writing Improves with the Use of Technology. One reported impact of using laptops has been increased willingness of students to write. In Warschauer, Arada, and Zheng's article (2010) one student commented, "Having laptops in the classroom...I've actually enjoyed writing more...my writing has improved so very much within just this year" (p. 222). Not only are students writing more, but also Lei and Zhao (2008) believe that students' writing is significantly improved via this use of technology. Knapp and Glenn (1996) go so far as to directly relate this improvement to the use of word processing programs. Whether this improvement is due to advances in engagement or the availability of tools such as grammar and spell check, the writing that is being produced by students supports the use of laptop computers in this academic area. "When

incorporated as a part of the instruction, computer-assisted instruction leads to higher academic gains" (Knapp & Glenn, p. 26).

Writing is not merely defined by the student's ability to word process, either. Students now are communicating with instructors and peers via the use of technology. Students utilize email and other on-line sources to ask questions and turn in assignments (Lei & Zhao, 2008). Similarly, Lei and Zhao (2008) report that whatever the reasons may be, students find this method of writing and of communicating with teachers easier and more convenient than conventional means. This type of networking is an essential skill for the current clientele. "The adolescents we have in our classrooms today have grown up in a world where cyberspace is not new, but rather another space for them to live in, learn from, and communicate" (Tarasuik, 2010, p. 544). It is imperative for 21st century learners to write and communicate well using modern technologies.

Student Engagement Improves with Technology. Increased student engagement is a documented benefit of one-to-one implementation (Warschauer, 2006; Barone & Wright, 2008; Nelson, 2008; Oliver & Corn, 2008). As digital natives, students are more responsive when taught using this native technology rather than expecting them to adapt to traditional paper and pencil models which may be the teacher's native language (Rochette, 2007). In Garthwait and Weller (2005), one teacher candidly reported that she felt students were more motivated to look for answers when given the opportunity to use a laptop instead of a traditional encyclopedia. When students are motivated, engagement occurs. The students were engaged in the activity because of the addition of the technology.

Engagement is also increased because teachers can take advantage of teachable moments that may have been unavailable without laptops. An instructor cited in Garthwait and Weller's (2005) study states:

> One of the greatest changes I've experienced since the arrival of the laptops has been my increased opportunity to act spontaneously. Every educator realizes that when a teachable moment presents itself, one must act accordingly. Nevertheless, in most cases...if that moment involves the use of technology, one must make sure that the computer lab is free... (p. 368)

In a one-to-one environment the lack of a free lab is never an issue; teachable moments are not dismissed because of the lack of technology. In fact, the technology allows for the ability to immediately answer those questions and is a great way to pique student interest and increase engagement; however, teachers have been limited by structural and physical limitations that are typical in schools without one-to-one access. Notwithstanding the fact that many educators, politicians, parents, and others with a stake in education continue to debate the academic worthiness of technologies in the classroom, the one thing that almost all will agree on is the impact technology has on student engagement. The result is this – teachers and students alike feel that student engagement is increased via the implementation of one-to-one programs in the classroom. (The ABELL Foundation, 2008, p. 7).

Student Subgroups Gain from One-to-One Implementation. Specific subgroups have benefited from one-to-one computing. Special needs students and English language learners' engagement increases from a one-to-one environment (The ABELL Foundation, 2008 & Knapp & Glenn, 1996). Silvernail and Lane (2004) also

studied the impact of one-to-one implementation, and similarly, they found that one of the subgroups to see the greatest improvements in engagement and achievement were students identified with Individual Education Plans. Similarly, Lei and Zhao (2008) suggest that one-to-one computing impacted these students in four separate areas. These students showed improvements in engagement, independence, and participation including the students' willingness and ability to work with peers. Another program called Inspired Writing cited English language learners and the benefits those students gain from the use of technology (Warschauer, Arada & Zheng, 2010).

Although strong data has yet to support the role of technology in teaching English Language Learners, schools are increasingly receptive to trying these new methods (Warschauer, Grant, Del Real & Rousseau, 2004). When these subgroups can be successful with basic fluency and comprehension, teachers are able to incorporate other literacies into the curriculum. The ABELL Foundation (2008) reports, "Teachers felt that the laptop initiative was very helpful for students…with limited English proficiency…" (p. 14). Additionally Knapp and Glenn (1996) recognize how laptops can benefit ELL programs by translating lessons into the students' native language. Such technologies are also available that allow students to transition to a new language as they are mastering that language (p. 156-157). Knapp and Glenn (1996) recognize the importance of using the laptops as recording devises for those English language learners. The use of technology also provides ELL students the opportunity to record their speech and play it back, so they can hear the pronunciation and make corrections. Similarly, English language learners could use this to simply listen to the language and hear correct pronunciation as books or other resources are presented out loud.

Study Habits Improve with One-to-One Implementation. Engagement is not the only benefit for students. Study habits including organization may also be impacted by the infusion of technology (Demb, Erickson & Hawkins-Wilding, 2004). One study reported that approximately two-thirds of students surveyed believed that having a laptop significantly impacted their study habits and academic lives (Lauricella & Kay, 2010). Furthermore, these same students, "found their laptop computers essential to their academic success" (p. 400). Lei and Zhao (2008) also interestingly noted that students felt they were more organized when they had unlimited access to the laptops. One student commented, "I don't lose my notes anymore. I am better prepared for my tasks and tests" (p. 107).

The Importance of Professional Development

Implementation of one-to-one alters the classroom; otherwise, why would schools be investing large sums of money to make these changes? Funds must be reallocated and textbook companies scramble to meet sales quotas as districts make these financial changes. Teachers, a majority of whom are digital immigrants, must be trained and must adapt to the challenges and changes (Prensky, 2001). Professional development is necessary when implementing a one-to-one technology program.

Teacher Responsibility. Teachers must take responsibility for successful implementation. In addition to adequate professional development, it is critical that teachers maintain a positive attitude and implement the technology with fidelity and efficacy (Shapley, Sheehan, Maloney, & Caranikas-Walker, 2010). Shapley, et al. (2010) write about the impact and importance of teacher's attitudes throughout the implementation process. The authors state that, "Teacher 'buy-in' for Technology

Immersion is critically important because students' school experiences with technology are largely dictated by their teachers" (p. 24). Most teachers are still considered digital immigrants, and although the traditional paper and pencil pedagogy may be the teacher's native language, it is likely not the native language of students and therefore is ineffective (Wambach, 2006). Although many teachers consider themselves digital immigrants, they understand that they must have a working understanding of the current technologies and methods of communication in order to create an environment that supports student learning (Shapley et al., 2010). The more teachers can communicate in the language students speak, the more successful lessons will be (Rochette, 2007).

Teachers must also be willing to make changes in everyday routines in order for implementation to be a success. Teachers cannot expect to get major results with just one overall change like the implementation of laptops. Teachers cannot forget the other components of quality instruction and must continue to engage and motivate students while teaching the lesson. Despite these challenges, schools that implemented one-to-one initiatives have had positive results. "Teachers and students believe that the laptops were very important and that the one-to-one laptop project greatly helped teaching and learning in spite of some challenges" (Lei & Zhao, 2008, p. 117). Because there are such challenges, fidelity becomes a huge factor. Teachers must buy in to the idea that laptops and being immersed in technology can make a significant difference in the students' involvement and achievement (Shapley et al., 2010). Teachers employed in one-to-one districts must understand that the teacher's role is one major part of success in the one-to-one school (Shapley et al., 2010).

Similarly, Teachers need to create new lessons that incorporate technology (Vannatta & Fordham, 2004). Professional development is one way of giving teachers the time needed to create and implement new lessons. Barone and Wright (2008) interviewed one teacher who stated, "I had to think about all of the kids having laptops and infusing technology in real ways" (p. 300). November (2010) states that, "managing the transition from the isolated to the connected classroom, we may have to let go of our traditional strategies" (p. 48). More simply put, teachers have to be willing to change, and professional development can facilitate that change.

As Leu and Kinzer (2003) point out, "Teachers of literacy must consider two issues: How to use technology to further their work in teaching children and how to teach children the necessary requirements for the literacies of their future" (p. 510). This is no easy task for any generation of teachers.

"The research provides…powerful indicators that indeed the cost [of one-to-one implementation] is worth it" (Lei & Zhao, 2008, p. 117). Despite this claim and the numerous benefits of one-to-one implementation, controversy remains as to whether or not this change can be part of the larger politically driven changes that must occur in education. It is clear though that as these technologies become more widely integrated into instruction, educators must continue to collect data and research how these new tools can best be manipulated at various levels (Sternberg et al., 2007).

One of the biggest issues is that schools must not implement technology without understanding the leadership and training that must go along with the new electronic devices (Barone & Write, 2008). One thing we must remember is that no matter how innovative a new idea is, it is extremely unlikely that one book, one method of

instruction, or even the inclusion of the newest technology will be effective for all learners (Sternberg et al., 2007).

Effective Professional Development Design. Creating a professional development model is no easy task. Because the topics are ever changing and because within one professional development session there are a variety of abilities and learning styles, no magical template will ever work. However, by paying attention to a few simple things, professional development can be a positive and profitable experience for all. The first thing that must be attended to is learning about the needs of the learners. A needs assessment will do this. Vogt and Shearer (2011) explain the needs assessment as, "a way to ensure that you are addressing actual rather than perceived needs" (p. 59). The next part is to develop a common vision for all participants. A literacy team or other leadership team can be a good method for delivering this vision. Sharing common knowledge through the reading of professional literature is another way of creating a common vision (Vogt & Shearer, 2011, p. 60) and that vision is important. "The most effective strategy for influencing and changing an organization's culture is simply to identify, articulate, model, promote, and protect shared values" (DuFour & Eaker, 1998, p. 134). The last pieces of a successful professional development model include time and the opportunity to collaborate. "Teachers increase the effectiveness of their schools when they collectively identify and work toward the results they desire…faculty, through a collaborative process, enables the school to foster a results orientation in its most critical area—student learning" (DuFour & Eaker, 1998, p 152). The time to complete this collaboration must be provided by the school or it is unlikely to exist. However, with a

professional development plan that incorporates a needs assessment, a vision, and time for collaboration and planning, great things can occur.

Methodology

Literature Review

After my school went one-to-one during the 2011-2012 school year, I knew that technology and its connection to literacy was something in which I was greatly interested. Other classes had required researching topics of interest. I was fascinated by the constant change in technology and the variety of ways technology was being implemented in different schools; therefore, technology and its connection to literacy became my topic of choice, and I began researching via three main resources.

My first resource was Rod Library at UNI, where I chose several books dealing with technology, literacy, and student engagement. Because technology is changing so quickly, I knew that published books may not be the best resource due to the time it takes to complete research and get that research published. Despite this, I found the books to be helpful in developing a foundation for my paper.

The next source I used was Rod Library's online database of scholarly articles. When searching I used several key terms including technology, one-to-one, laptops, literacy, secondary education, education, teaching, pedagogy, computers, engagement, and student engagement. I also wanted to make sure that I was finding the most time relevant material, so I tried to limit my search to articles from 2000 and on. Once I located an author who had completed a lot of research, I would then go back and look at older articles written by that particular author. Donald Leu was one such author this worked for. I recognized quickly that he had been writing about technology and new literacies for some time, and although not all of his articles were current, the main ideas of them helped with my research. Using much of the same method as with the Rod

Library database, I looked for articles on Google Scholar.

Once I had a sufficient amount of literature, I began skimming the articles. At that point in time they either were kept for further evaluation or they were discarded. Those that were kept were then read through, but I did very little with them at that time other than to write one or two sentences on a notecard that summarized the main points of the article. Only then did I read the articles for a second time and annotate as I read. While I read through articles I found it very difficult to not continue researching and gathering more articles. Once I recognized this as a potential problem, I came up with a system. As I read articles I would highlight authors whose research I found interesting. Only when I had finished reading all of the articles did I then go back and purposefully look for authors and articles that could fill in any gaps in research I had discovered. At that point the writing began and research became a secondary task to the development of the literature review and the project.

Professional Development

Creating a professional development plan for a district as it infuses technology followed a similar process as my literature review in the sense that much of it was based on personal experience. The Knoxville District is now mid-way through its second year with laptops, and I have witnessed how our professional development has and has not worked. This personal experience and the knowledge provided through my graduate level classes helped me to see how the professional development might be improved.

Before starting the professional development plan it is important to develop a needs assessment. With the initial survey this goal is accomplished. As the professional

development progresses, needs should be continually monitored. Exit slips are a way to do this. With each exit slip participants are asked to provide feedback about that day's session and to determine future needs. Vogt and Shearer (2011) support the idea of a needs assessment to ensure that the professional development is providing the most needed information (p74).

Another goal was to find professional literature that could lead the professional development. Vogt and Shearer (2011) provide information in chapter 3 of *Reading Specialists and Literacy Coaches in the Real World,* that creating a vision for the staff is an important part of a professional development plan. I found that vision in November's book, *Empowering Students with Technology* (2010). I liked the book because it was a shorter piece of literature, and its language was not too academic in nature. My previous experience with professional development readings is that teachers do not like the very scholarly journals; therefore, I needed to find literature that was not going to be overwhelming for the staff. I also liked November's focus on the students. I liked that he saw it as the teacher's job to "empower" students rather to know everything about technology. Again, as our staff is a mixture of digital immigrants and digital natives, I knew that I needed to address the needs of all teachers, not just a few.

My next goal was to create a professional development plan that gave teachers time. The lack of time seems to be an overwhelming obstacle with teachers and our previous professional development evaluations stated that teachers wanted time. I tried to create a professional development calendar that gave teachers' time. My plan allows for time to read the literature and apply the knowledge without requiring teachers to use time outside of the contracted hours.

My final goal was to give teachers the opportunity to collaborate with other teachers. With the information from DuFour and Eaker (1998), this goal was set. It has been my experience that my peers have a vast amount of knowledge to share if only given the time and direction to share it. This goal and my desire to have teachers collaborate meant that I had to use time in the professional development plan for PLCs (Professional Learning Communities) to meet. With each PLC session, groups will be guided with topics or assignments to respond to; however, I wish to have enough flexibility in the agenda so that each PLC can use the time as best suits that group.

Finally, I feel it necessary to point out the weakness in my professional development plan, and that is that it is fictional in nature. I feel very strongly that professional development can have a plan, but the plan is just that…a tentative plan. If I were to be the lead with this or any professional development, part of my plan would be to continually evaluate and change the plan based on the needs of the learners. Although I have included exit slips, I also feel very strongly that informal observation is very telling. Without actually putting the professional development in place this informal observation cannot occur; therefore, I currently have no need to adjust the plan. In a real world situation, being flexible with a professional development plan is critical and the evaluations would provide the information I would need to alter the plan.

Professional Development Plan

The following professional development has been developed for the district of Knoxville, Iowa. Specifically, the PD plan is intended for the teachers at the high school as they began a one-to-one laptop program. Ideally, this professional development model could be used as the basis for any secondary school as they begin a one-to-one program. The plan starts by establishing the district and building goals, and it also shows how the professional development plan aligns with the Iowa and Common Core curriculum. The rationale behind the plan, the readiness of the staff, a description of the presenters follows. A survey is included which would help to establish the skills and need of the entire staff. Resources and the cost of those resources have been provided. Following this information, a basic outline of the professional development plan is provided, and finally each session is listed in detail, including information such as who will present, what materials are needed, and a detailed agenda for each session. Exit surveys are provided at the conclusion of most sessions; this information would be used to help determine if needs of the faculty are being addressed, and the evaluations would also help determine what changes need made for future sessions. Appendices are provided at the end.

Knoxville High School

Professional Development Plan

January 2013-May 2014

District Goal(s):

- All students will achieve at high levels in reading comprehension to prepare for success beyond high school.
- All students will use technology in developing proficiency in literacy, mathematics, and science.

Building Goal(s):

- All teachers committed to literacy for all students.
- To improve academic achievement and technology literacy for all K.H.S. students based on the Iowa Core Curriculum and effective instructional routines.

Alignment with Iowa/Common Core:

The Iowa Core aligns specifically with technology. In training teachers to use technology in the classroom, students are gaining knowledge about technology literacy as well. Achieving these standards listed below can be more easily and better accomplished through the use of technology-assisted quality instruction. The following 21st century skills were found at the Iowa Department of Education website (2013).

Technology Literacy:

- Each Iowa student will be empowered with the technological knowledge and skills to learn effective and live productively.
- Demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.
- Use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
- Apply digital tools to gather, evaluate, and use information.
- Demonstrate critical thinking skills using appropriate tools and resources to plan and conduct research, manage projects, solve problems and make informed decisions.
- Understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.
- Demonstrate a sound understanding of technology concepts, systems and operations.

Rationale:

As fluency and comprehension skills have been an area of focus in the Knoxville district for the past few years, looking for ways to improve these skills is a primary goal. The survey asks teachers to respond to how comfortable and/or knowledgeable they are with previously taught fluency and comprehension strategies. This is done to establish the needs of the faculty. Faculty needs to understand literacy skills before implementing

technology. The survey also establishes a baseline of information about technology use in the classroom and asks teachers to comment of their level of comfort with specific technologies. This information will help to establish the needs of the staff as the professional development sessions are created.

Student/Teacher Survey (Appendix A)

https://docs.google.com/spreadsheet/viewform?fromEmail=true&formkey=dFhaZ0d5YU9yUXFlczBKSzJITHZKd3c6MQ

Readiness:

In designing a professional development plan I took into account what information had already been provided to the staff and what areas the staff was still struggling with. I also wanted to make sure that the presenters of the professional development could relate with the staff; therefore, I have used teachers and groups within the building as presenters if at all possible.

- Teachers: Teachers have participated in a variety of professional development over the past few years that have focused on literacy instruction in the core areas. During the summer and fall of 2011 those teachers employed by the district took part in a 4-day MacBook training provided by certified Macbook trainers. Those who have joined the district since have no training on Macbooks. Since the beginning of the 2011 school year and the implementation of one-to-one the district has had a variety of opportunities to learn and practice resources.

- Presenters: A majority of the presenters fall into 3 groups- Area Education Agency (AEA) consultants, Distirct Leadership Team (DLT) members, and Technology in the Iowa Core for Learning (TICL) group members. Each of these groups has a unique set of strengths that make them strong choice to lead professional development. The AEA staff is well versed in professional development and they have a vast amount of resources to share and train the staff on. DLT members are volunteers who have shown a desire to lead. They have taken on the leadership role in professional development in the past and are seen by peers as dependable and responsible leaders. Finally, the TICL team has been trained specifically in technology resources making them a reasonable choice for this professional development model.

Materials needed/Cost:

Materials	Item Cost	Total Cost
Empowering Students with Technology **By: Allen November**	$23.21	$1044.45 (45 copies)
Turnitin.com membership	$1734.53	$1734.53
AEA Presenters	No Cost	No Cost
Ipod touch	$299.00	$2990.00 (10 units)

Total cost:

$5768.98

Professional Development 2013-2014

	Focus (Topic/Content)	Teacher will learn (Knowledge)	Teacher will do (Behavior)
2013 January	Google Forms	-How Google forms can be used in the classroom	-Incorporate Google Forms into current lesson plans and share out in PLCs
February	Educational social networking sites • Edmodo	-Benefits of using a social networking site	-Explore site and set up account -Be given time to have hands on time with the site and set up classes
March	Technology and Writing	-Expectations of students at each grade level -Technology which assists in the writing process	-Be given time to ask questions and incorporate technology into lesson plans involving writing
April	Recognition of the importance of content area literacy skills. Evaluation of Iowa Assessments	-Results of the Iowa Assessments -Content area literacy skills that are working	-Review test results -Discuss which practices to continue and why/why not.
May	Discussion and evaluation	-What other technologies are being used successfully	-Share out ideas -Provide feedback and support for other staff members

August	**-Evaluating technology -Review of technologies**	**-About TPACK -To use given rubric to gauge the value of technology used**	**-Look at current use of technology and gauge its value -Be given time to look for new technology resources that will better fit the curriculum and the student needs.**
September	-Turnitin.com -*Empowering Students with Technology* (chapter 1)	-Teachers will learn about the benefits of using Turnitin.com -What to expect from writing assignments. -To determine value of websites and resources.	-Teachers will be given time to create accounts and receive training on the use of Turnitin.com. -Have the opportunity to practice evaluating student writing. -Self evaluate current websites in use.
October	-*Empowering Students with Technology* (chapter 2)	-About critical planning questions. (p. 33).	-Apply critical planning questions in evaluating lessons and the implementation of technology into those lessons.
November	-Vocabulary, engagement, and technology	-Resources available for implementing technology with vocabulary lessons.	-Evaluate current vocabulary practices and select and use a new resource.
December	-*Empowering Students with Technology* (chapter 3)	-That implementing technology takes time	-Evaluate their place in the technology infusion process and see how to move up and increase their comfort/use of technology.

2014 January	Incorporating technologies into the curriculum	-About technologies for classroom use.	-Be provided time to explore technologies and infuse technology into classes.
February	-*Empowering Students with Technology* (chapter 4)	-About using primary sources in the classroom -Where primary sources can be accessed by students and teachers	-Recognize the benefit of primary sources and the need to teach the difference of sources to students.
March	-*Empowering Students with Technology* (chapter 5)	-About online classes and teaching	-Evaluate where Knoxville is on this spectrum.
April	- Recognition of the importance of content area literacy skills. -Review Iowa Assessments	-Results of the Iowa Assessments -Content area literacy skills that are working	-Review test results -Discuss which practices to continue and why/why not.
May	-Using technology to engage students	-About technologies that are available for increasing engagement.	-Evaluate current practices. -Replace current practices with strategies that engage students using technology.

Professional Development

Date: January 2013
Time allotted: 1 day
Presenters: District Leadership Team members, School faculty attending TICL, volunteers
Audience: KHS certified teachers
Goal: To give teachers the training needed to use Google drive and all of the Create components in professional communication and as a means to facilitate student collaboration and learning. By the end of the PD session teachers will have created a variety of resources with Google to use in the classroom and will have shared those with an administrator.
Materials needed:

- Projector
- Teachers will need to have laptops with them
- Copies of handouts

Resources:

- https://sites.google.com/site/colettecassinelli/docs
- Creating a Google Account
- Handout also found in Appendix C.

Schedule:

1. Teachers will meet in small content area groups. Each group will have a leader who is familiar with Google drive and is comfortable leading a group. (These will be determined by asking for volunteers via email several weeks prior to the PD date.)
2. Groups will go over each of the types of Google Create and will have time to play with each. Teachers will have mini homework assignments to make sure that they work with the various tools and know the basic functions of each. Sample activity is provided in the appendix.
    a. Google Docs
    b. Google Presentations
    c. Google Spreadsheet
    d. Google Forms
    e. Google Draw
3. Groups will be given time at the end of the day to work on creation of documents for individual classroom use.
4. Exit cards https://docs.google.com/a/kcsd.k12.ia.us/spreadsheet/gform?key=0Ah6ol7-oAKiwdG8zTUxzTWdnR1pQQnVPVG9McjFKWlE&hl=en#style

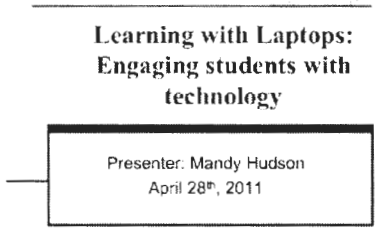
Professional Development

Date: February 2013
Time allotted: 3 hours
Presenters: Teachers attending TICL and volunteers who have experience with Edmodo
Audience: All certified staff
Goal: Teachers will set up an Edmodo account and set up at least one class. Teachers will learn to post and grade assignments as well as embed videos.
Materials needed:

- Projector
- Laptops
- Copies of article or sent/shared prior to meeting

Resources:

- **http://vator.tv/news/2012-07-30-resetting-education-social-networks-for-the-classroom**
- **http://help.edmodo.com/?subdomain=www**
-



Schedule:

1. Teachers will be given the article as they enter and will be asked to read it.
2. Teachers will be asked to discuss the article with their tablemates and what it means to KHS.
   https://docs.google.com/a/kcsd.k12.ia.us/document/d/1YFpXKdHQ9EwiiVONPSxIcWITEa6Iriyi2VjrGlGUf_A/edit?sp=sharing
3. Whole group will share out and topic of Edmodo and the incorporation of social networking sites will be introduced.
4. Power point... Discussion of the positive impact of sites like Edmodo
5. Teachers will be instructed on setting up an Edmodo account if they do not already have one. (Most who have one and use it on a regular basis will be assisting with the professional development and will be available to assist with this process.)
   a. Set up classes
   b. Post assignments
   c. Upload previously created documents
   d. Upload links/videos

e. Grade assignments
f. Post announcements
g. Create and post tests/quizzes
h. Create small groups
i. Post items to the library
j. Invite parents
k. Connect with others

6. Exit cards
https://docs.google.com/a/kcsd.k12.ia.us/spreadsheet/gform?key=0Ah6ol7-oAKiwdG8zTUxzTWdnR1pQQnVPVG9McjFKWlE&hl=en#style

Professional Development

Date: March 2013
Time allotted: 3 hours
Presenters: Language Arts PLC
Audience: All certified staff
Goal: Share with staff the writing abilities of students at each grade level, and provide resources for teachers for writing assignments.
Materials needed:

- Projector
- Laptops

Resources:

-  What do they know? Writing.
- http://owl.english.purdue.edu/
- http://www.angelfire.com/wi/writingprocess/specificgos.html

Schedule:

1. Teachers will meet in the media center and start by brainstorming the times in their class where students write.
2. The leaders will ask each teacher to share out with their tablemates and then each table will share out to the entire group. (have someone typing so the entire group can see the writing that occurs school-wide...not just in the language arts classes)
3. The document "What do they know?" will be shared with everyone and projected. The language arts department will go over the expectations of each grade level. Questions will be fielded if there are any.
4. Teachers will be asked to look at the writing that they expect of students and see if it matches with what they should be expecting...is it too much or too little? Maybe it is just right.
5. Teachers will share out.
6. Teachers will be split into two groups. One group will work on specific expectations of MLA, while the other group will work on finding and using graphic organizers for writing assignments. (As not all teachers write research papers, we will only discuss MLA with those who do use research papers. All other staff will get instruction on graphic organizers for writing.)
7. Exit cards
   https://docs.google.com/a/kcsd.k12.ia.us/spreadsheet/gform?key=0Ah6ol7-oAKiwdG8zTUxzTWdnR1pQQnVPVG9McjFKWlE&hl=en#style

Professional Development

Date: April 2013
Time allotted: All day
Presenters: District Leadership Team with the support of the AEA 11
Audience: KHS Certified Staff
Goal: Reinforce the importance of content area literacy. Teachers will reflect on current practices, discuss practices with small groups, and be provided time to implement new literacy practices.
Materials needed:

- Iowa Assessment scores
- Copies of article or share link to article
- Sticky notes
- Large sheets of butcher paper

Resources:

- http://www.edutopia.org/blog/literacy-instruction-across-curriculum-importance
- https://docs.google.com/spreadsheet/viewform?fromEmail=true&formkey=dFkxVDZfRWNqSERNT1o4RTJScXhKZVE6MQ

Schedule:

1. Teachers will begin the day by reading the article provided.
2. Using sticky notes teachers will write down what they personally are doing well and what they would like to improve on in terms of content area literacy.
3. They will post the notes on a larger piece of butcher paper.
4. The DLT members will then bring the group back together and facilitate a discussion about content area literacy.
5. By the end of the day teachers will have created and submitted a plan for improving literacy within their classroom.
6. Exit cards https://docs.google.com/a/kcsd.k12.ia.us/spreadsheet/gform?key=0Ah6ol7-oAKiwdG8zTUxzTWdnR1pQQnVPVG9McjFKWlE&hl=en#style

The rest of the schedule will be determined once the results of the Iowa Assessments are in, but regardless the core teachers will need to focus on the literacy scores and what needs done to continue improving these scores.

Professional Development

Date: May 2013
Time allotted: 3 hours
Presenters: DLT and Literacy team members will lead PLC groups
Audience: All certified staff
Goal: To give staff the time they need to collaborate about technology infusion.
Materials needed:

- Copies of article
- Graphic organizers for teachers to share out

Resources:

- http://www.iste.org/images/excerpts/TLPREP-excerpt.pdf
- Appendix D (handout for evaluating use of technologies)

Schedule:

1. Teachers will be given article and given time to read.
2. Teachers will finish and discuss with an elbow partner.
3. Teachers will come back to whole group and discuss article.
4. Teachers will be given the opportunity to ask questions about the article and about the LoTi framework.
5. Teachers will be asked to fill out the graphic organizer (Appendix D). Teachers will be reminded that it is best to answer honestly. They are not being judged; however, presenters need to know how technology is being used and what assistance is needed in the areas where technology is not being implemented.
6. Teachers will spend the rest of the afternoon brainstorming and working together to see how technology is used and how it might be implemented in the future.
7. Exit cards https://docs.google.com/a/kcsd.k12.ia.us/spreadsheet/gform?key=0Ah6ol7-oAKiwdG8zTUxzTWdnR1pQQnVPVG9McjFKWlE&hl=en#style

Professional Development

Date: August 2013
Time allotted: 3 hours
Presenters: TICL conference attendees and AEA presenters (Toy Waterman)
Audience: All certified staff
Goal: Teachers will evaluate current use of technology and look for ways to improve technology use in the classroom to improve student engagement.
Materials needed:

- Evaluative tools as presented to the TICL group in October of 2012.

Resources:

- http://www.thethinkingstick.com/evaluating-technology-use-in-the-classroom/

Schedule:
To be determined after discussing further with Toy Waterman and TICL conference attendees.

Professional Development

Date: September 2013
Time allotted: Full day
Presenters: AEA staff with the assistance of TICL conference members
Audience: All certified staff
Goal: -Teachers will create a Turnitin account and set up classes. Turnitin is an anti-plagiarism database service that compares student essays to an immense archive of other writings. (Definition taken from the following website: http://articles.latimes.com/2012/jan/29/local/la-me-plagiarism-20120129.)

-Teachers will practice using Turnitin to evaluate written assignments in an effort to achieve consistency in writing expectations throughout the building.

-Teachers will read chapter 1 of *Empowering Students with Technology* and discuss and evaluate current practices.

Materials needed:

- Laptops
- Projector
- Screen
- Copies of books
- Poster paper
- Markers

Resources: www.turnitin.com
https://docs.google.com/a/kcsd.k12.ia.us/file/d/0B92-L7UhRkCNRjg1YlBpaXpfNUU/edit

Schedule:

1. Language arts PLC will show staff the website of turnitin.com. Each member will discuss how he or she has used it.
2. Teachers will use their laptops to log in and create an account for the site.
3. Teachers will set up classes.
4. Teachers will input assignment(s).
5. Language arts PLC will submit assignments for teachers to evaluate.
    a. Teachers will evaluate assignment independently for similarity and grading.
    b. Teachers will use provided comments and their own comments to evaluate the writing.
    c. Teachers will discuss as a small group how they arrived at the grade for the writing assignment.
    d. Teachers will share out the table's evaluation of the written assignment.
6. Language arts PLC will share how they would like the assignment to be graded. At this time it is likely that discussion will occur.
7. This process will be complete a variety of times for a variety of writing pieces.

-Break for lunch...staff will be given an hour past the allotted lunch time and asked to come back having used the hour to read chapter 1 of *Empowering Students with Technology*.

8. Staff will return to the media center with books and any notes they took while reading chapter 1. Staff will be asked to write on post it notes the responses to the following questions. (Adapted from the discussion questions at the end of the chapter.)
    a. What does it mean to be information literate?
    b. How can we teach our students to have the skills essential to be literate about information?
    c. How can teachers prepare students to be effective users of technology and the resources provided via technology?
    d. What practices are already in place to help us achieve information literacy?
    e. What do you need to make sure students are knowledgeable about the resources provided via technology?
9. Staff will be given 20-30 minutes to complete their individual thoughts on these questions. They will then post their answers to a larger piece of poster paper.
10. Staff will be asked to complete a gallery walk and view others responses to these questions.
11. Staff will come back to whole group and the DLT members will facilitate a discussion about chapter 1.
12. Staff will be asked to create a list of the top 10 sites they use in their classroom. For those who do not use the Internet on a regular basis, they will be asked to search quickly for 5-10 sites they could use. (Following this, staff will be given a 10-15 minute break)
13. Upon returning, the staff will be asked to evaluate these sites they or their students regularly use.
14. Staff will be asked to evaluate those sites based on the recommendations of the book.
15. Staff will share will tablemates the value of the websites they currently use.
16. Exit cards https://docs.google.com/a/kcsd.k12.ia.us/spreadsheet/gform?key=0Ah6ol7-oAKiwdG8zTUxzTWdnR1pQQnVPVG9McjFKWlE&hl=en#style

Professional Development

Date: October 2013
Time allotted: 3 hours
Presenters: DLT members
Audience: All Certified Staff
Goal:

- Teachers will learn about and apply critical learning questions.
- Teachers will find collaborative partners within and outside of the district.
- Teachers will identify one way of using technology to connect to parents.

Materials needed:

- Books
- Handouts
- Laptops

Resources:

- http://parentcommunication.wordpress.com/using-technology-to-communicate-with-parents/
- http://www.youtube.com/watch?v=QCJv3TweHlM

Schedule:
Staff will be given the first hour of professional development to read chapter 2. After this, staff will meet in the media center.

1. Start of by watching video about technology. (link above and embedded into first post.)
2. Discuss the critical learning questions. Have teachers rate them from most important to least important.
3. After making personal selections have staff discuss ratings with the table. As a table they must come up with a rating they can all agree on.
4. Using butcher paper they will write the critical learning question from most important to least important.
5. Leaders will facilitate a whole group discussion about the overall consensus of the building. (Obviously we will not know the outcome until we see the papers put up. Conversation will weigh heavily on what teachers feel is most important. This may also help to guide future professional development sessions.)
6. Teachers will then be asked to focus on ways to use technology to communicate with parents. Teachers will be asked to discuss at tables the ways they currently communicate with parents. Why do they communicate with parents?
7. Whole group will share out while leaders take notes for the whole group to see on the overhead.
8. Following this share out, leaders will post the article above about using technology as a way to communicate with parents.

9. Lastly, teachers will be shown how to post lesson plans and email entire classes using the current grading program that is provided by the district.
10. Exit cards
    https://docs.google.com/a/kcsd.k12.ia.us/spreadsheet/gform?key=0Ah6ol7-oAKiwdG8zTUxzTWdnR1pQQnVPVG9McjFKWlE&hl=en#style

Professional Development

Date: November 2013
Time allotted: 3 hours
Presenters: AEA
Audience: All Certified Staff
Goal: Teachers will evaluate current vocabulary practices and determine and implement those resources that might better serve students.
Materials needed:

- Laptops
- Vocabulary lists
- Overhead projector
- Screen, handouts
- Poster size paper
- Markers

Resources:

- http://www.readingrockets.org/article/52248/
- Vocabulary Instruction Locations

Schedule:

1. Teachers will be given time at tables to brainstorm current vocabulary instruction ideas. Each table will list the resources they currently use to create a poster that can be hung up on the wall for all to see.
2. Quick discussion about the strategies used.
3. Facilitator will ask the groups to put a star next to all of the resources that they use which involve technology.
4. Pass out or share article from Reading Rockets website and give teachers time to read that article. (20 – 25 minutes) *Good idea to work in a break here.
5. Upon completing the reading of the article and having a quick break, one of the facilitators will quickly review the 10 strategies provided in the article. Teachers will be asked to pick the 3 they are most interested in or think they could easily use in their classroom. They will then write down the locations of those 3 strategies and write them down. (A list of these locations will also be shared via the Google Doc.)
6. Teachers will then go to these sessions for the next hour. Each session will last 15-20 minutes. Sessions will be led by DLT members who have used these resources before.
7. At the end of the vocabulary sessions teachers will return as a whole group back to the media center and share out.
8. Teachers will add resources to their posters. Posters will be hung in the teacher's lounge as a reminder to implement vocabulary strategies using technology.
9. Exit cards

https://docs.google.com/a/kcsd.k12.ia.us/spreadsheet/gform?key=0Ah6ol7-oAKiwdG8zTUxzTWdnR1pQQnVPVG9McjFKWlE&hl=en#style

Professional Development

Date: December 2013
Time allotted: 3 hours
Presenters: DLT members
Audience: All Certified Staff
Goal:

- To recognize fear and anxiety about technology and to provide those who have fears the support needed.

Materials needed:

- Books
- Poster paper
- Sticky notes

Resources:

- http://youtube/_VnHdqpE4RM

Schedule:
Teachers will be given the first hour to read chapter 3. After reading the chapter they will meet in the media center.

1. Upon entering the media center staff will see questions posted on posters around the room. These questions will also be posted on the overhead and can be found at the end of chapter 3.
    a. Which collegial relationships add value to student work or to the knowledge and skill of the teacher?
    b. Can teachers within the district from new partnerships based on sharing work?
    c. Are there potential partnerships that can be nurtured beyond the school district?
    d. What are the new roles of teachers and students?
    e. How much control can be shifted from teachers to students to manage learning?
    f. What are the emerging collaborative relationships for teachers?
2. Teachers will use sticky notes to answer each of these questions and will post their response to the respective poster.
3. Upon completing all responses, teachers will complete a gallery walk to see how others responded.
4. Following the gallery walk, leaders will bring the whole group back together for discussion.
5. The meeting will conclude by watching the video.
6. Exit cards https://docs.google.com/a/kcsd.k12.ia.us/spreadsheet/gform?key=0Ah6ol7-oAKiwdG8zTUxzTWdnR1pQQnVPVG9McjFKWlE&hl=en#style

Professional Development

Date: January 2014
Time allotted: 3 hours
Presenters: AEA staff
Audience: All Certified Staff
Goal:

- Staff will be exposed to multiple technologies for use in the classroom.
- Staff will have time to work in PLCs to implement strategies into classes for second semester.

Materials needed:

- Laptops
- Projector
- Screen
- Copies of handouts

Resources: To be determined

Schedule:
The schedule will be set closer to the time of the professional development. At that time I will have a better understanding of the needs of the staff in terms of technology. It is likely that I would have the staff respond to a survey about current practices in the classroom. The results of that survey would be shared with the AEA staff as we work together to create and afternoon of professional development. Also, it is worth mentioning that more than a year from now, technology resources will be different than what is available today which is yet another reason to wait to plan this particular day. In general:

1. Staff will meet in the media center and technologies will be demonstrated for them.
2. Staff will receive a handout or have a document shared that lists all of the websites demonstrated.
3. Staff will then return to their PLC groups and will be given time to incorporate new or current technologies into second semester classes.
4. Exit cards https://docs.google.com/a/kcsd.k12.ia.us/spreadsheet/gform?key=0Ah6ol7-oAKiwdG8zTUxzTWdnR1pQQnVPVG9McjFKWlE&hl=en#style

Professional Development

Date: February 2014
Time allotted: 1 full day
Presenters: AEA staff with the help of DLT members
Audience: All Certified Staff
Goal: Teachers will see the importance of using primary sources in the classroom and will be exposed to a variety of tools to locate primary sources.
Materials needed:

- Laptops
- Books
- Projector
- Screen
- Poster paper
- Markers
- Sticky notes

Resources:

- http://www.archives.gov/education/
- Chapter 4 questions
- http://www.youtube.com/watch?v=g0plq2E9ZjQ
- Comparing Primary and Secondary Sources

Schedule:
Teachers will be given the first hour to read chapter 4. All staff will meet in the media center promptly at 9:00 A.M. to begin whole group instruction.

1. As staff enters they will see end of chapter questions posted on the screen and on posters around the room. Teachers will use sticky notes to write their responses to these questions and post them.
2. Teachers will complete a gallery walk and have the opportunity to see how others responded to the chapter.
3. When all are done responding and reading the facilitator will bring it back to a whole group discussion. The comments posted will lead the discussion. (Sort of risky as the presenters won't know the staff's feelings or insights until they are posted, but this is real.)
4. Facilitator will then explain the difference between primary and secondary sources. Teachers will watch video and be provided the copy of the handout that compares the two types of sources.
5. Teachers will share out with their table the primary sources they currently use. Of those primary sources, how many of those are accessed via technology? How important is it that students and teachers use primary sources?

   Staff will break for lunch.

6. Upon returning from lunch, staff will be show the national archives website and given time to explore.
7. Teachers will then be given time to work in PLC groups for the rest of the afternoon (around 2 hours) and will be asked to find ways to implement primary sources into their lesson plans using technology.
8. Exit cards https://docs.google.com/a/kcsd.k12.ia.us/spreadsheet/gform?key=0Ah6ol7-oAKiwdG8zTUxzTWdnR1pQQnVPVG9McjFKWlE&hl=en#style

Professional Development

Date: March 2014
Time allotted: 3 hours
Presenters: TICL attendees
Audience: All Certified Staff
Goal:

- Introduce teachers to the idea of online instruction and determine where K.H.S. is in terms of teaching online courses.

Materials needed:

- Books
- Laptops
- Projector
- Screen

Resources:

- http://cnn.com/video/data/2.0/video/living/2011/04/11/am.intv.online.classes.cnn.html
- Chapter 5 questions

Schedule:
Teachers will be given the first hour to read chapter 5. After reading the chapter they will meet in the media center.

1. Upon entering the media center staff will see questions posted on posters around the room. These questions will also be posted on the projector and can be found at the end of chapter 5 or in the Google document provided.
2. Teachers will use sticky notes to answer each of these questions and will post their response to the respective poster.
3. Upon completing all responses, teachers will complete a gallery walk to see how others responded.
4. Following the gallery walk, leaders will bring the whole group back together for discussion.
5. The meeting will conclude by watching the video and discussing
6. Exit cards
   https://docs.google.com/a/kcsd.k12.ia.us/spreadsheet/gform?key=0Ah6ol7-oAKiwdG8zTUxzTWdnR1pQQnVPVG9McjFKWlE&hl=en#style

Professional Development

Date: April 2013
Time allotted: All day
Presenters: District Leadership Team with the support of the AEA 11
Audience: KHS Certified Staff
Goal: Reinforce the importance of content area literacy. Teachers will reflect on current practices, discuss practices with small groups, and be provided time to implement new literacy practices.
Materials needed:

- Iowa Assessment scores
- Copies of article or share link to article
- Sticky notes
- Large sheets of butcher paper
- Markers

Resources:

- https://docs.google.com/spreadsheet/viewform?fromEmail=true&formkey=dFkxVDZfRWNqSERNT1o4RTJScXhKZVE6MQ
- http://www.adlit.org/article/34644/

Schedule:

1. Teachers will begin the day by reading the article provided.
2. Using sticky notes teachers will write down what they personally are doing well and what they would like to improve on in terms of content area literacy.
3. They will post the notes on a larger piece of butcher paper.
4. The DLT members will then bring the group back together and facilitate a discussion about content area literacy.
5. By the end of the day teachers will have created and submitted a plan for improving literacy within their classroom.
6. Exit cards
   https://docs.google.com/a/kcsd.k12.ia.us/spreadsheet/gform?key=0Ah6ol7-oAKiwdG8zTUxzTWdnR1pQQnVPVG9McjFKWlE&hl=en#style

The rest of the schedule will be determined once the results of the Iowa Assessments are in, but regardless the core teachers will need to focus on the literacy scores and what needs done to continue improving these scores.

Professional Development

Date: May 2014
Time allotted: 3 hours
Presenters: TICL attendees and AEA staff
Audience: All Certified Staff
Goal:

- Teachers will incorporate technologies that increase engagement.

Materials needed:

- Laptops
- Projector
- Screen

Resources:

Getting Them All Engaged:

Part 1: Active Participation

Schedule:

1. Teachers will meet in the media center.
2. AEA staff will use the Anita Archer video to show strategies to engage students.
3. Following the video teachers will discuss with table-mates about active engagement strategies.
4. AEA and leaders will facilitate a whole group discussion about active engagement strategies.
    a. What are the benefits of active engagement?
    b. How does a teacher determine if a student is engaged or not?
    c. What can be done if students are not actively engaged?
    d. What engagement strategies do you use or have you seen used?
    e. What happens when students are not actively engaged?
    f. Does technology increase or decrease engagement?
5. Teachers will set up a http://www.symbaloo.com/ account for a place to house online resources
6. Teachers will be shown how to search for resources using symbaloo and add them to their webmix.
7. Teachers will be given a few minutes to explore.
8. Teachers will then be asked to close laptops as the AEA and TICL staffs demonstrate a few of their favorite websites.
9. AEA with the assistance of the TICL staff members will then demonstrate online resources that can help with student engagement

a. http://todaysmeet.com/
b. http://www.edmodo.com/
c. http://www.slideshare.net/
d. http://m86vusafe.com/
e. http://www.hippocampus.org/
f. http://quizlet.com/
g. http://blabberize.com/
h. http://www.wordle.net/
i. https://bubbl.us/
j. http://exploratree.org.uk/

10. Teachers will be given the rest of the afternoon to incorporate technology presented today in lessons for the remainder of the year and/or next year.
11. Exit cards https://docs.google.com/a/kcsd.k12.ia.us/spreadsheet/gform?key=0Ah6ol7-oAKiwdG8zTUxzTWdnR1pQQnVPVG9McjFKWlE&hl=en#style

Conclusions

Technology is not going anywhere, and it will continue to drive education and be a constant in the classroom. One-to-one classrooms are only the beginning of the changes that are bound to occur, as technology becomes a way of life in the 21st century. I understand and recognize that I am a supporter of one-to-one implementation. Because of that there is likely to be a bias in favor of implementation. Despite my bias I feel as if I have presented a quality research paper.

I found it very difficult to create long-term professional development without the formative evaluative data to support the choices I was making. I understand that professional development should have a long-term objective; however, even with that objective in place a strong professional development plan calls for constant evaluation. Based on the changing needs of the staff and the response of the student the future professional development should change. Without the opportunity to hold the professional developments and survey the staff to determine their needs, I was left to assume the needs and how they would present themselves. Although I feel as if the professional development model I created can work, I know it would be better if it were modified as the needs of the audience changed.

I also found it difficult to produce professional development to meet the needs of all of the learners. I have found this to be a weakness of the professional development that I attend and faced the same obstacle those who provide my school's professional development must face. To combat this, I tried to provide several opportunities where teachers had a choice about attending workshops or had the chance to learn the

technologies which best fit their curriculum and needs. I also tried to give plenty of opportunities for teachers to meet with PLC groups to create lesson plans in hopes of giving them the opportunity to work to their own potential.

Throughout my studies of literacy, technology, and engagement I thought I knew what I would find. I was astonished at the literacy I found and excited by it. I believe that I am part of teaching in a time when the landscape is changing drastically, and I could not be more motivated and inspired by those changes.

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Appendix A

*Please note the formatting is off but the full survey can be viewed at https://docs.google.com/spreadsheet/viewform?fromEmail=true&formkey=dFhaZ0d5YU9yUXFIczBKSzJITHZKd3c6MQ

Literacy and Technology Survey

Please answer the questions as honestly as possible. We are in the process of developing professional development for the future and need your input to make the best decisions for those sessions.

Which fluency strategies have you used in your classroom?

- choral reading
- partner reading
- repeated reading
- echo reading
- Other:

Which of the following comprehension strategies have you used in your classroom

- Summarizing
- Prediction
- Visualization
- Questions
- Inference
- Making connections
- Determining importance
- Other:

Which of the following technologies have you used in your classroom?Those you check should be those that you have used and continue to use. It is not beneficial for the purpose of this survey to mark multiple technologies that you only have used once or twice.

- Educational social networking (Twitter, Edmodo, PBWorks...)
- Blogging
- Software (Pages, Keynote, Numbers)
- Google Documents
- Internet

- Other:

How comfortable are you using technology in your classroom?

	1	2	3	4	5	
Not at all comfortable	○	○	○	○	○	Extremely comfortable

How comfortable are you using comprehension strategies in your classroom?

	1	2	3	4	5	
Not at all comfortable	○	○	○	○	○	Extremely comfortable

How comfortable are you using fluency strategies in your classroom?

	1	2	3	4	5	
Not at all comfortable	○	○	○	○	○	Extremely comfortable

Please take the opportunity to provide any information that you think would be helpful as the KHS district implements technology and literacy strategies into the core areas. What need do you have that you would like assistance with?

Submit

Appendix B

Freshman-
By the end of 8th grade year students:

- will write an effective paragraph with a topic sentence and supporting details.
- will write complete and a variety of sentences
- will write a 5 paragraph essay with assistance
- will write a 1 page paper.
- use basic mechanics correctly (end punctuation, capitals, commas, apostrophes, quotation marks)

Sophomores-
By the end of Freshman year students:

- will write a 5 paragraph essay with some assistance.
- will write a 1-2 page essay.
- use basic mechanics correctly
- use a variety of sentences

Juniors-
By the end of Sophomore year students:

- will write a 5 paragraph essay without assistance.
- will understand when to use MLA format to avoid issues of plagiarism with assistance.
- use more sophisticated punctuation correctly (semi-colons, colons, ellipses, parentheses, hyphens, and dashes)
- will write a 2-3 page essay.

Seniors-
By the end of Junior year students:

- will write a 5 paragraph essay without assistance.
- will write longer essays with assistance in organization. (Students may need to be given ideas on what goes in each paragraph. Outlines and other graphic organizers will aide them in organization.)
- will understand and use MLA in text citations with assistance.
- will write a 4-6 page essay.

Appendix C

Creating a Google Account

1. Go to http://www.google.com

2. Go to **Get Started** link and sign up for a Google account with Gmail. Your Username will consist of your firstname.lastname@kcsd.k12.ia.us and your password will be kcsd_ _ _ _ (Your 4 digit login number.)

3. Once you have your Google account open, look at the top of your screen to the black heading and click on Google Drive. Click on Drive.

5. Click on **Create** to open a blank document. (This will be a red box on the left hand side of your screen.) At this point you can select a document, form, etc. Open a document.

6. Type your name in the first line.

7. Change the font, the size of the font, and put the font in bold.

8. Click on the share button. (blue in the upper right hand corner)

9. Share with someone else in the room by entering their email address in the appropriate box. (Make sure you change the settings so that the person you share with "can edit.")

10. Now you can type on and edit any document that has been shared with you and others can type on any documents you have shared with them!

11. Discuss with the room how this could be used in your classroom.

12. Remember, if you would like to share a document with your student; however you do not what them to be able to edit then simply change the settings so they can "read only."

13. Try to do some of the following tasks on your own…You are NOT going to break it! Ask if you get stuck!

    a. Use the insert link button and copy and paste a URL into your document.
    b. Create a Google form and send it to someone else in the class to answer.

c. Create a folder in your Drive for one of your classes.
d. Insert an image or create a drawing.
e. Explore Google Spreadsheets and Presentations; share these with someone else and create on it together.

Appendix D

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Level of technology use	Examples
Awareness	
Exploration	
Infusion	
Integration (mechanical)	
Integration (routine)	
Expansion	
Refinement	

Appendix E

Primary Sources	Secondary Sources
Definition: The main text or work; a first hand experience	Definition: works that have interpreted or analyzed; author was not a participant
EXAMPLES	EXAMPLES
Diaries, journals, speeches, manuscripts, data, records, minutes of meetings, legal agreements, treaties, maps, etc.	Encyclopedias and other fact books that report the information
Documentary photographs, audio recordings, videos, letters, and speeches	Biographies
Polls, surveys, field notes, experiments, artifacts, fine art, death/birth certificates	General histories
Newspapers written at the time of the actual event.	Textbooks
Clothing, tools, pottery, inventions, weapons, memorabilia	Newspapers/books (can be either)