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Student Learning Engagement with
SMART Boards in Reader’s Workshop

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 SMART Boards encourage student learning engagement in reader’s workshop. Using technology in the classroom will motivate and engage students throughout a lesson. This research was conducted by observing three different lessons with each group of three students; the SMART Board was incorporated with only one group of students. Data was collected and analyzed through means of observation, student work samples, questionnaires, and personal interviews. The findings suggest there are many benefits for educators who incorporate the SMART Board into daily instruction. Increased student engagement, increased peer collaboration, and strengthening of comprehension are some of those benefits. The implications determined that educators should consider using the SMART Board to provide students with an engaging outlet of instruction.
Student Learning Engagement with SMART Boards in Reader’s Workshop

Barone & Wright (2008) stated, “As new literacies that include digital and media technologies evolve, preparing students to understand and adjust to these literacy demands is critical to current and future expectations for pleasure and work” (p.292). With new technologies being produced at a rapid pace, it may be difficult to include all of the new technologies into a classroom setting. However, it is most beneficial to students when technologies are incorporated into the curriculum to help them become more accustomed to new technologies. Technology is interesting and appealing; when it is integrated into one’s learning it engages students and serves as a motivation for understanding. Most children are familiar with devices such as the laptop, iPod, and iPad. These devices may be found at home, in the library, or at a friend’s house. One cannot change the importance of how this new technology is changing literacy and how literacy is now defined. For most of us, we remember literacy as simply being able to read, write, listen, and speak with proficiency. However, due to current technology, that is no longer the case. In today’s society, we must know how to access the internet, type with ease, and be comfortable with different social networks, such as Facebook or Twitter.

The SMART Board is another piece of technology that enriches students learning and provides students with the skills necessary to adapt in a highly technological society. Most students can find this device in a classroom or library. This specific device can be used in the classroom as a gateway to new technologies and it’s enhancement to one’s learning. A SMART Board combines the functionality of a whiteboard, computer, and projector into a single system (Giles & Shaw, 2011). SMART Boards have made their way into more and more schools. The SMART Board is used to enhance one’s learning and encourage interactive participation from students. Some teachers are not familiar with the SMART Board and tend to shy away from it.
However, if teachers continue to ignore the importance of technology in the classroom, students are going to become disengaged and learning may come to a halt. What teachers may not realize is how truly important technology use is in schools. If technology is absent in our schools, students will struggle to become literate in our society (Giles & Shaw, 2011). Many colleges and places of employment expect one to be accustomed to new technology devices. With all the different types of technology, it is not hard to incorporate it into classrooms and lessons. SMART Boards are being installed in classrooms, and it is time teachers take full advantage of integrating them into their lessons. Giles & Shaw (2011) declared that, "The interactive nature of the SMART Board offers many practical uses for providing an introduction or review of material, while the large work area invites collaboration through social interaction and communication” (p.36). Not only is the SMART Board a great technological device that engages students, but it also provides an invitation for students to feel comfortable to collaborate with one another and gather opinions and ideas related to the content being taught.

This study researched how SMART Boards encouraged student learning engagement in reader’s workshop. The research was conducted with two groups of three students each. The study focused on measuring engagement through behavior, understanding, and interest. Through classroom observations, student work samples, questionnaires, and personal interviews I was able to see that the SMART Board increased student engagement, peer collaboration, and strengthened students ‘comprehension. It was determined that the SMART Board gives teachers the ability to provide engaging lessons for a variety of students and diverse learners at any grade level.
Theoretical Framework

Gee (2001) defines literacy as “the mastery of or fluent control over a secondary discourse” (p.20). According to Gee, one’s primary discourse is used to communicate with individuals within one’s own community, and a secondary discourse is used to communicate with others in the broader spectrum of the community. Gee claims that language is the tool used for communication and that it serves functional purposes within and outside of one’s social community. In order to recognize the importance of using SMART Boards in reader’s workshop, it is important to be familiar with the underlying theories that connect to this research. The sociocultural theory and new literacy theory help to give better understanding of this topic.

Gee’s (2001) definition of literacy represents the sociocultural theory. Sociocultural theory is stated by Larson and Marsh (2005) as learning which occurs through participation in social, cultural, and historic contexts that are mediated by interaction. Children learn by participating in sociocultural activities in both formal and informal contexts of culturally relevant situations. Literacy knowledge is constructed through tools teachers and students use in everyday life in and out of school such as traditional texts or multimodal texts. These include blogs, Facebook, and Wiki’s. It is through this idea teachers are challenged to build a meaningful community of learners. According to sociocultural theory, being literate is meant to be able to use text for specific purposes within specific communities (Larson and Marsh, 2005).

Gee (2001) and Larson and Marsh’s (2005) idea that people are social in nature is an easy concept for one to relate to. From the time of infancy, a baby begins to interact with those around them by using different facial expressions and sounds of language in an effort to become socially interactive. It is in one’s nature to continue to develop our language and social skills to be able
to communicate appropriately. The SMART Board helps students to actively participate with their classmates using a hands-on device that presents interaction between one another. Through the SMART Board students are able to work together and communicate to solve problems, ask questions, and create ideas.

Technology has become evident in society’s literary practices and social interactions. As new technology devices emerge, societal practices change. For example, before the internet came about, the main sources of communication were talking on the telephone, writing letters, and face-to-face communication. Once the internet was integrated into society, the way many began to communicate changed entirely. Today we use text-messages, E-mail, Facebook, and Twitter as our main source of communication to those we seek to communicate with. Needless to say, technology has changed the way we socially communicate. Technology is also changing how one learns and how lessons are implemented in classrooms. Larson and Marsh's (2005) idea of sociocultural theory describes how literacy knowledge is constructed through tools teachers and students use in everyday life in and out of school. Therefore, integrating technology into classrooms and using it to teach lessons is critical. The SMART Board allows students to interact with one another and communicate socially. The interactive white board provides “a valuable method of delivering content in an interactive and meaningful context to facilitate student engagement...” (Giles & Shaw, 2011, p.37). Therefore, as conveyed by the sociocultural theory, students are communicating and interacting with others while using a form of technology that encourages societal practices.

The New Literacy Theory is stated by Larson and Marsh (2009) as, "a theory in which students' are given the ability to decode, encode and make meaning by using many modes of communication including print, videos, photographs, and sounds and gestures; all which are
mediated by new technologies” (p.68). The technologies that students use every day at school and home help them to communicate through different modes of communication. Teachers can use the SMART Board to hold classroom discussions by integrating videos or PowerPoint's. The interactive board provides students with the opportunity to become actively engaged with the lesson through the SMART Board. The SMART Board provides a touch control system to perform all mouse and keyboard functions, allowing students to write over documents, websites, and videos with digital ink (Giles & Shaw, 2011). This idea can empower learners to independently navigate the SMART Board to learn new information and form ideas.

According to Larson & Marsh (2005), literacy learning does not occur in one specific situation but rather in multiple situations and at different times. For example, literacy is not simply learned by reading and writing in school. Literacy can be learned through social interactions outside of school, as well (Larson and Marsh). It is important that teachers take this idea from the New Literacy Theory and implement it into their classrooms. Introducing new technology devices to students and creating authentic lessons with the use of these devices will create a more rich and comfortable environment for students. Finding literacy practices that can be effective and significant in one’s life will create a stronger foundation for understanding (Larson and Marsh). Giles and Shaw (2011) point out how teachers use the SMART Board helps to bridge the difference between learning styles, abilities, prior knowledge, and interest levels that exist within any group of children (Giles & Shaw). The use of the SMART Board allows students to be more engaged through active participation and hands on learning. The use of technology from the SMART Board provides an environment of learning that is interesting and social for students. The use of the SMART Board also helps students become well-informed of
the content being taught, offers experience with the technological device (SMART Board), and provides social interaction with one another, all at the same time.

**Research Question**

The growth and new developments of technology has changed the way people communicate. New ways of communication has resulted in the way literacy is acquired. Not only has the vast developments of technology transformed the way people communicate in today’s society, it has also changed society’s perspective on what it means to be literate. Given that literacy is a social practice and that technology is changing the way in which people communicate socially with one another, this action research project asks, how do smart boards encourage student learning engagement in reader’s workshop?

**Literature Review**

The following literature review explores the research examining beneficial technologies in the classroom, the role of technology within literacy, and teacher perspectives of technology integration. Technology is developing rapidly and expanding into children’s everyday lives. It is important to use technology in schools to keep children educated and up-to-date with the new technologies. Literacy is a very important aspect of education; technology can be beneficial to the success of student’s literacy learning. Even though some educators struggle with integrating technology into their own classroom for lack of “know how,” research has shown there are many benefits to technology integration within the curriculum. The use of the SMART Board is accessible for many teachers and can provide engaging implementation techniques for lessons. Research indicates that integrating technology into curriculum has many great advantages; yet, only successful with the right tools and knowledge of the technology being used.

**Beneficial Technologies in the Classroom**
As technology continues to grow it has become more accessible to teachers and students; the variety of technology that is available in schools is increasing as well (Frank, Lei, & Zhao, 2006). Technology offers teachers the opportunity to engage students with new ways to learn. Technology as well as computer based instruction has given teachers potentially powerful and meaningful ways to provide instruction to students (Gast, Mechling, & Thompson, 2008). Integrating technology in diverse content areas can be motivating and encouraging for students to learn the instruction being taught. Many schools have incorporated a diverse amount of technology to use for every subject such as, numerous types of software, desktops, laptops, handheld computers, peripheral technologies, Internet resources, multimedia technologies, and e-learning systems (Frank, Lei, & Zhao, 2006). It is clear the growth of technology has been so enriching and accessible that it has moved into classrooms and brought new changes to how curriculum is taught. There are several technologies that are used in classrooms and implemented into lessons to benefit teachers and students. These include laptops, iPods, Podcasts, iPads, and the SMART Board.

Barron, Harmes, and Kemker (2007) investigated the integration of laptop computers, in which research proved that using laptops helped students skills with technology dramatically develop. When integrating laptops or any other form of technology it can be beneficial to their knowledge of the technological device and their actual learning of the content. Baron et. al (2007) explained modeling responsibility, by giving students the opportunity to fix problems with the laptops and demonstrate careful treatment with the laptops. Encouraging students to solve their own computer problems will help them with their independent problem-solving skills. Fink, Kolar, and Sebatini (2002) also researched laptops within the classrooms and found the students preformed significantly higher in class participation and needed less time to do
homework. Technology can offer engagement and can help students to stay on task. Results from Barron et al. (2007) indicated that technology integration with teaching instruction increased academic achievement for the students. The integration of technology can provide students with more interest and motivation to do well with school work or projects. Both Barron et al. (2007) and Fink et al. (2002) found that students had a better understanding of the general value and significance of computers as they created work. The more access students have to technology, the more comfortable and willing they will be to use technology. Baron et al. (2007) and Fink et al. (2002) also concluded that teachers must be committed to making good use of the technology with the students. If teachers are persistent on integrating technology in their daily instruction, students will learn to look forward to mastering the use of those technologies.

Implementing technology into classroom instruction can promote engagement and enthusiasm for students. Barron, Harmes, and Kemker (2007) reported how the enthusiasm with students was very high and the teacher became an advocate for effective integration of technology. When the teacher advocates for the technological device being used, it is more likely students will do well at using the device in the classroom. Fink et al. (2002) also showed comparison with Baron et al. (2007) in findings, reporting that class dynamics were consistently better when using laptops in the classroom. Students become excited when learning how to use a new technological device and become motivated to work with the device. In contrast, Baron et al. (2007) examined teacher’s beliefs about the incorporation of technology, such as laptops and found in general the teacher was positive about the experience; however, found that student’s lack of fine motor skills was an issue. It is important that teachers present a positive attitude about using technology in the classroom. If students see teachers becoming annoyed or frustrated with the device, they may view that as negativity and not want to experience those same
situations. Fink et al. (2002) found that students did adapted fairly quickly to the use of computers; yet again, their fine motor skills were not strong enough to use the track pad and they did not have the appropriate typing skills to use word processing efficiently. It is important that teachers work with students if they are struggling with their fine motor skills. This may be a new experience for students and you do not want them to feel discouraged. Fink et al. (2002) explained how the laptops were a very effective tool for the classroom; however, the effectiveness of the laptops is based on the material being taught and how comfortable the instructor is with teaching the skills to use a laptop. Making sure students understand how to use laptops or any other technological device is imperative. Taking time to model and using step-by-step processes will help students to be successful with technology.

There are many useful benefits of using virtual experiments. Technology encourages active learning and it can be more beneficial to students to use technology to learn the instructional information, rather than teachers just posting notes for students on a board (Fink et al., 2002). The iPod is another type of beneficial technology to be used in classrooms. Dale and Pymm (2009) explained how the use of the iPod offers new opportunities to enhance students learning experiences. The iPod can be incorporated into curriculum in various ways and offers teachers and students the amenity of being able to use such new technology as a learning tool. Research indicates the usefulness of the iPod for playing music, for use as a portable hard drive, and for recording audio (Dale & Pymm, 2009). The iPod provides many great ways to use with students in classrooms. The iPod is a great way for students who struggle with reading to be able to listen to the story, while reading the words. The iPod offers students many learning differentiation techniques to help them to succeed. Baron et al. (2007) also describes how using computers as tools for research, writing, data analysis, and communication encourage students’
literacy skills and their ability to solve problems more effectively. Using technology to
strengthen student’s literacy and problem-solving skills is a perfect example of using technology
to the best of its ability. Dale & Pymm (2009) describe how IPods are a means of allowing
learning material to be distributed in more creative ways and promote the ability to create a more
positive learning environment. Different technologies provide different skills to students;
however, it is clear that technology is a distinctive benefit to students learning.

Podcasting is one main function used with an iPod. Dale and Pymm (2009) reported how
users can all at once listen and watch audio and visual materials through the use of the iPod and
access new sources of learning such as, journal articles and other media. The iPod is another
technological device that gives students the opportunity to have access to diverse ways of
learning. Borgia (2009) reported a study of students concentrating on vocabulary instruction with
the use of podcasts and found that students improved their vocabulary score immensely. The
iPod helps students to be actively engaged in the task for the entire time period. Dale & Pymm
(2009) also reported student’s ability to become more familiar and gain conceptual knowledge
when using the iPod in a music project. Students were able to familiarize themselves with
practical work while using the podcasts. The iPod gives students the opportunity to reflect
critically on their work away from the classroom environment. Borgia (2009) explained how
students were able to improve their performances through self-evaluation from observation using
the iPod. When students are part of a creative learning environment, it can give a sense of self-
empowerment that can lead to a more responsive and independent learner. The podcasts also
helps students to have greater control over their learning experience. Through the iPod, podcasts
can give students an opportunity for gearing instruction towards their individual needs (Dale &
Pymm, 2009).
Overall, the iPod and use of podcasts can have a positive outcome with students learning; however, there are some concerns with using this type of technology in the classroom. Borgia (2009) found that the gadgets and social media aspects of the iPod may hinder a teacher’s or parent’s outlook of using the iPod in the classroom. With the iPod having so many different applications and uses, it may be overwhelming for teachers or students; however, taking your time to learn the different functions will not only be of a great use, but will help to not overwhelm the user. Dale and Pymm (2009) suggest that, “in a world of social networking experiences, collaboration within the educational context has to be redefined” (p. 93). Social networks are being used more and more for communication, integrating social networks and devices with educational instructional learning can be beneficial to teachers and students. Borgia (2009) indicated the importance behind using technological devices into the classrooms; explaining how higher education institutions will benefit from adapting to the flexibility the iPod can bring into a learning environment. Students may increasingly become more reliant on this form of communication as a means of learning, while gaining an experience comparable to their own expectations of knowledge. It is important to remember how computers were once rare, unreliable, and inexpensive; yet, through the last decade computers have become a positive impact on teaching and learning (Frank, Lei, & Zhao, 2006). Any technological device can become very useful and dependable when given the time to successfully learn how to use the device and acquire the benefits.

The iPad is another type of technology that can be used in the classroom and be beneficial to students learning. Olcese and Murray (2011) described the iPad stating, “The multi-touch display can handle more than one touch simultaneously, meaning users can type on a virtual keyboard or play multiple keys (and hear multiple notes) on a piano application” (p. 45).
The iPad is unique because it can work as a computer and unlike the iPod can be touched with fingers at the same time. The potential affects the iPad and its applications might have on teaching and learning in the classroom are countless. Dale and Pymm (2009) also found the applications used with the iPod and iPad give teachers more options to create a learning environment that is engaging and new to students. Olcense and Murray (2011) reported that “Educators who are introducing their students to the moon or other celestial objects might finally have a compelling way to help students shake the misconception that stars or moon only come out at night” (p. 47). For example, with the iPad, students can view the sky and nighttime scenery during a lesson at school. Without this type of technology it would not be possible for students to observe this. As well as Borgia (2009) and Dale and Pymm (2009) Olcense and Murray (2011) found there are difficulties that may hinder the use of the iPad in the classroom. The average user or even a K-12 teacher would have difficulty finding relevant applications by searching through the only place we found that has ready access to all the applications created for iPads (Olcense and Murray, 2011). Research may have to be used in order to find applications that would offer useful information for classroom content. Dale and Pymm (2009) found that having access to numerous iPods may be costly and difficult to come by for an entire classroom. The cost of the iPod or iPad can be expensive; therefore, grants or fundraisers may be needed to be able to have access to these devices in classrooms.

Using a SMART Board in classrooms has become quite popular in recent years. A SMART Board is an interactive white board that displays images from the computer monitor with the surface being used as a giant touch screen (Mowbray & Preston, 2008). The computer can be controlled from the SMART Board by touching the SMART Board screen with your finger or one of the electronic pens incorporated with the board. The ability of the SMART
Board technology allows one to present information within a group arrangement, in which all students can see the images on the board due to the large interactive screen (Gast, Krupa, & Mechling, 2007). The SMART Board is an exclusive device that gives students the chance to collaborate with one another to create projects and ideas, while being able to present them to the entire class. The benefits of the SMART Board include, pressing icons to hear pre-recorded sounds, watching simulations and viewing graphics, capturing text or areas of screen and annotating with the pen, saving notes or drawings for future use, and engaging students with educational multimedia activities (Mowbray & Preston, 2008). The SMART Board offers numerous applications to students to help create an engaging and motivating atmosphere where students feel comfortable to participate. Gast, Mechling, and Thompson (2008) conducted a reading study with the SMART Board and reported students learning and reading the words significantly better. Students are more engaged and intrigued to be able to read words off of an interactive white board rather than traditional flash cards. The SMART Board gives students the excitement and motivation to learn through animation and colors. Campbell and Mechling (2009) reported a study that consisted of teaching letter sounds with the SMART Board and found that the students acquired some letter sounds targeted for other students. With the SMART Board being very visual and big enough for all students to see, all students can learn words at different times. Both, Gast, Mechling, and Thompson (2008) and Campbell and Mechling (2009) reported the SMART Board allowed the students to simultaneously see, say, hear, and touch the letter sounds to benefit their learning of the words. Observational learning can be a significant benefit of using the SMART Board with students. Campbell and Mechling (2009) also found that students could hear and see their classmates or teacher read letter sounds and the target letter sounds for each student served as an observational letter sound for the other students. The
SMART Board allowed students to read one another’s target words by presenting instruction
with the interactive board. This not only kept the students engaged through the class lesson, but it
also helped students to read at higher levels than expected.

Mowbray and Preston (2008) stressed the concept of the SMART Board supporting
several different learning styles including, visual-spatial, auditory, and kinesthetic. When content
is presented on a SMART Board, young students are highly motivated because of the different
learning styles it automatically provides. Being physically involved touching and moving objects
on a large screen in front of the class is engaging and allows all students to see the work being
completed on the screen (Mowbray & Preston, 2008). When students are up and moving and
being interactive, it can help them to understand the content better and stay on task throughout
the lesson. Gast, Mechling, and Thompson (2008) reported when students were asked why they
liked the SMART Board, one reason a student gave was because he could see the words. Some
students can struggle to learn because they cannot see what is written on the board, the SMART
Board helps students to be able to see clearer because of how big the letters are displayed. Gast,
Krupa, and Mechling (2007) reported that when images were made larger and visible it increased
attention to the task.

There are many ways the SMART Board can benefit teachers and mainly students.
Introducing a lesson to determine students’ prior knowledge and understanding, making
predictions, building up instructions for practical tasks, and recording results can be used on the
SMART Board effectively and efficiently (Mowbray & Preston, 2008). Using the SMART
Board to introduce a lesson can grab the student’s attention because of the engagement it
provides for the students. This can help the students to become interested and want to learn more
about the topic. For example, students can group pictures of the objects into the specific area
they belong to introduce a lesson and test the students prior knowledge at the same time. When making predictions students can draw a picture on the SMART Board to show their prediction (Mowbray & Preston, 2008). Using the SMART Board for predicting can help students to stop and think about what they think will happen, gather ideas while collaborating with others, and then write or draw it out on the SMART Board. Having step-by-step instructions on the SMART Board will help students be able to complete practical tasks easier (Gast, Mechling, and Thompson, 2008). Some students may need extra directions or visuals of directions to help them understand better and the SMART Board can help to assist with these modifications. Having tables or charts to show results and drag information from one box to another will help assist students in reading results correctly (Gast, Mechling, and Thompson, 2008). The SMART Board gives students the ability to manipulate information on tables and move boxes or shapes to find answers. All of these animations and uses help to keep students engaged. Both, Gast, Mechling, and Thompson (2008) and Mowbray & Preston (2008) presented some interesting issues that may need further examination when implementing diverse activities with the SMART Board. Are there additional features of whiteboard technology? Is delivery of instruction with the Internet video-based programs grounded on the interactive touch screen or video streaming? Is interactive whiteboard technology effective for teaching a diverse population of students? Even though there are still some questions in regards to the SMART Board, it is clear the SMART Board has many benefits for classroom instruction.

When technology is being used, there is always the risk of encountering technical difficulties and when using the SMART Board there is no difference. Mowbray and Preston (2008) reported the obvious initial cost to purchase the SMART Board; however, with many SMART Boards already in classrooms the financial aspect is one limitation that is becoming
minor. Distractions from the SMART Board can occur as students begin to focus on the SMART Board from the moment they come into the room (Gast, Krupa, and Mechling, 2007). Due to the fact that only one person can use the SMART Board at a time; other students are sitting, watching, and not directly involved. Therefore, selecting activities that allow multiple student interaction means students are actively involved for longer and waiting for a turn. Mowbray and Preston (2008) added how the instructional program required some basic computer skills by the teacher, including the obvious use of the SMART Board and PowerPoint. It is important that the teacher has some training with the use of the SMART Board and is able to help assist their students when using it. Gast, Krupa, and Mechling (2007) also stated more examination was needed to ensure complete success for delivering instruction to students with different abilities. Campbell and Mechling (2007) agreed with this and also stated that varying group sizes may hinder the success of the curriculum being taught. In any lesson the obvious is stated, with the smaller number of students being taught the better the results can be; the SMART Board is not any different. It is important to make sure the teacher uses their best judgment to determine how many students are using the SMART Board and being interactive with it.

The SMART Board itself does not enhance teaching and learning, it is the way that it is used and implemented into lessons that make it beneficial to teaching and learning (Mowbray & Preston, 2008). Any technological device can be implemented into a lesson; however, it is how a teacher uses it to benefit the students learning that is more important. Gast, Mechling, and Thompson (2008) agree that the SMART Board is an effective tool for facilitating a hands on and ‘minds on’ approach. The SMART Board is a unique tool that now allows students to view information on a large screen, which traditionally has been accessible on a small computer.
It has been made clear that a SMART Board is one type of technology that is very beneficial to teachers and students in the classroom.

**The Role of Technology within Literacy**

Clearly technology within literacy instruction has the potential to benefit learners in the classroom; however, how to integrate technology into the critical content area of literacy seems less clear. Many teachers are often introduced to the new pieces of technology in their classroom or school through a traditional staff development workshop after school (Hansen, 2008). When new devices are introduced it is important that teachers and school administrators are given access and time to learn about the devices, how to use them, and how to integrate the specific device into classroom curriculum. Turbill (2001) describes how the need to integrate technology is becoming increasingly urgent as more technologies are being developed and are a way of life. Technology is seen just about everywhere and the classroom is the perfect environment for students to learn about new technological devices and how they can assist students to succeed. Starting at a very young age children are engaged with technology within their own home and because of this expect technology to be part of their learning at school (Burnett, 2010). Some students have access to technology at home and look forward to using those same devices in the classroom. Other students who do not have access to technology at home are eager to use these devices at school; therefore, making the need for technology at school crucial to student’s motivation to learn. Children are more motivated to read and write when a piece of technology is involved; such as a computer (Hansen, 2008). Teachers should begin to build on student’s enthusiasm for technology and use it to facilitate student’s success in difficult content areas; such as reading and writing. Turbill (2001) found in a study with kindergarten students that the implementation of technology was being hindered by lack of time and expertise to explore and
understand the different types of technology that are most beneficial in the classroom. Depending on the diverse ages of the students using the technological devices more time and support may be needed. Students at a younger level will need more assistance with the technology. Yet, it is important to remember more support does not mean students are incapable of using the device. Hansen (2010) reported that with the increase use of technology with students in the classroom, students are using technology the most when applying their literacy knowledge and teachers are using technology the most when presenting literacy mini-lessons. Technology, especially a device such as a SMART Board, can be very informative and beneficial to students becoming successful in the development of their literacy skills.

Technology used to deliver literacy instruction was shown in numerous studies found (Burnett, 2010, Turbill (2001), Hansen (2008), and Hackbarth (2004). Burnett (2010) conducted a study to show the benefits of digital texts and computer use in the classroom and found that images and narratives contained within computer-based stories can teach and make students aware of social and cultural worlds. The computer engrosses learning in many ways for students; whether it is, active research, finding pictures, viewing a video, or simply typing a paper. Similarly, Turbill (2001) found how using interactive books on the computer were integral to and supportive of the story. The idea of using interactive books, or videos to help students comprehend the story or stay engaged gives students an opportunity to use technology and see how effective it can be to their learning. Hansen (2008) conducted a study in which the SMART Board and diverse websites were used to spark student’s interest in the upcoming literacy lesson. Using technology as an anticipatory set helps students to become engaged and interested. Using technology to enhance a real life scene or make a connection to the real world is exactly what using technology in the classroom is all about. For example, in this particular classroom a video
was shown about Martin Luther King, Jr. famous march and speech and after a student exclaimed, “I never knew there were white people there” (Hansen, 2008, p.116). A student would not have been able to make this connection if the speech was just read aloud in class. Hackbarth (2004) found how spelling is another skill that is distinctive with the use of technology and is still a very important aspect of literacy. It is important to understand that the spell check feature in Word has not relieved students of learning how to spell. Technology has enhanced students need to learn how to spell by giving them access to devices and programs that can help them learn how to spell. For example, Hackbarth (2004) describes how students can view animated words through PowerPoint presentations by challenging students to shout out the correct spelling before the word fades in or repeat the spelling when the animation does a quick in and out exit of the word. The programs and applications that technology allows us to be part of our endless.

Hansen (2008) found that writing is still just as important as well. The use of technology enhances a student’s writing piece and motivates the student to write by typing the piece up after it has been revised and edited. Both Hansen (2008) and Hackbarth (2004) have found that creating a laptop literacy center for students in which they use the laptops to view templates, moveable words, word banks, and a rhyming dictionary in their writing allows students to become more knowledgeable with the laptop and the applications it offers.

Technology integration is one way students can grow as literate beings. Technology has not change the curriculum; rather learning literacy is being enhanced (Hansen, 2008). Hackbarth (2004) describes how the use of computers can help students with disabilities and can help to accommodate various learning styles. Students who may not be able to see or hear well can use the diverse functions the computers has to offer to assist them; such as, making the screen larger or using the audio device to voice the words being typed. Web sites on the computer can help
students become engaged in mini-lessons for review or accelerated-lessons for students who need more challenging concepts. Hansen (2008) found that it is never too early to integrate technology in the classroom and have it be beneficial. Using technology in innovative ways gives students an opportunity to use higher order thinking skills. Technology gives students and teachers diverse ways to keep students engaged and on task with each lesson taught. Hansen (2008) states the importance of using technology by exclaiming, “Technology may never replace teachers, but teachers who do not use technology will be replaced by those who do” (p.117). Teachers, who chose not to use technology in their classroom, will only hinder their student’s ability; most schools will not let this happen and will get rid of that teacher. Technology is too much a part of society and it is crucial for students to learn about diverse technologies. Turbill (2001) identifies that students need to learn to read and write within the traditional classroom environment using technologies to best prepare them to become literate. Technology is only growing and students and teachers need to be prepared for the changes technology may bring to educational learning. Burnett (2010) also stresses the importance of technology use in the classroom by stating, “Current educational practices are becoming increasingly anachronistic within a world in which knowledge, learning, and relationships are being re-defined in digital environments” (p.265). Teachers should not continue to use the same old practices they have been for years when it comes to implementing content and need to stay up-to-date. Technology has played a huge role in how learning is changing and teachers and schools should be a part of that change. Technology can help to reshape how a student learns (Turbill, 2001). The applications and programs offered through technological devices make it possible for students to learn in diverse ways. Even the reluctant readers and writers are typically thrilled to engage in computer-based literacy and research activities (Hackbarth, 2004).
As technology continues to transform literacy instruction, students internalize lifelong skills needed for success in this global society (Saine, 2012). Teachers of literacy are integrating iPods, iPads, and the SMART Board in the classroom to make their instructional activities more appealing and exciting for their students. Martinez-Pons and Rosenfeld (2005) found that when students developed PowerPoint presentations they had hands on experience and modeled technology use for each other. The use of technology can be both educative and informative. With the use of technology, students become more creative in their thinking and see technology devices as unique and exciting; therefore, making them not feel as though they are actually doing schoolwork (Saine, 2012). Using technology as a means to create engagement and motivation with students is using technology to the best of its ability. For example, Miller (2007) found that watching and creating digital videos in the classroom benefited student’s literacy learning. Students are engaged in creative writing, dramatic reading, visualizations, movement, process drama, and music as they are planning and producing digital videos related to the English Language Arts curriculum (Miller, 2007). When a teacher can let go of their own insecurities and reservations with the use of digital devices then they can begin to successfully integrate those devices into their classroom. In comparison, Saine (2012) also found that English Language Learners using Google Earth to find pictures to represent English words improved their writing and speaking and appealed to the visual and artistic learners. Technology offers a variation of learning experiences for students as long as teachers are willing to implement technological devices into instruction.

Using technology to help students to become more creative in their thinking, sequence story events, and comprehend the story is very engaging and beneficial for students who may struggle with this concept. Saine (2012) reported students excelling while using the iPad in the
literacy classroom through an application to create short stories that focused on character traits and story elements. The visual and audio characteristics from the iPad help students to stay on task and motivated to complete the lesson. Morrow, Barnhart, & Rooyakkers (2002) described how audio media and audio books helped students develop their comprehension skills and expose them to different cultures. When students listen to audio books or watch audio media they are able to become experienced with different cultures, dialects, and beliefs. Audio gives students a new style to learn without being lectured by the teacher. Students can work alone or in groups while engaging in audio media or the iPad. These devices strengthen their listening abilities and provide them with necessary literacy skills.

Moore-Hart (2008) determined that students are benefited by using programs such as Word and other Word processers in their literacy classrooms. When students have access to Word or other Word processers they can use these programs to help improve their writing and stay motivated to use the programs after each writing assignment. Levin and Wadmany (2006) reported that the greater use of computers is connected to more positive attitudes to computers. When teachers have positive attitudes about computers, students may reiterate those beliefs and want to use the computer more often. If students see that the computer is an easier tool for them to use, they will want to use it and look forward to using it. Tools such as delete, insert, and rearrange text can help with the revising and editing stages as students complete papers through Word processor (Moore-Hart, 2008). Tools that help students to edit and make their work better are all helpful characteristics for students writing. Another benefit of using the computer with younger children was that they learned the correct spellings of words by using spell check (Moore-Hart). When students see that they have spelled a word wrong, see the correct spelling, and then fix the spelling it is in hopes they will spell that word correctly the next time they go to
write it. Moore-Hart (2008) and Levin & Wadmany (2006) both agree that when students learn in a rich technology based classroom it transforms their knowledge and develops their cognitive capabilities. Technology offers students diverse ways to learn and gain knowledge; therefore, it is significant that educators implement technology within their instruction.

It is important to understand that technology is not a substitution for valuable literacy instruction; instead there needs to be a connection between what is taught and why the technology device is being used. There needs to be justification for incorporating technology such as the engagement it offers to learners through multiple learning styles and the benefits it gives struggling students of literacy (Martinez-Pons & Rosenfeld, 2005). Technology should be implemented in classrooms because of the benefits technology offers students. Miller (2007) describes the digital video experience as supportive towards students with visual and auditory needs. Students are able to listen and view digital videos to assist them in their readings of literature as a way to reinforce what has already been read. Motivation is huge for students with learning disabilities. At times students become frustrated and want to give up. The use of technology offers students a way to be engaged and motivated by exploring and being hands on with the devices to ensure active participation (Barone & Wright, 2008). Technology provides students with a way to collaborate with one another while learning important content information. Giles and Shaw (2011) have determined that motivating students with technology, specifically the SMART Board serves as a technological stimulation that allows students to practice procedures and answer questions in an efficient and engaging manner. For example, students can use the SMART Board to move and connect items or solve problems instead of just reading about it in a book. Activities such as this would not be possible without the use of the
SMART Board. The interactive features provide an engagement for students that are far different from writing notes or reading a book (Giles and Shaw, 2011).

Undoubtedly there are numerous ways teachers can integrate technology within literacy classrooms; however, for some teachers using certain technological devices is not their greatest strength. Martinez-Pons and Rosenfeld (2005) describe the importance of teachers having the appropriate skills and knowledge to incorporate technology into their curriculum. For teachers who are not knowledgeable or familiar with the technological device they want to use in their classroom, an afterschool workshop on the technology device is not enough. It is important that teachers take it upon themselves to learn about the different types of technologies that benefit their curriculum, learn how to use it, and research activities that are best used with the device (Chase & Laufenberg, 2011). It is also helpful for teachers to turn to their colleagues to see how they have used the specific device or what they may know about it. Technology devices are constantly being created and educators cannot use them in their classroom just because they are not familiar with them. Teachers need to use their resources to help educate their students to be successful in this tech-savvy society (Martinez-Pons and Rosenfeld, 2005). Technology is no longer at odds; therefore, it should be absorbed and used frequently and efficiently to best educate students.

**Teacher Perspectives of Technology Integration**

As earlier stated, technology is rapidly developing; with this development and integration into classrooms and curriculum teachers views and perspectives of technology are varied. Frank et al. (2006) suggests that just because technology is available in schools and classrooms does not mean teachers are actually using it. Teachers must not let technology go to waste, if technology devices are in the classroom they should be integrated into curriculum. Nevertheless,
there are two determining factors to why teachers are not integrating technology into their classrooms; these factors include experience and knowledge with the technological devices (Martinez-Pons & Rosenfeld, 2005). Administrators should be making sure teachers are given workshops to attend, hands-on demonstration of the technology, and constant assistance with the specific device. This will ensure teachers are using the technological devices that are available.

 Teachers may have different perspectives in regards to technology; however, it is critical that concerns about technology are addressed within schools. McGrail (2005) found that teachers in her study had divergent perspectives towards technology. An example of a difficulty included a student becoming frustrated with not being able to cut, copy, and paste something into a document (McGrail, 2005). Difficulties occur all of the time when teaching students new topics and teaching a student how to use a technological device is no different. In contrast to McGrail (2005), Gorder (2008) suggests that we embrace these new language challenges and use these experiences as teachable moments. If a student is using slang in their formal writing, explain to the student that there is a time and a place for slang and formal writing it is not an appropriate time to use slang. McGrail (2005) reported teachers concern with mixed-ability classes with reference to computer skills. The teachers explained how they needed to give instructions much slower with using the internet and making sure all students were on the same page. One teacher described her frustration by stating,

“I used to say, “Single space, single sided” and kids would handwrite it, and that was it.

Now, it is to the point where I have to give the actual definitions, “I want 12-point font, I want Geneva, I want double-spaced” (McGrail, 2005, p.15).

When using a Word processor, you do have to be clear on directions as to how you want students writing their papers; however, following directions is critical to students learning to actively
participate successfully in society. Following directions is a life skill needed to succeed and using technology helps students prepare for mastering this skill. Although instructions needed to be clearer when typing a writing assignment on the computer, compared to hand-writing it, there were still more benefits for the students by using the computer. Gorder (2008) concluded that, “Teachers know their content and pedagogy, but when it comes to technology, teachers often learn along with students” (p.63). Using technology in the classroom can be very overwhelming and confusing for teachers who are not familiar with the technological device to be used and may be embarrassed or uncomfortable when a student knows more about the device than the teacher does. Therefore, it is important that teachers learn about the technological device before using it in their classroom and become knowledgeable by familiarizing themselves first with the technology. This recommendation will help teachers feel more comfortable and become more interested in using the device more in the classroom.

Teachers who use technology regularly are more likely to integrate technology in the classroom (Gorder, 2008). Just like with many children who are immersed with technology at home, and when coming to school and using technology they come more engaged and motivated in the content being taught. Davidson (2009) reported that increasing use of new technologies by children at home suggest the need for institutional changes in classroom settings. Schools should incorporate diverse technologies into classrooms to help students understand the importance of technology. Larson and Marsh (2005) explain how educators continue to undervalue the digital practices and experiences that young children bring to school. When students are involved with technological devices at home it has an influence on how they learn at school. If a student is constantly involved in technology at home, they will expect that same advancement at school and should. Honan (2012) agrees with Larson and Marsh (2005) by finding that teachers cannot
see that students’ knowledge of digital texts used outside of school could be useful or have any place in the literacy classroom. Student’s experiences at home will play a part in school. These experiences and knowledge about a technological device can be very helpful for the specific student and other students in the classroom. If a student is very experienced with a device, the teacher should use this student to help others when needed. Honan (2012) felt it was important to have an integration of both technology and handwritten material by using internet resources and print resources for a research project. As long as the use of technology is being integrated into classrooms in some way it will have an impact, even if minute.

There is great importance behind going to teacher-training programs that would actually show the teacher how to teach with computers or implement other technological devices (Gorder, 2008). Having informative programs to teach educators about technology devices will help the teacher to feel more comfortable using the specific device in their classroom. McGrail (2005) found that teachers felt if they had better-equipped classrooms, with more computers in individual rooms would give teachers a better opportunity to be able to integrate technology into their teaching. The more devices being available for students, the better; however, that should not stop teachers from integrating technology into their instruction. McGrail (2005) also found that teachers felt as though having a computer technician to assist with all computer problems would help teachers and students when there were problems with the computer. Technology is great; however, there are problems that can occur with a device that may be tricky or frustrating. Nevertheless, Gorder (2008) found a teacher that used any technical difficulties that happen with her or her students as a teachable moment to have her students work through trouble shooting and fixing the problem. There is great importance behind students learning how to deal with
technical difficulties as these problems may occur at home or when someone is not around to help them; knowing how to try and fix a problem makes for great authentic learning.

Gorder (2008) concluded that teachers use technology for professional productivity to facilitate and deliver instruction, but at times struggle to integrate technology into teaching and learning. There are numerous ways teachers can integrate technology into instruction. Some research and guidance may be needed, but once occurred implementing technology into classrooms will be a lot less difficult. Gorder (2008) found through practice, reflection, and sharing of teaching practices with the integration of technology, teachers will be better able to use and incorporate technologies into the designated content area. Using technology in the classroom is not always easy, collaborating with associates and reflecting on previous lessons will help to make the integration successful. Davidson (2009) agreed with Gorder (2008) explaining the importance of teacher collaboration to share ideas and teaching strategies for using technology in the classroom as this can help increase technology integration. Using diverse technologies for the first time is the same as teaching a lesson for the first time; it is going to take time, practice, and reflection to master the use of the device within instruction. Davidson (2009) also explained that teachers feel that one time professional developments need to be extended and maintained throughout the year. Professional developments should be offered to accommodate teacher’s busy schedules; for example, having more programs in the summer when teachers have extra time to attend.

Buzzard, V. Crittenden, W. Crittenden, and McCarty (2011) state the positive influence technology is creating. Buzzard et al. (2011) conducted a study with professors and students involving the integration of technology and found that most professors are excited about the changes technology has given to students learning. Technology has so much to offer and
educators should be excited about the changes it can bring to classrooms. Technology gives students an opportunity to learn in a different style(s). Honan (2012) reported how quick students are at learning about a new technology software or device; thus, giving those more time to learn other skills or techniques in the specific lesson. Some students are involved with technology outside of school; therefore, when it is used in school classrooms and as a means to learn students become excited and engaged. Buzzard et al. findings suggest that any new instructional technology should allow a student to learn more, learn faster, and learn easier. Technology can bring about great changes and effective learning skills for students as long as these devices are used properly and consistently within classrooms. Ryan, Scott, and Walsh (2010) reported teachers view on technology was so positive because of the strong effect that technology was seen to have on students motivation to learn about and work with digital literacy. Once technology is used in the classroom and students become intrigued with using the specific devices, the student’s motivation to learn can increase dramatically. Ryan et al. (2010) also exclaimed the importance behind teachers using technology to communicate particular messages to diverse audiences. It is important for teachers to go beyond the speed and colors of technology and look to see how it can make a much stronger impact on students learning.

Buzzard et al. (2011) found that the use of interactive digital media has propelled as students and teachers begin to communicate with one another through social networks such as, Facebook or Twitter or blogs and found great response through this technique. Social networking for communication purposes has become extremely popular, therefore; integrating this approach into literacy curriculum is most beneficial for students to teach effectively. Ryan et al. (2010) described how technological changes often push teachers to begin using technology; this is critical to students learning and their pedagogical understanding. Educators should be excited
about technological advancements and using these devices in their classroom to make learning more engaging for students. Buzzard et al. (2011) found that students appreciate and use digital technologies in academic work more than instructors require. This finding is consistent with the idea that students want more instructional technology integrated into their learning. It is not that teachers are not integrating some type of technology into their classroom; in fact, Gorder (2008) explained that teachers in grades 9-12 tend to use technology in their curriculum the most. However, it is important to report that most of the technology being used includes technology for professional procedures, such as for grades or communication and delivery of lessons, such as the usage of PowerPoint (Gorder, 2008). It is not often that teachers are integrating technologies such as, blogs, podcast, SMART Boards, Wiki’s, or any social networks to engage their learners on a higher integration of technology. These are the types of devices and experiences educators should be offering students to broaden their learning. Teachers must be constantly asking themselves, “What new types of technology will engage my students? (Honan, 2012, p.95) When teachers begin to find technologies that will help engage their students in the classroom they are helping their students become familiar with the technological device and giving them the opportunity to learn in a more unique way. Using technology in the classroom can create an atmosphere of interest and engagement and give students the motivation to learn new concepts.

Conclusion

Research has shown how technology is rapidly advancing and how students’ abilities in technology based literacy is becoming more significant to their learning and communication in society. Literacy curriculum is a crucial part of education and technology can help to enhance content and support students learning. Whether students are engrossed in reading through audio tapes or hands-on involvement with a SMART board; technology is an integral part of learning.
Schools and teachers must keep up with new technology and not be afraid to use technological devices due to lack of knowledge and experience with the specific device. Students that are not being exposed to new technologies will not be learning to the best of their ability and will be hindered to society norms. Teachers who choose to use diverse technologies in their classroom are rewarded with increased student motivation, engagement, and greater understanding of content from students. Using technology in classrooms and students having the opportunity to employ it will only make teaching and learning stronger.

**Method**

**Context**

Research for this study occurred in an eighth grade classroom at Statue High School (pseudonym) in upstate New York. This study specifically researched a small group of six students during reader's workshop. The groups of students are part of a middle and high school that serves 1050 students in grades 7 through 12. Of the 1046 students in the school, 76% receive free or reduced-price lunch (New York State Education Department, 2012). In terms of the racial/ethnic demographics of the school, 58% of students are Black or African American, 23% of students are Hispanic or Latino, 17% of students are White, and 2% of students are Asian. In addition, 23% of students receive special education services, and 6% are English Language Learners (ELL). On the New York State (NYS) English Language Arts (ELA) eighth grade assessment, only 49% of this year’s current eighth grade students passed. Passing requires an achievement level of three (meeting learning standards) or four (meeting learning standards with distinction); all performance levels are determined by NYS (NYSED, 2012).

The six students are part of a classroom of 21 students. In the classroom there are 15 girls and 6 boys. In terms of the racial/ethnic demographics of the classroom, 67% of students are
Black or African American, 19% of students are Hispanic or Latino, and 14% of students are White. In addition, 24% of students receive special education services, and there are no English Language Learners (ELL) in the classroom.

Participants

**Teacher:** Danielle (pseudonym) has been a teacher at Statue High School (pseudonym) for the past two years, in which she currently teaches English to seventh, eighth and ninth grade students. Her main job responsibilities include implementing the READ 180 program into her curriculum to help students be able to read and write better and preparing students to pass the NYS ELA Exam. Additionally, Danielle has worked at four different schools in upstate New York; altogether she has been teaching for 10 years. Danielle's jobs have consisted of being an English teacher or reading specialist while at these school districts. She is certified in English from grades 7 - 12 and Literacy from grades K-12. She also is certified in Special Education in grades 7 - 12. Danielle is married and is a mother to three children; two four year-old twin boys and an eight year old little girl. Danielle enjoys spending time with her family and participating in outdoor activities.

**Students:** The six students involved in this study are all female students ranging in age between 14 and 15 years. In terms of racial/ethnic origins of the group of students all of the students are Black or African American. There are no students who have an Individualized Education Plan (IEP) or a 504 plan. On the eighth grade NYS ELA assessment, all but one of these students received an achievement level of a three or four.

Mary (pseudonym) is a 15 year-old African American female. She is a bright student who enjoys dancing in her spare time. Her favorite subject is English and her most difficult subject is
Math. Mary enjoys reading books that she chooses rather than books in her class. Last year, Mary received a three on the NYS ELA assessment.

Jessica (pseudonym) is a 15 year-old African American female. She is a very respectful student who enjoys watching T.V and texting with her friends. Her favorite subject is Math and her most difficult subject is Science. Jessica enjoys reading and writes in her journal often. Last year, Jessica received a four on the NYS ELA assessment.

Stacey (pseudonym) is a 14 year-old African American female. She is energetic and outgoing and loves to swim in her spare time. Her favorite subject is English and her most difficult subject is Math. Stacey sometimes struggles with comprehension when reading and is encouraged to use during-reading strategies to help her better understand what she is reading. Last year, Stacey received a two on the NYS ELA assessment.

Amanda (pseudonym) is a 14 year-old African American female. She is a very motivated student who enjoys dancing in her spare time. Her favorite subject is Spanish and her most difficult subject is Math. Amanda participates often and is always willing to share her opinion about a topic in class. Last year, Amanda received a three on the NYS ELA assessment.

Jackie (pseudonym) is a 14 year-old African American female. She is a very organized student who enjoys watching T.V. in her spare time. Her favorite subject is Home and Careers and her most difficult subject is Math. Jackie reads in her spare time, but does not like to write as much. Last year, Jackie received a three on the NYS ELA assessment.

Sara (pseudonym) is a 14 year-old African American female. She is a very outgoing student who enjoys laughing and smiling as much as she can. Her favorite subject is Math and her most difficult subject is Science. Sara enjoys free writing during class. Last year, Sara received a four on the NYS ELA assessment.
Researcher Stance

Throughout this study, I observed two small groups of students in a reader's workshop classroom. Each group consisted of three students with their teacher leading the lesson. I am a certified elementary and special education teacher with certifications in both early childhood education (birth through grade two) and elementary education (grade one through grade six). In the past I have been a substitute teacher for about three years; however, I am not currently teaching. As a substitute teacher I have worked with a wide range of students. I have been in many different classrooms; anywhere from kindergarten to senior high school physical education. In addition to teaching, I am currently perusing a Master’s Degree in Literacy Education (birth through grade twelve) from St. John Fisher College.

In this study, I served as a passive observer. Mills (201) defines a passive observer as "no longer assuming the responsibilities of the teacher and should only focus on their data collection" (p.75). Taking on the role as a passive observer could implicate my research due to the attempted interaction I had with the students before I began observing the lessons. The student conversations I overheard could lead to me having different opinions or ideas about the students I researched.

Method

This study occurred over a three day period. At the start of the study I had the students fill out a sheet inquiring information about each individual including their grade, age, favorite subject, most difficult subject, and favorite hobby (Appendix A). I also informally interviewed the teacher (Danielle) in regards to some more academic information about each student. The purpose of this study was to find out how SMART Boards encourage student learning engagement in reader's workshop. In order to do find out if SMART Boards encourage students
learning engagement, I defined student learning engagement by looking at the behavioral, comprehension, and acquired interest of the students throughout the lesson. On the first day I observed two groups of students, with three students in each group for a twenty-five minute lesson. Both groups were being taught a readers workshop lesson about the book, *The Great Gilly Hopkins* with the SMART Board. *The Great Gilly Hopkins* by, Katherine Patterson is about an 11 year-old girl named Gilly. She has been stuck in more foster families than she can remember, and she has disliked them all. She has a county-wide reputation for being brash, brilliant, and completely unmanageable. She is sent to live with the strangest family yet, the Trotters. This is when Gilly decides to put her sharp mind to work and devises an elaborate scheme to get her real mother to come rescue her. However, the rescue does not work and Gilly is left thinking that maybe life with the Trotters isn't so bad.

One group was taught the lesson with the SMART Board and the other group was taught the same lesson, but without the SMART Board. Before I began my observation on day one, I gave all six students a questionnaire to answer some questions in regards to the SMART Board (Appendix B). During each lesson the teacher taught (one with the SMART Board and one without), I recorded field notes to measure the behavioral aspect of the students. I noted any behavioral problems that occurred throughout each lesson with the two groups of students. To successfully measure comprehension, I gathered student work (Appendix D and Appendix E) from the students from each group to compare and see how the students did with the SMART Board being implemented into the lesson and with no use of the SMART Board. At the end of the lesson, I had the students fill out a questionnaire focusing on how the lesson impacted their interest (Appendix F). On day two and three, I again observed two of the same lessons with the two different groups of students. For the lessons I observed I took field notes to show how each
lesson, with and without the SMART Board, impacted the students through aspects of behavioral, comprehension and acquired interest. At the end of my study, I conducted a formal interview with Danielle to inquire information about integrating the SMART Board into her lessons and how she felt students responded with the incorporation (behavior, comprehension, and interest).

Quality and Credibility of Research

In conducting research, it is important to ensure the quality and credibility of the study. In doing so, four characteristics must be met: credibility, transferability, dependability, and confirmability. Mills (2011) defines credibility as, "the researcher's ability to take into account the complexities that present themselves in a study and to deal with patterns that are not easily explained" (p. 104). To ensure credibility during this study, I applied several strategies. I debriefed with critical colleagues about my approach to the study and went over the results that I obtained. I also did persistent observation three days in a row to ensure I was able to identify qualities and characteristics of the students being observed. I also analyzed artifacts such as a student-work to check for understanding of the material from the students.

Transferability is defined by Mills (2011) as understanding, by the research, that everything they study is context-bound and cannot be used to generalize to larger groups of people. To ensure transferability, I collected detailed and descriptive data and understand the data I collected during my study is specific to the study at hand. Even though I used the data to draw on comparisons that may be used in other circumstances, no generalizations will be made.

Mills (2011) defines dependability as, "the stability of the data" (p.104). I ensured dependability through my use of multiple sources of data. Using triangulation is one way that I
accounted for dependability. Another way I ensured dependability is by consulting and reflecting with critical colleagues about my data.

Finally, confirmability is defined by Mills (2011) as, "the neutrality or objectivity of the data collected" (p.105). Using the triangulation approach accounted for my data as having confirmability because all data was cross-checked. While cross checking data, you are verifying its validity by comparing it to a similar or additional data taken from diverse sources each having a different method of collection.

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

Before beginning my study, I provided the necessary consent and assent forms to participants in the study to ensure that all rights were protected. I acquired an informed consent form from Danielle do to the interviews obtained from her in regards to her teaching experience, make-up of the classroom, and questions about the lessons conducted regarding to the study. I obtained informed assent from each student. Due to the fact that I was working with minors, I obtained parental permission. Most importantly, before any assent forms were signed both participants and parents were informed of their rights, risks, and were made aware that at no time would their identities be revealed. In order to protect the participant’s identity, pseudonyms were used.

**Data Collection**

To complete this study, multiple forms of data were collected. Before I began observing the students I provided two types of questionnaires to the students (Appendix A & B). The first questionnaire (Appendix A) was to seek background information about each student. I also informally interviewed the teacher one time to gather more information about each student. The second questionnaire (Appendix B) was to inquire information about the students knowledge of
the SMART Board and their thoughts and opinions about how it is used in lessons. This questionnaire allowed me to see how often the students use the SMART Board, what they like best about the SMART Board, how the SMART Board is used in their classroom, and if they prefer the SMART Board to be implemented in a lesson.

I conducted one formal interview through e-mail (Appendix C) with the teacher (Danielle) to gather information about her views of the SMART Board and how she feels about using it to engage her students. This interview helped me to go beyond my own observations from the lessons observed and to gain thoughts and experience through the teacher about using the SMART Board to help encourage student learning engagement.

Through the three days of observing six twenty-five minute lessons within the two groups of students I obtained field notes to help me become more informed of the engagement level the SMART Board provides students during a reader's workshop lesson. I was able to observe behavioral issues with the students who were integrated with the SMART Board during their lesson and behavioral issues with students who were not given the opportunity of using the SMART Board. I observed students active participation with sharing thoughts and using hands-on involvement with the SMART Board. For those students who did not have the SMART Board in their lesson, I was able to see if their participation was affected by not using the SMART Board.

On day one, I collected student work from two students in each group (Appendix D & E) to see if their level of understanding would differ from having the SMART Board implemented in their lesson or not having the SMART Board in the lesson. I used this work sheet the teacher gave the students as an assessment piece throughout and after the lesson to see how well the
students understood the content and reflection of the reading. Once again, comparing the work to each group of students.

On day one, I also collected a student interest questionnaire (Appendix F) from the groups of students who had the SMART Board implemented into their lesson to see how it affected their learning, participation, motivation, and overall interest of the content being taught. This interest questionnaire helped me to see if students felt the SMART Board helped them to complete their work and be engaged throughout the lesson. The reason why I only gave this interest questionnaire to the students with the SMART Board being implemented was because the teacher explained to me how the students tend to struggle to complete their readings the night before. However, when she uses the SMART Board and the students know they will be in front of the class writing answers and sharing thoughts they tend to read the night before to help them be prepared for the activity on the SMART Board the next day.

**Data Analysis**

Multiple forms of data were collected and analyzed to show any patterns that arose during the research study. The student questionnaires and classroom observations were analyzed and sorted by similarities and differences between the participant’s perceptions of the SMART Board and the advantages and disadvantages of using the SMART Board. The teacher’s interview responses were analyzed and arranged to see how the responses impacted the study. Student work was compared with the use of a writing rubric (Appendix G) to see how well the students comprehended the lesson or activity with and without the use of the SMART Board. Themes were created based on the similarities found during the cross-examination of the data.
Findings and Discussion

Three themes emerged after careful analysis and cross examination of the data collected from my research. The themes of increased student engagement, increased peer collaboration, and, strengthening of comprehension were prevalent in the data collected and can be used to support the benefits of student learning engagement when using a SMART Board in reader’s workshop. These themes helped me to organize my data to be able to determine the appropriate findings suitable for each theme.

Increased Student Engagement

One of the major themes that emerged from my research was increased student engagement to work with the SMART Board. This theme became apparent when reviewing classroom observations, student work, student questionnaire, and teacher interview responses. Additionally, this theme is supported by the literature reviewed earlier by researchers such as, Mowbray and Preston (2008), Hansen (2008), Moore-Hart (2008), Hackbarth (2004), Crittenden, W. Crittenden, and McCarty (2011), and Ryan, Scott, and Walsh, (2010).

The study included two groups of students being taught the same lesson; one group had the SMART Board implemented into their lesson and the other group did not have the use of the SMART Board or any other piece of technology. It was observed that before the SMART Board lesson began the students in the group; Mary, Amanda, and Sara were excited to be using the SMART Board. Such comments were made as, “Yes, we are using the SMART Board today” and “Miss (Danielle - Teacher) said we get to use the SMART Board today, I’m writing first!” (Field Notes, June 8, 2012). These statements could mean the students are excited about using the SMART Board that day and will be engaged throughout lesson. During the SMART Board lesson, all three students volunteered to use the SMART Board and at numerous times the
students went up to use the SMART Board more than once to add another answer or comment. It was noticed by comments such as, “ugh” or “she just went, it’s my turn,” that the students were disappointed when they were not called on to use the SMART Board (Field Notes, June 11, 2012). This observation could mean the students were actively participating and had great willingness to be active in the lesson. Like my research, Mowbray and Preston (2008) found similar results with students using the SMART Board. When content is presented on a SMART Board, students are highly motivated. Being physically involved touching and moving objects on a large screen in front of the class is engaging and allows all students to see the work being completed on the screen (Mowbray & Preston, 2008). The students were engaged by continuously asking questions and volunteering to participate throughout the lesson. The students were focused when writing down information from the SMART Board, this was observed by the students not talking and concentrating on their writing as they knew the information would not be on the SMART Board too long (Field Notes, June 8, 2012). This observation may mean that the students are more focused, engaged, when using the SMART Board and took advantage of the technology offered to help assist them in their writing. Similar to Mowbray and Preston (2008), Hansen (2008) observed that children are more motivated to read and write when a piece of technology is involved.

After reviewing the student work from each of the lessons, it was noticed that the work completed from the students that participated in the SMART Board lesson was noticeably better. This finding was determined due to the student work only having two to three grammar mistakes and 90% complete sentences. The information from the student work was correct and insightful to the context. When using the writing rubric to grade the student work, the work that was completed with the implementation of the SMART Board scored a 21 out of 25 and the work
that was completed without the implementation of the SMART Board scored a 12 out of 25. Students engagement with the SMART Board activity was seen through the completed worksheet connected to the lesson. It was observed students seemed to be engaged in the task and began working together and building off of one another (Field Notes, June, 6, 2012). When writing answers on their worksheet, it was shown that students had more thoughtful answers and fewer grammatical mistakes (Appendix D). For example, the student work completed with the implementation of the SMART Board had only two to three grammatical mistakes and the student work completed without the SMART Board had four to five grammatical mistakes. One could predict that the students using the SMART Board were more engaged and felt more connected to the lesson; therefore, putting forth greater effort in their work. My research supports Moore-Hart (2008), who found that students produce more improved work when technology is implemented in the lesson; as students are engaged and motivated with the use of technology.

After reviewing the student questionnaires, there were certain responses that seem to make it very apparent that the students were more engaged when the SMART Board was implemented into the lesson (Student Questionnaire, June 8, 2012). Sara reported, “I think that the SMART Board makes learning fun.” Amanda stated, “The SMART Board helps me learn better.” When Mary, Amanda, and Sara were asked in the interest questionnaire (Appendix F) if they felt the SMART Board encouraged them to participate more throughout the lesson they replied with “yes.” It can be presumed that the participants felt the SMART Board was an asset to their learning and they enjoyed engaging in SMART Board activities. Similarly, both Hansen (2008) and Hackbarth (2004) found that students were actively engaged in using technology. Hansen (2008) and Hackbarth (2004) also found that the use of technology is accommodating for
various learners and can help students become more engaged in a lesson compared to a lesson with no incorporation of technology.

In addition to classroom observations, student work, and student questionnaires, the teacher interview responses also supported the theme of increased engagement. Danielle explained, “I believe the SMART Board engages my students in their learning. Students are eager to use the SMART Board and like participating when using the SMART Board” (Teacher Interview, June 12, 2012). These statements can acknowledge that most students enjoy using the SMART Board and become more active participants when the SMART Board is implemented. Danielle also explained, “I find negative student behaviors are minimized when using technology in general. When using an interactive lesson on the SMART Board, students enjoy the movement and transitions more than just lectures so there are fewer interruptions” (Teacher Interview, June 12, 2012). One can determine that the use of the SMART Board creates a more engaging atmosphere allowing students to be on task and focused throughout the lesson. Like my research, Buzzard, V. Crittenden, W. Crittenden, and McCarty (2011) found that technology is creating a positive atmosphere for classrooms. Danielle stated, “Students are absolutely more engaged when using the SMART Board and make it a point to consistently volunteer. When I tell students we will be using the SMART Board, they are more focused and want to share their thoughts so they can use the SMART Board” (Teacher Interview, June 12, 2012). It can be said that the SMART Board gives students a greater opportunity to share answers and thoughts and encourages students to be hands on active participators. My research supports Ryan, Scott, and Walsh, (2010) who reported that teachers view on technology was so positive because of the strong effect that technology was seen to have on student’s motivation to learn about and work with digital literacy.
Increased Peer Collaboration

Another major theme that emerged from my research was increased peer collaboration. This theme became evident when reviewing classroom observations and student work. This theme is supported by the literature reviewed earlier by researchers such as, Campbell and Mechling (2009), Gast, Mechling, and Thompson (2008), and Saine (2012).

After reviewing my classroom observations it became very apparent that the use of the SMART Board seemed to promote peer collaboration between students. On day two of my observations (Field Notes, June 11, 2012), I found that the lesson that incorporated the SMART Board was more collaborative between the three students then the lesson without the SMART Board. For example, when the students were completing a writing activity on the SMART Board, Mary, Amanda, and Sara discussed their ideas and each person took turns writing down sentences with a different color. The girls seemed to be more enthused and seemed to work very well together. The writing activity was supposed to be an independent activity, but turned into a group project. The students who had this same writing activity were given an opportunity to work together to discuss ideas. When observing Jessica, Jackie, and Stacey, I noticed their conversation was not about the activity and was about off-topic conversation. At the end of the activity, students wrote their responses independently and shared out loud. However, it seemed to be apparent that their responses were lacking insight (Field Notes, June 11, 2012). For example, the student work completed with the use of the SMART Board scored a five in the comprehensibility section on the writing rubric, showing insightfulness and connection to the topic. The student work completed without the use of the SMART Board scored a three in the comprehensibility section on the writing rubric. One might determine that using the SMART Board can promote more insightful learning and collaboration for students. Like my research,
Campbell and Mechling (2009) found that using the SMART Board provided students with a more collaborative atmosphere that allowed students to become more eager and comfortable to work together and gather ideas.

On day three of my observations (Field Notes, June 12, 2012), I found that once again Mary, Amanda, and Sara began working together and discussing their predictions for the story. They wrote their predictions as a class on the SMART Board and gave answers with very little prompting. It can be presumed that the SMART Board enabled the students to become encouraged to work with one another, think, and write ideas. It seemed that due to all three of the students wanting to use the SMART Board, they were eager to think of an idea and share it. It can be acknowledged that the students used more thought-process and responses were more in-depth than the students who did not have the SMART Board incorporated (Field Notes, June 12, 2012). This observation was proven by the overall score from the writing rubric comparing the student work with the implementation of the SMART Board and without. The student work with the use of the SMART Board scored a 21 out of 25 and the student work without the use of the SMART Board scored a 12 out of 25. Similar to Campbell and Mechling (2009), Gast, Mechling, and Thompson (2008) both agree that the SMART Board is an effective tool for facilitating a hands on and ‘minds on’ approach; helping students to produce more well thought-out responses while working together.

After evaluating the student work completed from day 2, (Field Notes, June 11, 2012) students in both groups were asked to write a description about the main character, Gilly in the book, The Great Gilly Hopkins. Jessica, Jackie, and Stacey did not have the SMART Board incorporated into their lesson, they were asked to brainstorm with each other then write about Gilly independently. The students did not take full advantage of brainstorming with one another
and produced less than adequate work for the writing response. This was proven by the overall score from the writing rubric comparing the student work with the implementation of the SMART Board and without. The student work with the use of the SMART Board scored a 21 out of 25 and the student work without the use of the SMART Board scored a 12 out of 25. Not to mention, there were several behavioral interruptions throughout the lesson (Field Notes, June 11, 2012). See table 1 and table 2 to show that the students with the implementation of the SMART Board had less behavioral interruptions then the students without the implementation of the SMART Board.

Table 1

*Behavioral Interruptions Without the Implementation of the SMART Board*

<table>
<thead>
<tr>
<th>Day of Observation</th>
<th>Total Interruptions</th>
<th>Call Out</th>
<th>Talking</th>
<th>Disruption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day One</td>
<td>9</td>
<td>2</td>
<td>4</td>
<td>3</td>
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<tr>
<td>Day Two</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Day Three</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

During each lesson students were specifically observed to see how many behavioral interruptions occurred during the twenty-five minute lesson. Interruptions consisted of calling out, talking, and disrupting the class. When interruptions were noted calling out consisted of a student calling out without raising their hand. Talking consisted of students talking with their peers about off topic discussions. A disruption was considered making unacceptable noises (such as buzzing noises), asking to use the bathroom, or students getting out of their seat when told not to. Table 1 shows on day one students had a total of nine interruptions. These interruptions consisted of students calling out twice, talking four times, and disrupting the lesson three times.
On day two students had a total of seven interruptions. These interruptions consisted of students calling out once, talking five times, and disrupting the lesson one time. On day three students had a total of six interruptions. These interruptions consisted of students calling out two times, talking two times, and disrupting the lesson two times.

Table 2

*Behavioral Interruptions With the Implementation of the SMART Board*

<table>
<thead>
<tr>
<th>Day of Observation</th>
<th>Total Interruptions</th>
<th>Call Out</th>
<th>Talking</th>
<th>Disruption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day One</td>
<td>5</td>
<td>4</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Day Two</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Day Three</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

During each lesson students were specifically observed to see how many behavioral interruptions occurred during the twenty-five minute lesson. Interruptions consisted of calling out, talking, and disrupting the class. When interruptions were noted calling out consisted of a student calling out without raising their hand. Talking consisted of students talking with their peers about off topic discussions. A disruption was considered making unacceptable noises (such as buzzing noises), asking to use the bathroom, or students getting out of their seat when told not to. Table 2 shows on day one students had a total of five interruptions. These interruptions consisted of students calling out four times and disrupting the lesson one time. On day two students had a total of two interruptions. These interruptions consisted of students calling out once and talking one time. On day three students had a total of two interruptions. These interruptions consisted of students calling out one time and talking one time.
One can assume these interruptions occurred because the lesson was not engaging and there was no technology involved in the lesson to make it more intriguing. Mary, Amanda, and Sara were given the same activity with the SMART Board and were found working together to come up with ideas and shared their responses by writing different sentences on the SMART Board. In the end the work produced was very meaningful and the students did a great job of utilizing the opportunity to work together. This was determined by the comparison of the overall student work scores scored with the writing rubric (Appendix G). The student work from day one (Appendixes D & E) was also evaluated and it was found that the work produced with the use of the SMART Board and peer collaboration excelled far more than the students who did not have the SMART Board integrated in their lesson. This finding was maintained from the overall student work by comparing the work scored with the writing rubric (Appendix G). For example, the student work with the use of the SMART Board scored a total of 21 out of 25 points and the student work without the implementation of the SMART Board scored only 12 out of 25 points. While comparing the student work and overall scores based on the writing rubric it was determined that the answers from the lesson with the integration of the SMART Board made more sense, were more grammatically correct, and more knowledgeable. It can be presumed that when students are using the SMART Board and working together to complete an activity or gather ideas, their work is better and their thoughts and ideas are more intellectual. This idea may be because of the students building off of one another and collaborating to come up with answers they all agree upon. The eagerness to use the SMART Board may contribute to the success of the work being produced. Saine (2012) also agrees that with the use of technology, students become more creative in their thinking and see technology devices as unique and exciting; therefore, students are more willing to work together and produce more intuitive and rigorous work.
Strengthening of Comprehension

Lastly, strengthening of comprehension was another recurring theme that emerged from my data. This theme became evident when reviewing classroom observations, student questionnaires, student work, and teacher interview responses. My data is in support of the findings by Giles and Shaw (2011), (Hackbarth, 2004), Levin and Wadmany (2006), and Burnett (2010).

After reviewing my classroom observations it can be found that the SMART Board can be used as a tool to strengthen student overall comprehension of the lesson and activity. It can be presumed that the visuals from the SMART Board, the hands on approach, and the collaborative learning all support the student’s ability to better comprehend the material taught (Field Notes, June 8, 2012). This reflection was noticed on Day one of my classroom observations when students using the SMART Board were more involved and produced better work (Appendixes D & E) versus students who did not have the incorporation of the SMART Board. The lesson observed without the SMART Board seemed to show students talking very little and not working together; therefore, producing work that was sometimes inadequate. This finding can be supported by the student work graded using the writing rubric (Appendix G) that determined the work with the implementation of the SMART Board scored a 21 out of 25 and the work without the use of the SMART Board scored a 12 out of 25. Similar to my research, Giles and Shaw (2011) support the concept of using the SMART Board to help students engage in a hands-on environment that allows students to practice procedures and answer questions in an efficient and engaging manner.

In the interest questionnaire given to the participants, Sara exclaimed, “Using the K-W-L chart on the SMART Board helped me to remember important parts in the chapter” (Student
Interest Questionnaire, June 8, 2012). In the interest questionnaire given to the participants, Mary exclaimed, “The SMART Board encouraged me to participate more throughout the lesson” (Student Interest Questionnaire, June 8, 2012). It can be determined that the participants are able to comprehend better when using the SMART Board and are encouraged to participate more during the lesson when the SMART Board is incorporated. This finding can be supported by the student work being graded using the writing rubric showing how the student work with the implementation of the SMART Board scored a 21 out of 25 and the student work without the use of the SMART Board scored a 12 out of 25. (Hackbarth, 2004) has similar findings to my research and states that even the most resistant learner will be encouraged to participate more and is able to comprehend the material taught better with a source of technology because of the engagement it offers.

After evaluation of the student work and based on the writing rubric, it can be said the student work completed with the use of the SMART Board is academically better than the student work without the use of the SMART Board (Appendixes D & E). This finding can be assumed by the sentence structure, the insightfulness in the answers, and the overall grammar in the responses. When students are able to think out loud and work together to produce ideas, better work will be formed; through my research I believe this indication can been seen throughout students work. Similar to my findings, Burnett (2010) found that when technology is involved in the classroom students respond better to the material being taught. Students are more engaged and focused on the task; therefore, are able to comprehend the content better (Burnett, 2010).

When looking at the teacher interview responses it can be determined that Danielle feels as though her students do learn and comprehend the content better when the SMART Board is
incorporated. For example, Danielle states, “I feel my students understand the content better when a SMART Board is integrated into the lesson. They connect more to the content when they are able to interact with what is being taught by touching and manipulating the board” (Teacher Interview, June 12, 2012). Danielle also stated, “It is boring for students to sit and listen to a teacher talk; however, when you incorporate interactive technology they are more interested and engaged and take ownership over their learning” (Teacher Interview, June 12, 2012). It can be supposed that using technology can help students become active and responsible for their own learning. My research supports findings of Levin and Wadmany (2006) as they have found that when students learn in a rich technology based classroom their knowledge and cognitive capabilities are better developed.

**Implications and Conclusions**

The findings of my research suggest several implications for teachers. The SMART Board is a technological device that should be used with a variety of students and diverse learners from the primary grades to adult learners (Giles & Shaw, 2011). The SMART Board is easy to use and manipulate in the classroom with students (Mowbray & Preston, 2008). When the SMART Board is incorporated into lessons, it provides an engaging atmosphere for instructional delivery. The SMART Board can be used as a tool to strengthen student overall comprehension of the lesson and activity. It can be presumed that the visuals from the SMART Board, the hands on approach, and the collaborative learning all support the student’s ability to better comprehend the material taught. Lastly, the SMART Board can promote collaboration and meaningful learning experiences for students (Gast, Krupa, & Mechling, 2007). These findings relate to the research previously discussed, and also provide implications for classroom teachers.
Incorporating the SMART Board in classroom instruction is important for teachers because it offers students the engagement needed to stay focused and on task while being taught diverse lessons. When the SMART Board is implemented, students tend to participate more and have active and hands-on involvement (Gast, Mechling, & Thompson, 2008). Students enjoy using the SMART Board because of the unique features and the technology it has to offer. Students are interested in using and writing on the SMART Board; therefore, students volunteer to share their thoughts and ideas (Mowbray & Preston, 2008). Teachers are consistently looking for ways to encourage student participation. When using the SMART Board students have a tendency to participate more and continue to want to participate (Gast, Krupa, & Mechling, 2007). When educators find ways to implement the SMART Board, students will be more likely to participate and encouraged to contribute in class lessons.

Educators should consider using the SMART Board to provide students with an engaging outlet of instruction. Students can be exposed to a variety of different lessons involving the SMART Board that include videos, PowerPoint, and different animation tools. These unique lessons can stimulate different senses while still engaging students in meaningful tasks (Giles & Shaw, 2011). Student engagement and collaboration can increase when students take part in working together to create tables, projects, and writing assignments all with the use of the SMART Board (Mowbray & Preston, 2008). When the students are working together to gather ideas, answers, or opinions the SMART Board gives students the ability to collaborate and individually draw on each person’s perspective. The students can take turns writing down sentences or working on the SMART Board. The significance of the SMART Board is that most students are eager to use the SMART Board, making it easy for each person to play a role and contribute when working together.
Educators can also use the SMART Board as a way to introduce lessons, post notes for students, or even take attendance. The SMART Board can be used on a daily basis for the students to interact with. Using the SMART Board to introduce lessons can help students become motivated and engaged right away due to the SMART Board being so interactive and hands-on (Giles & Shaw, 2011). Posting notes on the SMART Board throughout the day for students can keep them focused and on a direct routine. For example, when students come in the room they know to look at the SMART Board, they can come up and complete fill-in-the blanks or look for directions in animation and color. Using the SMART Board for attendance is a great way for students to gain responsibility (Campbell & Mechling, 2009). Students going up to the SMART Board and clicking their name to say they are here, helps the teacher because it is one less thing she has to do and gives the students another opportunity to use the SMART Board in a unique way.

In my future classroom, I will implement the SMART Board as much as I can into my daily activities and classroom instruction with my students. It is my hope that with using the SMART Board students will find this technological device intriguing and fun to use. I want my students to be involved in technology as much as possible and be exposed to different types of technology. I would also hope to be an advocate for the SMART Board for my school. If my co-workers want to learn how to use the SMART Board or want more information or ideas about it, I will give them the tools needed to become an expert at implementing the SMART Board. The SMART Board is unique and engaging for students and I strongly believe that it can make learning more engaging, interesting and fun for students.

My study researched how SMART Boards encouraged student learning engagement in reader’s workshop. Relying on the sociocultural theory and New Literacy study, I learned that
literacy knowledge is constructed through tools teachers and students use in everyday life in and out of school; such as traditional texts or multimodal texts (Larson and Marsh, 2005). I have also learned that learning literacy is social in nature and society’s attitude towards what it means to be literate has changed over time (Gee, 2001). In order for students to be successful in these changes, schools must keep up with technological advances. Incorporating the SMART Board into teacher’s instruction will help support society’s beliefs in what it means to be literate.

To support my claim, I have researched several scholarly, researched based articles. The articles I have read have provided me with great insight into the benefits of technologies in the classroom, the role of technology within literacy, and teacher perspectives of technology integration. I have found that there are numerous benefits of integrating technology into the classroom and found that with proper training for teachers, technological devices would help to engage and motivate students to learn successfully (Frank, Lei, & Zhao, 2006). I have also found that technology plays a huge role in literacy. Teachers should begin to build on student’s enthusiasm for technology and use it to facilitate student’s success in difficult content areas; such as reading and writing (Giles & Shaw, 2011). There is a diverse prospective on integrating technologies in the classroom. Some teachers believe it is very important to incorporate technology and will do whatever it takes to make sure technology is being used in their classroom. However, some teachers believe their lack of familiarity and fear of not knowing how to create meaningful lessons with technology prevents them from doing so (Gast, Mechling, & Thompson, 2008). Therefore, it is crucial that teachers receive time to explore technology and meet with their peers to discuss different ways to incorporate technology into their lessons. The SMART Board offers teachers and students a technological device that likely increases student engagement and motivation, peer collaboration, and strengthens student comprehension. There
are numerous ways to incorporate the SMART Board into daily activities and lessons; when doing so the benefits will be remarkable.

Even though my findings supported much of what I have read, there are some things in my study I would like to have done differently. With more time, I would have liked to observe more lessons with a greater number of students. I would have preferred more time because it would have given me more research to support my claim. I would have also liked to teach a couple of the lessons myself to actually be part of the study to gain my own perspective on the difference of using a SMART Board and not using the SMART Board throughout the lesson. I would have also interviewed more students to gain their perspectives on the SMART Board and the lessons they were involved in. I feel additional viewpoints from the participants would have added to my data and gave more support to my research. The time constraints was a limitation to my study because I would have liked to explore this topic more in-depth, observing and analyzing more lessons with and without the SMART Board.

My study also leaves me with some unanswered questions. First, would using a greater number of students have affected my data and findings? My research was conducted with middle-school ages students, if I had done my research on elementary students would they have provided me with different results? Lastly, I only interviewed the teacher that I observed in the lessons, if I had interviewed more teachers, would their opinions about the SMART Board be the same or differ?

Although my research with the SMART Board was brief, the results have supported my belief that the SMART Board is a great technological device to use in the classroom to make student learning more engaging. When the SMART Board is incorporated into teacher instruction in meaningful ways, it can increase student engagement and their motivation to learn.
The SMART Board also offers a collaborative atmosphere for students to feel comfortable to interact with one another. Not to mention, the SMART Board can be used with diverse learners and help to support students at all levels. It is important to recognize that the SMART Board is a device that is easy to navigate and students find it fun and exciting to use.
References


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Appendix A

Student Background Questionnaire

Name: ____________________________

Grade: __________________________

Age: __________

Favorite Subject: __________________

What subject do you find most difficult? ______________

Favorite Hobby: ____________________
Appendix B

Name: _____________________________
Grade: ______________

Have you used the SMART Board before this year?   Yes or No

Do you volunteer to use the SMART Board when it is being used in a lesson?   Yes or No

When using the SMART Board, do you feel it helps you learn better?   Yes or No

What do you like about using the SMART Board?
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Describe your favorite lesson when the SMART Board has been implemented:
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

What features about the SMART Board do you like best?
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Do you feel there is anything confusing about the SMART Board?
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Do you feel your teacher struggles when using the SMART Board?
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Would you rather have a lesson with or without the SMART Board?
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
Appendix C

Interview Questions for Teacher:

1. Do you enjoy using the SMART Board during your lesson?

2. Do you feel the SMART Board is beneficial for your student's learning?

3. When teaching a lesson with the SMART Board, how is the behavior with the students throughout the lesson?

4. Are students more engaged when using the SMART Board?

5. How do you prepare a lesson when the SMART Board is being integrated?

6. Do you feel your students understand the content better when a SMART Board is integrated into the lesson?

7. Do you struggle to use the SMART Board at times?

8. Do you think the SMART Board enhances student's interest about the topic being taught?

9. Do you find that your students are more eager to participate when using the SMART BOARD?

10. What SMART Board features to find most intriguing to your students?
The Great Gilly Hopkins
Chapter 10

In this chapter, it is quite evident that there has been a change in Gilly's attitude. Answer the following questions about these changes. Write your answers in the boxes.

1. List some things that Trotter has done for Gilly to make Gilly see her in a new light.

   * made her realize that being mean is NOT always an option.

2. How is Gilly changing?

   * She's starting to be more nice and starting to become more friendly to W.E.!
     (Lighting up)!

3. If you could give Gilly some advice right now, what would you say to her?

   * I would give her the advice, to be nice more often and that she'll see her mother one day! (very soon)...

4. What do you think about Gilly's grandmother?

   * I think Gilly's grandmother wants Gilly to come live with her and she's different (worse).

5. Predict what you think will happen next.

   * I think that Gilly's grandmother will try to get her to become part of her family!
Appendix E

Student Work: Lesson without SMART Board

The Great Gilly Hopkins
Chapter 10

In this chapter, it is quite evident that there has been a change in Gilly's attitude. Answer the following questions about these changes. Write your answers in the boxes.

1. List some things that Trotter has done for Gilly to make Gilly see her in a new light.

   (Your her anything she wants)

2. How is Gilly changing?

   She helping as many people as she can

3. If you could give Gilly some advice right now, what would you say to her?

   Be very nice

4. What do you think about Gilly's grandmother?

   She is nice

5. Predict what you think will happen next.

   Her grandmother was going to try to take her
Appendix F

Student Interest Questionnaire

1. Do you feel the SMART Board helped you to become more interested in reading chapter 10 of *The Great Gilly Hopkins*?

   Yes  OR  No

2. Did the SMART encourage you to participate more throughout the lesson?

   Yes  OR  No

3. Did using the K-W-L chart on the SMART Board help you to remember important parts in the chapter?

   Yes  OR  No

4. Did writing on the SMART Board encourage you to want to participate in the writing activity?

   Yes  OR  No

5. Will you read the next chapter tonight knowing you will have a writing activity on the SMART Board tomorrow about this chapter?

   Yes  OR  No
## Appendix G

### Writing Rubric

<table>
<thead>
<tr>
<th>Category</th>
<th>Excellent 5 pts</th>
<th>Very Good 4 pts</th>
<th>Average 3 pts</th>
<th>Below Average 2 pts</th>
<th>Poor 1 pt</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organization</strong></td>
<td>Excellent Composition is well organized. Topic is discussed thoroughly.</td>
<td>Very Good Composition is generally logical. Most information on topic included.</td>
<td>Average Composition is somewhat illogical and confusing in places. Information on topic lacking.</td>
<td>Below Average Composition is poorly organized. Information is missing.</td>
<td>Poor Composition is unorganized. Information is incomplete and not pertinent to topic.</td>
</tr>
<tr>
<td><strong>Comprehensibility</strong></td>
<td>Excellent Reader can always understand what the writer is trying to communicate.</td>
<td>Very Good Reader can understand most of what the writer is trying to communicate.</td>
<td>Average Reader can understand about half of what the writer is trying to communicate.</td>
<td>Below Average Reader can understand less than half of what the writer is trying to communicate.</td>
<td>Poor Incomprehensible throughout.</td>
</tr>
<tr>
<td><strong>Spelling and Accents</strong></td>
<td>Excellent Writer uses grammar point correctly. There is 1 or less misspelled word.</td>
<td>Very Good Writer usually uses grammar point correctly. There are 2-3 words misspelled.</td>
<td>Average Writer makes frequent mistakes with grammar point. There are 4-5 misspelled words.</td>
<td>Below Average Writer uses grammar point incorrectly for most of composition. There are 6 words misspelled.</td>
<td>Poor Writer uses grammar point incorrectly throughout. There are more than 6 words misspelled.</td>
</tr>
<tr>
<td><strong>General Accuracy (Grammar)</strong></td>
<td>Excellent Writer uses correct grammar, word order, and punctuation (above 95% of composition).</td>
<td>Very Good Writer usually uses correct grammar, word order, and punctuation (95% - 90% of composition).</td>
<td>Average Writer makes frequent mistakes with grammar, word order, and punctuation (90% - 80% of composition).</td>
<td>Below Average Writer consistently makes errors with grammar, word order, and punctuation (80% - 70% of composition).</td>
<td>Poor Writer consistently makes errors with grammar, word order, and punctuation (less than 70% of composition).</td>
</tr>
<tr>
<td><strong>Requirements</strong></td>
<td>Excellent Writer fulfills the requirements of the tasks.</td>
<td>Very Good Writer fulfills most of the requirements of the tasks.</td>
<td>Average Writer fulfills some of the requirements of the tasks.</td>
<td>Below Average Writer fulfills very little of the requirements of the tasks.</td>
<td>Poor Writing task is incomplete.</td>
</tr>
</tbody>
</table>