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How are Elementary Teachers Utilizing Technology to Enhance Their Instruction of Literacy in the Classroom?

By

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Submitted in partial fulfillment of the requirements for the degree

M.S. Literacy Education

Supervised by

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Abstract

This study examined how elementary teachers used technology to enhance literacy instruction in the classroom. Research was conducted by observing and interviewing both teachers and students in two classrooms, one a blended 3rd/4th grade classroom and the other a 4th grade classroom, on how technology is utilized in the classroom for literacy instruction. The findings showed the use of technology to be highly beneficial for elementary students. The students demonstrated an increase in motivation, attention and engagement. The benefits provided by technology allow students to participate more fully in the educational opportunities of the 21st century and helped students gain the skills necessary to be successful in today’s society.
How are Elementary Teachers Utilizing Technology to Enhance Their Instruction of Literacy in the Classroom?

There is increasing emphasis on computer technology and literacy in today’s classrooms, which reflects the importance of computer technology and literacy in society. Appropriate technology access and use to facilitate learning is an important aspect of today’s education, especially as many children will frequently encounter and interact with technology outside the classroom (Lovell & Phillips, 2009). As educators seek to prepare children for their literacy futures, they must realize that literacies of today may not be the literacies of tomorrow (Lue & Kinzer, 2000). Bringing new literacies into the classroom is not always an easy task for teachers, when two thirds of teachers feel underprepared to use technology (Kajder, 2005). Another challenge teachers face is a lack of resources, such as a lack of technology, time, and technical support. Also limiting are teachers’ attitudes and beliefs about technology as well as teacher knowledge and skills (Barone & Wright, 2008). All these factors influence a teacher’s use of technology in the classroom to enhance literacy instruction.

Teachers have a variety of resources to aid in their instruction of literacy in the classroom, such as Smart boards, computers, iPods, and digital cameras. In this study, focused on how two elementary teachers in a Social Skills Program, special education setting, in an Upstate New York school utilized technology in their classrooms to enhance their instruction of literacy. This study was accomplished through observation, teacher interviews, and student interviews. My research suggests that using technology in the classroom to enhance literacy instruction is motivating to students; students tend to stay focused on instruction when technology is used. Also, both teachers felt that in order to use
technology in their classrooms they needed more professional development and support from administration.

**Theoretical Framework**

One theory that supports my research and how I think about it is the New Literacy Studies (NLS) which suggests that literacy learning not only takes place in and out of school, in formal and informal settings, but also, in everyday interactions between people as a way to establish and maintain social relations (Larson & March, 2005). Burnett (2009) states that over recent years, literacy is redefined via the use of digital technology and that schools must find new ways of “acknowledging new literacies or risk perpetuating an outdated curriculum which offers little connection with children’s present or future lives” (p. 22). In today’s world, new literacies are ever changing according to Labbo (2006). New literacies can include, but are not limited to, electronic gaming, mobile communication, weblogs, WebPages, multimedia text, as well as learning how to read and write with multiple modalities, such as the following: graphics, video, animation, music, audio narration, hyperlinks, search engines, and power points. New electronic literacy genres include, (Labbo, 2006), informal products such as emails, text messaging, video conferences, and chat rooms and formal genres which include power point presentations and website design. Baker (2007) reports that some of the new literacy skills needed to be successful in today’s world include the ability to find information on the Web, being able to evaluate this information for accuracy, while also synthesizing this information.

As stated by Karchmer (2001), the Internet has changed the definition of literacy to include writers and readers of electronic texts not typically found in traditional forms of literacy. We now need to be able to communicate through video, hyperlinks, animated graphics and digital pronunciations, to
name a few of the new literacy skills that children and adults need for today’s literacy interactions. Karchmer (2001) asserts that there are four skills that are of the utmost importance for students to learn now that the Internet is such a significant factor in the world today: 1. the ability to collaborate with others effectively; 2. to gather information and sift through that information from different resources including both traditional and electronic means; 3. communication; 4. problem-solving skills. These are skills that will be looked at in this study to see if the teachers interviewed are teaching these skills and if not, it will be suggested how very important these skills are and how necessary they are for today’s students to obtain.

Lue and Kinzer (2000) believe that in today’s world it is the access to information and the ability to use this information effectively that will increase the ability to seize life’s opportunities. Lue and Kinzer (2000) assert that “the convergence of literacy instruction with internet technologies is fundamentally reshaping the nature of literacy instruction as teachers seek to prepare children for the future they deserve” (p.111). Barone and Wright (2008) state that new literacies are constantly changing and require teachers and administrators to embrace these changes. If these new literacy skills are not made part of teaching and learning standards, and teachers are not held accountable for teaching these NLS skills, then students of today will not be successful in today’s world of technology. New literacies are essential in today’s classrooms in order to provide equal opportunities to all students in the 21st century.

**Research Question**

Considering that literacies and learning are evolving with the ever changing technology available in today’s society, my research will ask the following question: How are elementary teachers utilizing technology to enhance their instruction of literacy in the classroom?
Literature Review

Introduction

The literature review of technology, literacy, and instruction in the classroom, reveals how teachers use, or are reluctant to use, technology in the classroom to enhance literacy instruction. Many findings of these studies reveal that teachers struggle to properly implement technology into their classrooms because of a lack of training, resources, and support. Other findings show that a lack of time and professional development are important reasons why teachers fail to bring technology into their literacy instruction in the classroom. This research study will focus on two elementary teachers who have access to the same technology and how they use technology in their classrooms to aid in literacy instruction. The review of research has presented the following topics: Teachers and Technology, Technology and Student Motivation, Reading and Technology, and Writing and Technology.

Teachers and Technology

Teachers are vital in providing today’s children the necessary literacy skills to master the ever changing world of technology that they will face. Most of the scholars reviewed for this project demonstrated that the reason many teachers do not incorporate technology into their instruction is that they feel ill-equipped to use it themselves. Barone and Wright (2008) echo this sentiment: “Bringing new literacies into a classroom is not an easy task for a teacher, especially when two thirds of teachers feel underprepared to use technology” (p. 292). Turbill (2001) identifies three factors as to why teachers don’t use technology in their classrooms: lack of time and expertise to understand and explore software, lack of confidence, and lack of training and support. Hansen (2008) and Merchant (2009)
indicate that already burdened teachers feel pressure to incorporate technology into their classroom where there is already a full curriculum. Hansen (2008) reports the following:

Often districts provide technology resources for their teachers without the training or ongoing support to use the resources well. For example, many teachers are introduced to technology through a traditional staff development model of required attendance at an afterschool workshop taught by an expert who delivers the program and then leaves the school (p. 110).

Another barrier of technology integration into the classroom is a lack of resources. Hew and Brush (2007) identify these barriers as one or more of the following: a need for technical support, time constraints and a lack of technology, which may include insufficient technology tools, such as hardware, software, computers and other resources. They also feel that in order to use technology effectively, teachers need to have access to adequate technical support. A lack of knowledge and skills also contributes to teachers’ reluctance to use technology in the classroom. Hew and Brush (2007) assert that there is a lack of technology-related-classroom management knowledge which creates a lack of technology in the classroom. The classroom management knowledge includes rules and procedures pertaining to computers, printers, monitors, laptops and Smart boards. Hew and Brush (2007) have also found that there are institutional barriers that may hinder teachers’ use of technology in the classroom. These barriers are school leadership, daily schedules, and planning time or lack thereof.

Teacher attitudes and beliefs towards technology can be yet another barrier for teachers who are reluctant to integrate technology into their classroom (Hew and Brush, 2007). Attitudes, are defined as the feelings of like or dislike of something, in this case technology, and beliefs can be defined as a person’s premises that are felt to be true. Researchers have found that a person’s beliefs determine a person’s attitude (Bodur, Brinberg, & Coupey, 2000). Groth et al. (2007) suggest that
there needs to be more technology integration into preservice classes in order to enable future educators to be adequately prepared to teach with technology. Krachmer (2001) also agrees with Groth et al. (2007) that possibly the most significant reason teachers do not use technology in the classroom may be the lack of training provided by teacher education and staff development programs.

Hew and Brush (2007) also identify assessment to be another barrier for teachers integrating technology into the classroom. With pressure on teachers to have their students perform well on high-stakes testing, teachers will focus on content rather than spending time incorporating technology into instruction. Butzin (2004) says the following:

Consequently, teachers feel they can cover more material when they are in front of the class talking with every student doing the same thing at the same time, rather than using technology because of the additional technology planning time required to identify and select appropriate software to match lesson objectives (p.230).

Some suggestions to help teachers overcome barriers when integrating technology, are as Hew and Brush (2007) suggest, moving computers into the classroom instead of having a computer lab, having schools provide laptop carts, using small group instruction, or a centers and stations approach when using computers. Teachers are much more likely to use computers if they are in their classrooms. Suggestions to overcome teachers’ lack of time would be to encourage teachers to collaborate when creating technology based lessons and materials. Teachers could share technology based resources such as good websites, web quests, interactive sites and educational games. Hew and Brush (2007) report ways to change teachers’ attitudes and beliefs towards technology could include having a school wide technology vision and/or plan. Schools need to provide the teaching staff with the necessary resources and ongoing professional development, as well as, encouragement and incentive for teachers to use technology in the classroom.
Abbott and Faris (2000) claim that reasons for using technology to enhance education can include “increased access to learning and to more and better information resources, availability of alternative media to accommodate different learning strategies, increased motivation to learn, and potential for both individualized and cooperative learning” (p. 150). These are all important reasons teachers to utilize the technologies to which they have access. With the ever changing world of technology and literacy in the 21st century, students need the skills and abilities to be proficient in both areas. Before this can happen, however, teachers first need to become proficient themselves.

As previous findings suggest, teachers have a lack of professional development and lack of resources available to them in the area of technology. It is suggested by Abbott and Faris (2000), that computer technology is in almost every public elementary classroom across the United States, and as schools and classrooms gain more access to technology, teachers must become more familiar with technology. Teachers must also help children learn to use that technology. Lovell and Phillips (2009) report that most educators agree that computer access and literacy are vital and necessary for young learners in the 21st century. These findings are supported by McVee, Bailey and Shanahan (2008) who report that “children of the Digital Age are too often taught by teachers prepared with techniques more appropriate for the Industrial Age” (p. 1). Research suggests that all teachers must begin to use technology on a daily basis to give students the skills necessary to be successful in a world that is filled with technology, such as the ability to decipher accurate websites and discern accurate information from information that is not reliable, as well as being able to communicate with others on social networking sites.

**Technology and Student Motivation**

It is clear how important technology skills are for students of the 21st century to have. Lankshear and Knobel (2003) assert that many researchers are finding that computers have a positive
effect on all age ranges of school students by increasing motivation, interest in school, improving enjoyment, acquisition and practice across all curriculum areas thus by improving quality and quantity of work students produce. These findings suggest it is imperative for all teachers to incorporate technology into their instruction. However, Baron et al. (2003) found that elementary teachers were twice as likely to use computers on a regular basis with their students than middle and high school teachers. Levin and Wadmany (2006) interviewed elementary teachers on their views of technologies and learning they found that technology is important in teaching and enhances student motivation. Again, Guha (2003) also interviewed elementary teachers about their experiences of integrating technology into the classroom and found that most believed technology to be a motivating factor for students. Much of the literature reviewed for this research project reflect that technology is a great motivator for students of the 21st century and teachers need to begin to recognize this reality. These findings are supported by Shenton and Pagett (2007) who report that interactive white boards (IWB) are a “touch-sensitive screen that work in conjunction with a computer and a projector” (p. 129). IWBs are a recent addition to classrooms and have been “hailed as a revolutionary resource for raising pupils’ literacy levels and their motivation” (LeBreuilly, 2004, p. 25). IWBs offer more varied opportunities for discussions and interactions in the classroom than other forms of technology. Shenton and Pagett (2007) suggest that IWBs engage students, encourage student participation, are highly motivating to students, and help to keep students on task. Students interviewed in this study on IWBs stated that they could see and hear better, it helped them concentrate better and lessons on the IWBs were more interesting and enjoyable (Shenton and Pagett, 2007).

Lankshear and Knobel (2003) found that across all age ranges of school, student computers are seen as increasing student motivation in schoolwork, allowing students to stay on task, and increasing literacy acquisition and practicing literacy skills. They suggest that computer use by children can
increase their involvement in and enjoyment of reading and writing, thereby improving the quality of student produced work.

**Reading and Technology**

As suggested previously, technology in the classroom improves student motivation, and is a necessity in the 21st century because reading skills can be increased with the use of technology in the classroom. Labbo (2006) believes that computer technologies can support traditional literacy skills. Computer assisted programs (CAP) in basic literacy skills can include playing games, decision making, purposeful interactions, and scaffolding tools to support students’ development of phonics, phonemic awareness, spelling, comprehension and vocabulary. Computer programs that include electronic versions of stories are able to utilize various multimedia features such as sound, speech, video, animation, and hyper links to additional resources. Students are able to click on a word and hear how it is pronounced or receive a definition. These digital supports enable students to experience independent reading and comprehension. Labbo (2006) states that “Electronic forms of text are less difficult for students to read, they are more engaging and interactive, and are more likely to be read completely by young children” (p. 203).

Technology can be used in a variety of ways to support student learning in the classroom, Baker (2007) reports that the Internet can be used to reinforce basic reading skills instruction, some web sites provide various games that work on specific reading skills, vocabulary, parts of speech, spelling and the alphabet. These are all great suggestions to motivate and encourage practice in literacy skills; technology can make repetitive tasks and learning much more interesting for students. It seems clear based on these findings that teachers need to incorporate technology into their day somehow whether it is used during instruction or for skill practice for both. Technology has become too important not to use.
More reading benefits occur from incorporating technology into the classroom, as Hansen (2008) asserts, that when young students interact with technology in the classroom. Students develop an increased vocabulary, comprehension, fluency and achievement. Interactions with technology in the form of CD-ROM storybooks have shown to increase comprehension, ability to retell and help create meaning-making responses. Also, when using CD-ROM storybooks students vocabulary has increased along with fluency. This idea is a great suggestion for teachers as a way to incorporate technology into the classroom for the benefit of student learning, while not being as overwhelming for teachers as other forms of technology.

With the ever increasing popularity of technology both in and out of the classroom, Karchmer (2001) reports that literacy “no longer consists solely of interaction with the one-dimensional written page” (p. 448). Electronic texts are interactive. They include audiovisual aids and are easily connected to related texts and produce different text structures. Also with the increased use of digital texts, literacy now incorporates the reality that electronic texts are much different than that of the written text. People need to be able to navigate through and make sense of a variety of features, while print based texts are fixed and are confined to the limits of what is written on the page in front of them. There is no interaction. Lue and Kinzer (2000) assert that multimedia information sources are replacing information that was previously presented only in traditional text. However, they believe that reading traditional text will continue to be important for two reasons: one, for speed and two, for information management.

Karchmer (2001) reports that an important characteristic of electronic text is it does not follow the traditional linear print when reading from left to right and top to bottom. Electronic texts allow readers to have a more active role when reading the text. Users are allowed to choose which links they want to explore and what information is important to them. This allows students to visit the same web
pages, but enables students to explore and take away different learning experiences, permitting greater choices and increasing student motivation.

**Writing and Technology**

Another aspect of literacy that seems to be changing along with reading in the 21st century is writing. Writing is an important literacy skill, one that is ever changing with the use of technology. Labbo (2006) asserts that word processing and creative software support students’ explorations with expressive forms of writing. Multimedia scaffolding allows students to write with a computer while also increasing their motivation to write. Revisions onscreen allow students to edit their work and go from a draft to a final written product with ease. Labbo (2006) also noted that with the use of word processing equipment, students are able to overcome problems with manual print production, thus avoiding difficulties experienced by some students when writing with pencils or other manual objects.

Yet another benefit of using technology to support writing in the classroom is as Baker, Rozendal and Whitenack (2000) suggest, that using a keyboard removes difficulties for students who have problems with fine motor skills that would normally be encountered while physically writing with pencils, crayons or markers. They also discuss how word processing can make the steps of the writing process easier via brainstorming, drafting, editing and revising. Word processing allows for easy removal or insertion of words, sentences or paragraphs.

The use of the internet in the classroom can provide an authentic writing experience for students. Some benefits are as Karchmer (2001) reports in her study of thirteen K-12 teachers and how the Internet influences literacy and literacy instruction in the classroom. Seven of the eight elementary
level teachers in the study reported that students were more motivated to produce and complete quality written assignments when they knew it was going to be published on the Internet. Publishing writing pieces on the Internet provided the students with a purpose and an audience on which to focus their writing.

Some other benefits of using the computer to aid in writing are as Burnett et al. (2006) assert in their study on digital connections that are transforming literacy in the primary school. With their primary focus on how students used digital literacy, one finding that came from the study was regarding the writing process and technology, and how writing on screen requires a whole new set of skills that include using a keyboard and a mouse. They also found that students have a varied level of keyboard confidence. Also, they discovered the students were more likely to reread their work and practice self-editing when using the computer. Further, the data presented suggests that e-mail partnerships are worthwhile, providing communication, motivation, and an experience with a responsive audience.

Another way to use technology to facilitate writing is as Baker (2007) reports in a study of how elementary classroom websites support children’s literacy. This research found that technology facilitates the writing process by allowing students to cut and paste, check spelling and grammar, and to receive online feedback when posting compositions as either attachments to e-mails or websites. The use of computers also allows the students to become website publishers, which increases motivation to write and provides an audience for their written pieces (Tracey and Young 2007). These findings are very similar to those mentioned above in the study by Burnett et al. (2006).
Conclusion

All of the research presented in this section supports the reality that technology should play an increasingly big part in today’s classroom instruction. By exploring this research it has focused my own research onto how teachers are utilizing technology in their classrooms to support and teach literacy skills.

Method

Context

Research for this study took place in a BOCES type school in upstate New York. The school includes Kindergarten through 8th grade and is a Social Skills Development Program where all the classrooms are 6:1:1, indicating six students with one teacher and at least one paraprofessional.

Students at this school come from 25 different school districts in upstate NY. There are currently 118 students attending this school; 74% of the students receive free and reduced lunch; 86% of the students are Caucasian, 7% are African American and 7% are Hispanic. The research occurred in a blended 3rd/4th classroom and in a 4th grade classroom. Both rooms have Smart boards, four desktop computers and have access to a laptop cart, scanners and digital cameras.

Participants

The teachers in this study are both special education teachers and each has six students and two paraprofessionals in the classroom. Both teachers have been teaching at this school since it opened twelve years ago. Ms. Miller and Ms. Book (pseudonyms) have taught a variety of grade levels. Ms. Miller, who is Caucasian and in her early forties, is also a certified Art teacher. She helped create the school’s technology plan and also sat on the technology committee. Ms. Book, who is also Caucasian and in her early fifties, has a passion for literacy and besides teaching everyday at this Social Skills
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Program, she was also a former adjunct professor at Nazareth College for 18 years. Ms. Miller is the tech savvy teacher for this study and Ms. Book is an admitted non-tech savvy teacher. Both teachers have access to the same technology resources.

The students consist of two 3rd graders and eight 4th graders. All the students are boys and four of them are African American and the other six are Caucasian. Seven of the boys are students that I had last year in my 3rd grade class, so I have a rapport with them.

**Researcher’s Stance**

I am currently a graduate student at St. John Fisher College working towards a Master’s Degree in Literacy, Birth-6th grade. I have a Bachelor’s degree in Childhood and Special Education from Keuka College. As a researcher in these classrooms, I will be a passive observer; this means I will have no teaching responsibilities and will focus solely on my purpose of collecting data. This type of observation will allow me the opportunity to experience and observe the classroom setting and dynamics (Mills, 2011).

**Methods**

For this study, I focused on how Ms. Book and Ms. Miller use technology to enhance literacy instruction in their classrooms. I passively observed one writing lesson in each of their rooms; these lessons lasted from 30 – 45 minutes. During my observations, I observed how technology is used in each lesson, how the students react and participate in these lessons, and I then interviewed each student individually and audio taped our interviews.

In addition, I formally interviewed both teachers one-on-one in a private location. The interviews, which could take up to one hour each, consisted of ten questions (see Appendix A). In the
interviews, I asked Ms. Book and Ms. Miller how they use technology in their classrooms to teach or practice literacy skills, and whether technology has an impact on student motivation and participation.

The third piece of my research included a formal one-to-one interview with each of the ten students from each classroom in a private location, I also audio recorded these interviews to ensure accuracy. The interviews consisted of four questions (see Appendix B).

**Quality and Credibility of Research**

In doing this research, it was important to ensure the quality and credibility of this study. Mills (2011) describes four objectives that researchers should follow to ensure the credibility and quality of research: credibility, transferability, dependability and confirmability. Credibility is “the researcher’s ability to take into account the complexities that presents themselves in a study and to deal with patterns that are not easily explained” (p.104). Factors to insure the credibility of my study include teaching at the school for four years, doing a student-teaching placement with Ms. Miller, and having observed in Ms. Book’s class before. As teachers, we have teacher meetings to discuss literacy and technology several times a year. To further ensure credibility, I practiced triangulation, which means that I collected data from three or more sources. I completed classroom observations, completed formal interviews with the participating teachers, and I completed formal interviews with all ten of the students participating during my observation.

I also ensured transferability in my study. Transferability means that the researcher must remember that everything studied is based on the context of the study and that the findings cannot be generalized for everyone (Mills, 2011). The results from my study were based on the participants in my study, not on every teacher in New York, the United States, or even the world. I have defined the research site to allow for understanding of the context of my research. I have provided background
information on my participating teachers. This research is solely based on these two teachers and their experiences, as well as, the ten participating students.

Dependability is also required to show the stability of my data (Mills, 2011). Dependability is indicated by using triangulation when collecting data, in the form of observation, teacher interviews and student interviews. I also had an audit trail, which included field notes, interview questions and answers, audio recordings from my student interviews and consultations with my critical colleagues to review my findings.

Finally, it is important to use confirmability which is “the neutrality or objectivity of the data that has been collected” (Mills, 2011, p. 105). In my study, I ensured confirmability during my research by using the triangulation process and implementing a variety of methods within the study.

**Informed Consent and Protecting the Right of the Participants**

Before beginning my data collection, I needed to collect informed consent to protect the rights of the participants. I worked with two teachers who I provided with an informed consent form. I also discussed the study and had them both sign the forms to confirm their authorization to perform my search. I also needed to get parental permission and had them sign informed consent as well as receiving the students’ permission to interview each student. Confidentiality was guaranteed with the use of pseudonyms.

**Data Collection**

There were multiple forms of data collection used in this study. I performed passive observations in both classrooms from 30 to 45 minutes each. In this setting, I observed a writing
lesson, took field notes, and I also conducted formal interviews with Ms. Miller and Ms. Book about their use of technology for literacy instruction. I also observed each of the ten students during the classroom lessons, I interviewed each one, individually, about the use of technology in their classrooms.

Data Analysis

Several steps were taken to analyze the data I collected from my research. First, after my visit to each classroom for observation, I typed up my handwritten field notes. Then after conducting each student interview, I listened to the audio recording and typed up a transcription based on each interview. I also typed up a transcription from the audio recordings from both teacher interviews.

Once I had collected all my data, I began to organize the data. I read through the interviews and field notes several times. Based on the data I collected, there became clear themes present again and again in the data. I determined that there were three main reoccurring themes which are increased motivation, technology in the classroom, and professional development.

Findings and Discussion

After careful analysis and examination of the data collected through teacher interviews, classroom observation, and student interviews, a few themes emerged. These themes were found consistently throughout the data. Included in these are, increased student motivation with the use of technology for instructional purposes in the classroom, uses of technology in the classroom, and the lack of professional development in the area of technology in the classroom.
 Increased Motivation

The first theme that emerged from my research was that using technology in the classroom results in increased motivation for students. This theme was evident throughout my research, from the teacher interviews to the classroom observations as well as from the student interviews. This concept of increased motivation through the use of technology in the classroom was one topic that appeared consistently throughout my review of current research articles by Lankshear and Knobel (2003), Shenton and Pagett (2007) and LeBruilly (2004).

My observation in Ms. Miller’s classroom occurred during a writing lesson that was presented on the Smart board; students appeared to be focused and engaged in the lesson. This lesson was on self-editing. Ms. Miller had a sample writing piece on the Smart board where she modeled self-editing, demonstrating what that looks like. After her presentation, every student received a sample writing piece and went to the Smart board to practice the self-editing process. Each student was enthusiastic about performing on the Smart board and after each piece was edited by the student, Ms. Miller would go over the corrections made by the students and discuss each one with the entire class. This lesson was a whole group lesson and lasted 45 minutes. I was amazed at how engaged her five students were throughout this lesson, because as I mentioned previously, the students at this school have behavioral disorders and it is very difficult to keep them focused and attentive for extended periods of time. This observation led me to believe that the students were motivated by the use of technology during the lesson.

The lesson I observed in Ms. Book’s class did not include the use of technology. She was doing a mini-lesson on using details in one’s writing. She presented her lesson on a flip tablet in front of the room using paper and markers. I must say that Ms. Book is a person who is very energetic and
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passionate when it comes to teaching, this enthusiasm does have a positive effect on anyone who is around her, however I am not sure if that enthusiasm extends to the use of technology. The five students in Ms. Book’s class seemed somewhat engaged in the lesson, but not quite as focused and attentive as the students in Ms. Miller’s class. The students were more fidgety and distracted than the students in Ms. Miller’s class, but I am not sure if it was due to the lack of technology in the lesson or just the difference between the students in the two classes. The lesson in Ms. Book’s class lasted about thirty minutes. There was not as much student participation during this lesson; it was more of a teacher centered lecture. The students did practice adding detail independently on a paper work sample provided by Ms. Book, but this was done individually with the teacher circulating around to each student. There was not as much interaction between students and teacher as there appeared to be in Ms. Miller’s, class whose students seemed much more motivated to participate when using the Smart board than the students in Ms. Book’s class with the use of paper and pencil.

After interviewing the teachers, it was clear that Ms. Miller recognized an increase in student motivation when using technology to teach in the classroom. She was asked if she found a difference in student motivation when using technology, as opposed to not using technology, for classroom instruction. Her response was, “Yes, The students are attracted to light and color. It is more inviting to them and they are more willing to take part in the lessons than when using just a text book or when writing on a chalk board” (Teacher interview, November 5, 2010). Ms. Book’s response was “the students were motivated when using the Smart board for activities, movies and games” (Teacher interview, November 5, 2010). She also stated that, “Smart board lessons or activities do not always engage all of the students all of the time” (Teacher interview, November 5, 2010).

From the results of my interviews with the ten students in both classrooms, technology seemed to be a big motivating factor for these students. Ten out of the ten students indicated that they are
much more willing to work and participate in lessons when some form of technology is being used, whether it is the Smart board, lap top computers, or desk top computers. Students two, five, seven and eight all stated that the use of technology was an incentive for them to complete work and behave in class (Student interview, November 10, 2010). Technology then became a reward for specific positive behaviors. At free time they are allowed to use the Smart board or the computers for student selected activities. The most popular activities chosen for free time were video games and visiting other interactive websites. The students also enjoyed using instructional based computer games for practice on literacy skills, for example, using punctuation and other grammar based activities and games. These activities did not seem like real work for the students as they were viewed as more of a fun activity. Free time activities could then become a reinforcement tool for prior classroom instruction. These findings that the use of technology is a great motivator for students today are also supported by the findings in my literature review by Baron et. al. (2003) and Abbott and Faris (2000).

**Technology in the classroom**

After interviewing Ms. Book and Ms. Miller, I realized that both teachers were using technology to enhance instruction in their classrooms. They were asked how they use technology in the classroom to aid in both reading and writing literacy instruction. Ms. Miller responded, “I used technology to aid in literacy instruction with 2nd graders who were really struggling to see patterns of words, such as with word families. I created activities for using the interactive white board. The students responded better to the larger size of the text along with the physical interaction. I also typed pages from the text for guided reading for students to highlight words” (Teacher interview, November 5, 2010). In the past, she has also used Power Point for making a word list assessment for a “specific student who has an obsession with electronics (a child on the autism spectrum). He was able to have control of his word list, change the slides himself, and he was able to demonstrate skills that were
otherwise un-testable as he wasn’t able to look at text on a page without walking away” (Teacher interview, November 5, 2010). She is currently attempting to teach students (4th grade) to create a Power Point presentation using research gathered from the internet. In addition to incorporating both reading and writing, they are learning to read the information on the internet and to discern desirable vs. undesirable web sites. They are more interested in reading because they are choosing topics of their own interest. They are then expected to write the information for the Power Point slides. For a population of students who have little to no interest in writing, their initial responses have been one of excitement and the desire to get right to work. Students are using computers for research at a very basic level, being introduced to search engines, learning to read the information that comes up with a link, what is a link, what is the difference between a search engine and an address box. These findings indicate to me that using technology in the classroom can have many benefits for students in ways such as in accommodating individual student’s needs, and again, to increase the students’ motivation to participate and allow for positive outcomes for the students. These findings are supported by the research done by Lue and Kinzer (2000) and Karchmer (2001).

Word processing has been a part of Ms. Miller’s instruction for many students who have difficulty with fine motor skills. The population of students we work with often have difficulties with fine motor skills and this is an excellent way to accommodate these students. Even in a traditional school setting, development of fine motor skills is slower in some students than in others, and the use of word processing frees students to concentrate on other aspects of their writing. This finding is also supported by research done by Labbo (2006) and Baker, Rozendal and Whitenack (2000).

Ms. Book’s response to the same question was that she uses her Smart board to display the daily agenda, to model writing, and to brain storm ideas for writing. She also does Power Point presentations on topics such as informational texts, genre, and text structure. The Smart board and
computers are for literacy activities and games like “Paintball Punctuation” and other ELA based websites.

Both teachers were asked if using technology in the classroom was beneficial to students. Ms. Book responded that some benefits she has observed would be increased student interest, engagement, visual support and development of technological skills. Ms. Miller’s response was “in our program with many students having difficulty paying attention, the interactive whiteboard helps them to focus more as well as being more involved. I am able to use the camera to project pages of text. This helps them in locating where we are on the page. It is easier to model how to write a paragraph, for example, and then to save the page which helps to keep me more organized” (Teacher interview, November 5, 2010). These findings lead me to believe that using technology in the classroom to aid in student instruction, either directly or indirectly, seems to be a positive for students. Teachers need to start to incorporating more technology into their daily routine to benefit students.

I asked the students what kind of technology their teachers used in the classroom, and students from both classrooms responded very similarly. All the students said that the Smart board was used almost daily for instruction, to play games or watch movies. Some students replied they played video games on the laptop and desk top computers during their free time. Five out of the ten students replied they liked having access to the internet at school because they did not have internet access at home. Three students replied they would rather type written work on the computer, rather than hand writing it on paper, because it was easier for them to do so and easier to read. These findings lead me to believe that students will be more successful when teachers use technology in the classroom. Students will benefit academically in a number of ways, but especially through increased motivation, improved concentration, skill development, and improved behaviors. My research is also supported by findings from Lovell and Phillip (2009) and Abbott and Farris (2000).
Professional Development

The final theme that presented itself during my research was that of a lack of professional development in the use of technology. The lack of professional development was indicated by both teachers during the interview process. Ms. Book and Ms. Miller were both asked if they felt the administration had provided enough training and continuing support in the use of the technology available in their school. Ms. Book’s response was, “no, she did not receive enough training to use the technology she had access to” (Teacher interview, November 5, 2010). Lack of adequate training is why she feels she is not using the technology to its fullest potential to aid in classroom instruction. She stated “she needs additional training and ongoing support which she has not been offered by administration” (Teacher interview, November 5, 2010). She also stated “that while the Smart boards were installed a year and a half ago the administration has offered very limited training since then. She was told to start using it, but lack of training leaves her feeling uncomfortable and at somewhat at a loss as how to use it in all of its applications” (Teacher interview, November 5, 2010). This lack of professional development seems to be a popular complaint among teachers, myself included. Several other researchers have found the same results in the lack of professional development provided for teachers in the area of technology, Hansen (2008) and Turbill (2001) have found this to be true.

Ms. Miller’s response was very similar to that of Ms. Book’s, “she agreed that she has received very little training for the technology she has access to, and that the training was very superficial at best” (Teacher interview, November 5, 2010). Ms. Miller also responded that she “feels unprepared to use the technology, specifically the Smart board and cameras that go with them and also that the
administration basically said here it is, run with it “(Teacher interview, November 5, 2010). Ms. Miller said she has spent an enormous amount of time outside of school to familiarize herself with the technology in order to be able to use it somewhat effectively in the classroom for instructional purposes. She has requested that the administration offer more professional development in the area of technology and in-house support from the computer TA, but she has had no success with those requests. Again, this lack of support by administration when it comes to technology seems to be a reoccurring theme among many teachers in the research presented in my literature review. Baron and Wright (2008) stated “ Bringing new literacies into the classroom is not an easy task for a teacher, especially when two thirds of teachers feel unprepared to use technology” (p.292). Turbill (2001) suggests that teachers are not using technology in their classrooms because they have a lack of training and support.

Implications and Conclusions

The findings of my research have several implications for me as a teacher. First, I feel it is clear that using technology in the classroom to aid in instruction promoting literacy is a must in today’s society. These findings have encouraged me to become more tech savvy as I do struggle with the use of technology in the classroom. From the research I have completed and similar findings from others in the field of literacy indicate, technology needs to become more important in the classroom. I believe the importance of using it will only increase in the future with the changes in technology but also with the changing of literacies in the world. The students of today have very different life experiences than the students of past years when expertise in traditional forms of reading and writing were all one needed to be successful in the world. Today’s students need to be able to navigate reading, not only in the traditional manner of reading from left to right and top to bottom, but
computer technology and the internet necessitates students must be able to decipher information on a page containing other links and to be able to determine which sites and information are the most credible. There are even different types of writing students will need to be responsible for as social networking has resulted in much more informal writing with texting, emails, and blogging. These findings that technology must be incorporated into classrooms of today for students to stay current are supported by the research presented in my literature review by Lovell and Philips (2009), McVee, Bailey and Shanahan (2008) and Labbo(2006).

A second implication of my research is that using technology in the classroom increases student motivation. As both the literature and my findings suggest, when students are motivated in the classroom, their excitement, engagement, and motivation to learn will increase (Lankshear and Knobel, 2003; Shenton and Pagett, 2007). If I intend to increase student motivation in my classroom, it is now clear to me that I will need to find ways to incorporate the use of more technology into my daily classroom instruction. Ms. Miller seems to be doing this with much success in her classroom; I may try to work with her to improve my own proficiency. Also, it is clear from the student interviews that technology does support increased motivation and helps students focus on instruction. Further, it is demonstrated that students enjoy practicing important skills on the computers, not only in the area of literacy, but other academic areas as well. In addition, access to technology in the classroom is important for students who do not have access to it at home.

From the literature I have reviewed and the results of my own research, I believe it is clear that by using technology in the classroom teachers can motivate students to be more active learners, to increase participation, while incrementally aiding the attentiveness of the students, this especially seems to be true for the population of students that I work with and those of Ms. Book’s and Ms.
Miller’s. We work with students who face numerous challenges and the use of technology seems to allow the students to be more successful with academics and behaviors in the classroom.

The third implication of my research is that teachers need more professional development opportunities offered by administration to support the use of technology in their classrooms (Hew and Brush, 2007 and Barone and Wright, 2008), this is evident from my interviews with both Ms. Book and Ms. Miller as well as from my own experience. We all agree that if we were allowed the opportunity for additional professional development in the area of technology that we would become more proficient and therefore be more comfortable using technology in the classroom. Teachers are lifelong students and as with all students learning styles vary. The minimal amount of support provided by school is not sufficient to equip each teacher with the knowledge that is needed to use technology to is full advantage. Additional development opportunities would increase the use of the technology that we have access to, there by benefiting the students and their opportunities for learning.

In future research, I would interview more classroom teachers across grade levels for their input on how they utilize technology in their classrooms to aid in teaching literacy as well as other curriculum areas, along with affects technology has on student learning. Another question I have after completing this research would be the following: Is there a link between integrating technology instruction and student achievement?

Conclusion

Technology in the classroom is beneficial to students learning. By using technology one increases student motivation to learn and focus on instruction as well as aids in the practice of important skills such as reading and writing. Teachers must use technology in the classroom to motivate their students, help focus their students, and create authentic and purposeful learning
activities for their students. Technology also increases student engagement, thus allowing students the educational opportunities of the 21st century and helping them gain the skills necessary to be successful in today’s society.


How teachers use technology for literacy instruction.


How teachers use technology for literacy instruction.


Appendix A

Teacher Interview Questions

1. How do you use technology in the classroom to aid in literacy instruction both reading and writing? Whole group or individually?

2. Are there any difficulties/limitations to using technology in the classroom if so what are they?

3. What do you see as benefits to using technology for instructional purposes or for individual practice in the area of literacy?

4. How does technology use in the classroom benefit students? And if so how?

5. How do you approach students who come in with different backgrounds in terms of technology use, computer experience/internet savvy?

6. Are there ways to differentiate among students, and if so, how do you do it?

7. What resources in technology do you have available to you to aid in literacy instruction or practice in the classroom? And do you feel supported or trained enough to use the technology successfully in the classroom?

8. How often do you use technology to aid in instruction in the classroom?

9. Do you find a difference in student motivation when using technology as opposed to not using technology for classroom instruction?

10. Do you find a difference in student produced work when using technology opposed to not using technology to complete an assignment?
Appendix B

Student Interview Questions

1. What types of technology do you use at home?

2. What kind of technology do your teachers use in the classroom?

3. Do you prefer technology based lessons or teacher presented lessons and why?

4. How often do you use technology throughout the school day?

5. What kind of technology are you using?