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ACQUIRING READING COMPREHENSION SKILLS IN THIRD GRADE
STUDENTS THROUGH THE SUPPORT OF WEB BASED
INTERACTIVE TECHNOLOGY

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Education:
Instructional Technology

by
Lisa Christine Harich
March 2008

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Approved by:



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3/4/08
Date

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ABSTRACT

Research shows that students struggle in developing good reading comprehension skills. Their skills are inadequate to be considered proficient readers as a whole. The purpose of this project was to help teachers support student learning in reading comprehension while incorporating technology into their instruction. The website, Master Readers, was developed to help meet the needs of struggling third grade students in one classroom in the Upland Unified School District. The site focuses on three key areas in reading comprehension that were identified as problematical for third grade students. The areas of focus are inference, finding detail, and identifying the author's purpose in writing. Using the ADDIE model of Instructional Design Theory a working product was created and incorporated into regular classroom instruction. The project discussed explains the parameters in creating the website and its use in classroom instruction. As with any form of technology there were limitations and struggles, however the impact that the website created was exciting. Though there was not a profound impact on improving student achievement, the increase in student motivation and engagement with text was exceptional. A goal in teaching is to grow

students to mastery in various subject areas, including reading. With this learner centered web based learning tool students are motivate to obtain the goal of being Master Readers.

ACKNOWLEDGMENTS

An "Acknowledgement" is an opportunity to express gratitude and thanks. There are no project endeavors that are actually accomplished by a single person; rather most successful ventures are a combination of love, support and dedication. This project is no exception. My thanks go to many people who suffered and supported my efforts and mostly to the staff of California State University, San Bernardino. My special thanks go to Dr. Eun-Ok Baek and Dr. Brian Newberry for their extended patients and support for the development of this high quality project. Their ability to deal with my every question, email, and rewrites were highly appreciated. However, my heart goes to my loving husband, Thomas. He was there throughout this endeavor. He showed immense patients, support and understanding as I worked night and day on this project. He also was my biggest critic as he reviewed each and every page I created to ensure its accuracy. And lastly, I have been blessed with a supportive family who were always there to support me with their love and words of encouragement.

DEDICATION

This thesis is for those who believe that
"When You Wish Upon a Star," dreams can come true.

To my loving husband, and supportive family.

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CHAPTER ONE

BACKGROUND

Introduction

For years teachers have pondered over the problem of how to assist children in becoming better readers: reading more effectively, comprehend better, and how to motivate the students to enjoy reading. Congress has mandated an increase in the reading rate of the children through the National Reading Panel (NRP) established in 1997 (National Reading Panel, 2000). The panel stated that for children to become effective readers they must apply comprehension strategies to better understand and enjoy what they are reading (National Reading Panel, 2000). Reading covers several areas that are greatly important when considering the lessons needed to raise reading rates. No single program, comprehensive or otherwise, "...will be sufficient for all instructional reading needs" (Schacter, 1999, p. 54). Due to this concern, teachers are researching new ways to teach children to read. Mixed with traditional teaching methods and new methods, such as technology, colleague teachers of this research hope to meet these expectations (Personal communication, 2007). One of the most important aspects of a child's future in school is .

how well they read, spell, and write. According to Fasting and Halaas (2005), "Success in reading and writing is of enormous importance to pupils' motivation at school, to their learning experience, and to their chances of succeeding academically and socially" (p. 28).

Statement of the Problem

By the 2013-2014 school year the federal government has mandated that all students should perform at a proficient level on state testing, which means that all students must maintain or obtain a 70% or better on state testing (Great Schools, n.d.). The California Standardized Test (CST) assesses student achievement in two major areas, Language Arts and Mathematics. More areas of assessment are being added to the testing however they do not apply to every grade level as the Language Arts and Mathematics sections do. In California, as a whole, it is common to see that the scores in the area of Language Arts are lower in average percentage than Mathematics. In 2005, 476,819 students were tested in language arts, 31% passed with a score of proficient (70%) or higher, while 68% scored at a basic level or below (California Department of Education, 2007). In 2006,

466,735 students were assessed and 36% were deemed proficient or better, while 64% scored a basic level or lower (California Department of Education, 2007). By comparison in the area of mathematics, in 2005 476,527 students were tested and 54% passed with a score of proficient or higher, while 45% scored at a basic level or below (California Department of Education, 2007). In 2006, 466,391 students were given the exam and 58% of those obtained a proficient score or higher while, 43% tested at a basic level or below (California Department of Education, 2007). The CST exam is not the same as the National Norm Test, however the California Academic Test (CAT6), which is given simultaneously with the CST in grades three and seven can be compared to the national standards. Test scores from the CAT6 exams show the same pattern. In 2006, in the area of language arts, 51% of the 464,980 students tested at the state level performed at or above the 50th national percentile rating (NPR), with 14% being above the 75th NPR (California Department of Education, 2007). 65% of those same students performed at or above the 25th NPR (California Department of Education, 2007). In the area of mathematics during the same testing year 464,980 students were tested and 63% scored at or above the 50th NPR, with 18% scoring in the

75th NPR (California Department of Education, 2007).

Those scoring at or above the 25th NPR made up 79% of students tested (California Department of Education, 2007).

Based on current scores of the CST and CAT6 exams a high percentage of the students are scoring below the proficient level in language arts. Specifically in the area of reading comprehension students score on average 56% (Achieve Data Solution, LLC, 2005). Students need to better learn how to understand what they are reading in order for their scores to improve. Research states that early interventions in primary grades can improve student reading comprehension skills (Pressley, 2001). The problem is that students do not receive enough practice time to develop the skills they need to be better readers. Students need more learning opportunities and practice to develop mastery in the areas of language arts.

Purpose of the Project

The purpose of the project is to develop an instructional tool, which will help third grade students in building their reading comprehension skills. The instructional tool will allow for more practice time to be

worked into the day after a direct instruction lesson has been delivered. Students will be able to practice their reading skills in an interactive format rather than simple lecture or discussion. They will also have access to tutorials to review concepts that they need extra assistance with. Ideally students will gain more confidence in their reading and become more careful readers.

Significance of the Project

The problem with students performing below a proficient level is significant because good reading skills are needed in all other subject areas from mathematics to social studies. Students need more time to practice and instructors are limited by time, thus using a tool such as this will help to provide more time for instruction even though the instructor is not physically there.

Using PowerPoints as both tutorials and interactive tools can bring more practice opportunities into the classroom. Teachers in this field can use this model in all subject areas. Students always need more practice time because of the rigor and intensity that accompany our

state standards. In the global sense instructional tools, such as the one created, can be used in all classroom settings to meet the needs of the students. In terms of a local level this particular instructional tool could be good for all third grade students in the school district.

There is also the possibility that the tool could be used in other school districts so long as their language arts curriculum is based on the Houghton Mifflin curriculum.

Limitations

During the development of the project, a number of limitations were noted. These limitations are the following:

1. Keeping the website topics specific to the area of need so not to be overwhelming. The area of language arts encompasses topics from reading comprehension to grammar skills. Keeping the website targeted to specific areas in reading comprehension helped in creating a focused learning tool.
2. Using new software programs in the development phase posed difficulty to the creator in having to learn a new program for development. It also

caused compatibility issues with the older computers that are often used in the classrooms today.

3. Time management was an issue in creating, implementing, and regularly using the website for instructional purposes. The instructional day is full of standards that need to be taught not only in language arts but in other subject areas as well. Learning to work in the technology as part of the instruction not as an extra activity took time and preparation. Students too, had to take time to learn how to use the technology so that they could complete independent activities later on.
4. Being sure that all students had equal access to the website and that all students understood the expectations and had the skills needed to use the website correctly for their benefit.
5. Other limitations included having functioning computers so that all students could work simultaneously in the computer lab setting. The computers had to be updated regularly and monitored daily to avoid having issues where computers would be down.

6. Having the four computers in the classroom all running properly was another issue so that students could work through their assignments individually during their center work periods. Most classrooms do not have that many computers accessible to students. It was necessary to bring in computers from outside resources and have those computers looked over by district personnel to be sure that they were allowed to be in the classroom.

Definition of Terms

The following terms are defined as they apply to the project.

1. ADDIE process: ADDIE stands for - analysis, design, development, implementation, and evaluation. The ADDIE process refers to the instructional design model where developers work through specific phases of development when designing programs, software, or tools to be used in various career fields.
2. Author's purpose: In reading comprehension strategies identifying the author's message and

why it was written is considered the author's purpose. An author may write to entertain their reader, to convey a lesson or message, or to persuade an audience of his/her own opinion on a topic.

3. California Standardized Test (CST): This test is used annually to test students' progress in grade levels 2-12. Students take the tests in sections over a two-week period in May. Students are tested on grade level standards in the areas of language arts and mathematics. Students in the third, fifth, and seventh grades receive additional testing in other subject areas.
4. Finding detail: A reading comprehension strategy where readers identify details in a story that support the main idea. Details can be made of examples, or evidence as to why particular things happen in text or why characters act individually.
5. Inference: A reading comprehension strategy where readers make a calculated guess as to why events are happening in a story, or why characters feel the way they do in a story based on clues given to them through reading. Often students are required

to draw a conclusion from what the author has written based on the clues given in the reading.

6. Language Arts: A core curricular area of study in all grade levels K-12. This subject includes: reading, writing, spelling, and grammar.

7. PPT: As used in the Master Readers flowchart, is the abbreviation for a PowerPoint document.

CHAPTER TWO

REVIEW OF THE LITERATURE

Introduction

In education today students are struggling most with reading development. Researchers have stated that many young students in our country are not proficient readers. "Forty percent of the U.S. fourth grade children read below a 'basic level' and have 'little to no mastery of the knowledge of skills necessary to perform work at each grade level'" (Jitendra, et al., 2004, p. 423). Due to the increase of students performing at or below a basic level of mastery, educators are developing reading lessons^{that} that enhance their reading instruction. There is much potential in technology to meet the needs of these low performing students.

The literature reviewed discusses many ways in which instructional developers and educators alike are trying to meet the needs of our students. There are many benefits to bringing in technological tools to assist students in bridging the gap. Along with those benefits there are always challenges in the form of funds, support, and training. There have been several successes in the area

of educational technology, which have benefited the learning environment of elementary students.

Research supports the fact that good teaching cannot be replaced by technology. Reading skills can improve with explicit instruction and with the use of supplemental tools created by instructors (Pearson & Duke, 2002). Technology tools are established and created to assist students in their learning environment. There are many effective teaching strategies that benefit students in developing their skills to comprehend text. Strategies like direct instruction, small group instruction, and guided reading coupled with technology can benefit students greatly. Research being done in neuroscience "...provides us with an opportunity to not only design programs that target what struggling readers need instructionally, but also determines the effectiveness of the instruction..." (MacGregor, 2004, p.2). There is evidence to support the claim that technology can help students of all learning levels to perform better as a whole.

Technology Tools to Support Reading Comprehension

Benefits

Through the studies of neuroscience we are better able to create instructional designs that help to shorten the learning gap in young readers. Scientists in the neuroscience fields have observed instruction that used technology to assist in the "...[development of] the sound-symbol correspondence knowledge to a level of automaticity" (MacGregor, 2004, p. 1), which in turn built up the "...previously weak functional connectivity in the brain..." (MacGregor, 2004, p.1-2). Knowing this type of information allows designers to develop programs that are specifically geared for certain types of learners, and can target the needs of a struggling reader. Learning can then become more personalized.

With the insights that neuroscience is bringing about we are learning that the brain functions more productively with more stimuli. How the brain learns is a new discovery. "The more sense we involve in learning, the more brain processes that are activated...the more 'sticky' the learning process" (MacGregor, 2004, p. 1). This statement is true in the educational setting today. When educators bring in more stimuli to their lessons, in the

form of manipulatives, posters, videos, audio, or technology, "...students are more apt to retain the knowledge that the teacher is presenting" (Epp, 2006, p.417). Students need to be stimulated and engaged in their learning if they are to retain the information.

Many studies show kids need to rest their minds from incoming information to process what they have learned (Holzberg, 2005). In the standards based learning environment the rigor and expectation level for students is extremely high. Concepts are taught one on top of another because of the demand and time frame placed upon educators by state standards and state testing. Educators are not able to provide students with time to absorb what they learn. "Interactive computer games give kids time to sort out and absorb what they've learned" (Holzberg, 2005, p. 42). The games provide time for students to apply the skills they have been taught. It is a fun and motivational way for students to use their new skills. Using a game approach rather than the traditional paper pencil, students are more engaged in their application of a skill (Holzberg, 2005). Far too often we are sending students on without mastery of key concepts.

The current trend being seen in curriculum development is the inclusion of technology. Many

publishers are including technology as part of their packaged programs from language arts to science and social studies. However, these "...separately packaged..." components like videos, audio and computer software "...fail to connect a reader immediately to digital content..." during the actual learning process (Mott, Benus, & Neal, 2005, p.1). Technology needs to be incorporated directly into the instruction of our young learners in a way so that the components of a program are integrated not separate from one another.

Schools across the United States have developed various programs and strategies to add technology to the tools children use regularly to obtain information and to instruct children in the new literacies (Teale, Labbo, Kinzer, & Leu, 2002). Students have and can benefit from the support, and the drill-and-practice, that technology can provide resulting in earlier mastery of a concept. Correctly used, computer-assisted instruction can permit students to discover more and at a quicker pace (Guthrie, 2003). In the end the goal is to build a strong educational foundation incorporating technology, which will support the growing learner.

There are many advantages to incorporating technology into a students' learning environment. Faculties in the

Miami-Dade County School District have seen great improvements in their students in areas other than academics (McClain, 2000, p.16). Students are coming to school regularly, lateness and absences are down from previous years, in addition to behavior and classroom management having improved (McClain, 2000, p.16).

Challenges

The National Center for Education Statistics conducted research on the lessons that were integrated into the classroom through the use of computers. They found that only 20% of the teachers were ready and able to use technology integration in the class and about 50% were not (Smerdon, et al., 2000). Students can only gain knowledge from the use of various technologies if teachers are trained. Boxie (2006) stated that, "Trained teachers make a difference in the success or failure to properly integrate computers into the classroom curriculum" (as cited in Bird & Rosaen, 2005; Grabe & Grabe, 2004; Pope, Hare, & Howard, 2002; Thorsen & Barr, 1997).

Though technology can provide great benefits academically for students of all ages it is not equally accessible. Many students are at a disadvantage due to lack of funds or training for teachers to use the

technology appropriately. The effects felt by schools include "...the ability to purchase hardware and software, Internet access, and the technological know how of teachers and curriculum personnel" (Teale, Labbo, Kinzer, & Leu, 2002, p. 654). Other challenges include time as well as equitable accessibility, readily available software to support learning, and ways in which to incorporate technology into everyday instruction (Oakley, 2003). Many educators are overwhelmed with the idea of adding more work to their already full plates. Building confidence in instructors and encouraging them to incorporate technology is also a challenge facing developers.

Another concern that researchers have was not every school is not going to have the same technological capabilities. Teachers who would like to invest in these software programs are unable to because the computers at their school site are not compatible with what the software requires. Technology can often times be challenging when the cost is so high, the servers go down, hyperlinks do not work, or the computer does not read the information correctly (Boxie, 2006). This can be very troubling to a teacher that is learning how to use the software and trying to learn the computers ability at the

same time. Some schools may have higher processing computers and more technology and others may be operating off a slower processor and lack other technological materials.

Some studies have shown that "nine out of ten U.S. public school classrooms are connected to the Internet" (Guthrie, 2003, p. 15a). Teachers complain that even though they are given the equipment to incorporate the technology, they themselves have little to no background on how to properly meet these goals. "America's instructional-technology game plan has been simple: Stock schools with equipment and teachers will use it" (Guthrie, 2003, p. 15a). Glenn M. Kleiman, author of "Myths and Realities about Technology in K-12 Schools," agrees that there has been an influx in the money devoted to stocking schools with technology equipment, with little attention being spent on how to incorporate it. He believes that focused educational goals will get schools a significant return on their investment in incorporating technology into the school learning environment (Kleiman, 2007). Kleiman also states that teachers do not have the software needed, the technical support is generally inadequate, and the accessibility to computers is inconsistent (2007). These are all things, which need to be addressed in order

for technology to be effectively incorporated into instruction.

Other negative findings have been noted from researchers on the impact of educational technology on students' achievement. In many cases technology "...did not have positive effects in every area in which [support technologies] were studied" (Schacter, 1999, p.46). It has also been stated that technology in schools has "...shown too few results for schools to be using it with vigor" (Schacter, 1999, p. 47).

There are many theories being tested as to the benefit or detriment of using technology in everyday learning. Several researchers have shown that progress can be made through the use of technology. Instructional designers are using the research that has been conducted thus far to support their integration of technology into the curriculums. Some curriculum designers are even including computer programs that support and enhance student learning. This research will support and reinforce the findings that so many other researchers are discovering. Technology can and will help students go further in their education.

Examples

Roth and Beck (1987) were among the first to show that computer programs designed to provide drill-and-practice in word recognition and decoding could result not only in improvements in those skills but also in better comprehension. Many programs have been developed which incorporate the use of technology to support the development of reading comprehension. Due to the new knowledge being gained by designers in the area of neuroscience new modes of technology are being developed to enhance the future of teaching. Small instructional instruments that use Nanotechnology, which can be carried with a student, could be used to support the reading process by making information or practice material more readily available. Students could have a microscopic computer with them at all times to help drill themselves on high frequency words or connect to "...international database of networks of information for in-school or homework projects" (Rickelman & Henk, 1990, p.210).

Another opportunity presenting itself is the use of Hypertexts to build reading skills. Hypertext "...allows text screens to be linked to each other in many flexible ways" (Rickelman & Henk, 1990, p.212). This type of design permits readers to "...set up unique reading/learning

situations that depend on the reader's prior knowledge..." (Rickelman & Henk, 1990, p.213). A student could be reading an article on volcanoes and not understand the concept of lava. There then would be a button that could take a student to another screen that describes what lava is at their level of knowledge. Designers are trying to make learning obtainable for all levels of readers. Hypertext can enhance reading by the use of pictures and sounds associated with the written words therefore elaborating the meaning found in text and assisting with comprehension development (McNabb, 2005). Hypertexts make "...learning more individualized than previously thought possible" (Rickelman & Henk, 1990, p.222). With the advancements in designer knowledge and the confidence that is being built in educators, technology can help support our struggling readers.

Another example of the use of hypermedia is the concept of Media-rich paper (Mott, Benus, & Neal, 2005). This concept takes traditional written documents and places them over a touch-activated interface. The preprogrammed computer and software are linked together to combine the components of the written text with digital media to help students hear, see, or experience what they are learning (Mott, Benus, & Neal, 2005). This concept

can reach the different learning needs of students in any grade level. Learning becomes more personal.

Programs like *Wordshark*, *Gamequarium*, *Accelerated Reader*, or *Starfall* have shown to be beneficial to student learning. These programs though engaging for students are not considered all-inclusive tools for enhancing the development of student reading comprehension skills.

Wordshark is a "...freestanding, flexible learning tool designed to be used as part of a structured program of literacy instruction" (Hassett, 2006, p. 136). The basis of the program is to teach and drill students in reading and spelling. The idea of making the program a game motivates students to stay engaged with the content (Singleton & Simmons, 2001). The program is "...being widely used in England as part of their curriculum" (Hassett, 2006, p. 138). Jan Pouistte of Editor Solutions, Britain, stated "This brilliant program teaches phonics for spelling and reading in a fun way... It is a program no school and parent should be without" (Singleton & Simmons, 2001).

Gamequarium is another example of a success in the incorporation of technology into the learning environment. *Gamequarium*, at www.gamequarium.com, offers learning games to students of various ability levels. Students and

teachers can go to this website and play games or use the instructional tools created by Diana Dell, and associates to use with the regular classroom instruction. Dell states "Technology...engage[s] students more than any other educational tool. Students must be involved in order for learning to take place." It, like *Wordshark*, is engaging and highly motivating for students in their learning process.

Starfall, at www.starfall.com, houses interactive multimedia games to build comprehension and teach phonics to beginning readers. Teachers can use the learning opportunities offered at Starfall to enhance their students learning experience. Students can extend their learning at home or practice time in the classroom. "Educators [could] visit the Download Center for reading and writing instructional materials" (Holzberg, 2005, p. 42).

One other commonly known program that has been created to assist in the building of reading comprehension is the Accelerated Reader Program (AR). "AR computerized reading management program is the most widely used program of its type in the country" (Brown, 2001, p. 5). In the AR program students read books at their independent ability level and then take ten point quizzes on their

content. The program is wonderful for motivation like the others, however it lacks depth in its value. Students want to read and gain points so as to move to the next ability level and read other books that interest them. The questions that are asked are simplistic and go no further than the first two levels of the Blooms Taxonomy of Comprehension. These two levels are remember and understand, which cover the basics of stating the setting, characters, and major points of the plot. Students are not asked to apply or analyze past the first layer of the text. Research has shown that "...after one year of being exposed to the AR program there is no statistically significant increase in reading comprehension scores..." (Brown, 2001, p. 11).

Though there are programs in the education field that incorporate technology the usefulness is still developing.

Educators and designers are looking to develop more effective ways in assisting students to build their reading comprehension through the use of supportive technology. Users of programs like the ones above need to use them in correspondence with strong instruction in the area of reading comprehension.

Instructional Strategies for Reading Instruction

Direct Instruction

In classroom settings today reading comprehension is generally taught using the direct instruction approach. Students benefit from "...explicit [direct] instruction..." where instructors walk students through the process of acquiring the knowledge they need to be good readers (Pearson & Duke, 2002, p. 247). The use of modeling and guided reading helps students learn to read text from different perspectives.

The concept of direct instruction is:

Instruction begins with a target behavior that is analyzed or broken down into specific tasks. Students are taught each component of the task associated with the target behavior. The teacher models the desired behavior, provides practice and feedback at each step, and assesses whether reteaching is needed. (Ryder, Burton, & Silberg, 2006, p. 179)

"Reading involves attention to many features of text, such as word meanings (semantics), phonological information, sentence context, and print itself, or orthography..." (Cartwright, 2006, p.628). This concept

cannot be taught without the use of explicit instruction.

Direct instruction allows the teacher to show students what is expected of them, how to find answers and how to use the text as a resource for answering questions at any level of comprehension. Good modeling is also important, as students need to be guided through the process and taught what good reading looks like, and sounds like.

Small Group Instruction

Ryder continued stating that small group instruction or "Cooperative learning, reciprocal teaching, collaborative problem solving, and conversational discussion groups use social interactions and group dynamics to scaffold or support children's learning" (Ryder, Burton, & Silberg, 2006, p.179). These strategies within the area of small group instruction allow students to discuss what they have learned. This in turn allows for further comprehension or better understanding to evolve. Students can learn a lot through talking about a text. The methodologies of direct instruction are still used within the small group settings to ensure that good learning is transpiring (Ryder, Burton, & Silberg, 2006, p. 183).

Interactive Strategies

Along with the above instructional strategies in place students stand to gain experience through the use of interactive strategies. These strategies can be from small group discussions and conversations to instructional tools in the technology field. "Technology profoundly affects the learning and teaching of literacy, as well as the nature of literacy itself" (Teale, Labbo, Kinzer, & Leu, 2002, p. 654). Students need practice in order for mastery of concepts to occur in any area of learning. Times set aside for interaction between groups, individuals, or instructional tools help to aid in student mastery. "Reading and interventions should start at an early age and continue through out their educational experiences" (Iddings, Ortmann, Pride, & Pride, 1999, p. 11). Interactive tools whether technological or otherwise can help students in acquiring necessary skills for success.

Instructional Design and Web Guidelines

Web Design Guidelines

In order to create an effective teaching tool it will be important to follow guidelines. Jakob Nielson, a web

usability specialist, has set forth guidelines that aid in creating a valuable web based instructional tool. He updates his list of the "Top Ten Mistakes in Web Design" yearly as web-building tools become more accessible and used by less experienced creators. He has given a list of the ten things to avoid when creating a web page as follows:

1. Using Frames
2. Gratuitous Use of Bleeding-Edge Technology
3. Scrolling Text, Marquees, and Constantly Running Animations
4. Complex URLs
5. Orphan Pages
6. Long Scrolling Pages
7. Lack of Navigation Support
8. Non-Standard Link Colors
9. Outdated Information
10. Overly Long Download Times

(Nielsen, 1996)

Though this particular "Top Ten List" is from 1996, the items to be avoided are still very relevant today. Avoiding these common mistakes will help create a useful and engaging site or instructional tool (Nielsen & Sano, 1994b). Designers want and need to create tools that are

engaging, user friendly, and motivating to learners. Students need to want to learn using the tools provided. Other instructional designers agree that creating a website can be done by people who are not fluent in technology (Borges, 1998). Sites should be kept simple and easy to navigate (Borges, 1998). A web page should be engaging and stimulating but still allow the user to read the text that is present. High uses of animation are not recommended but rather inviting colors and contrast used be used to create an inviting learning atmosphere (Nielsen, 1996). Using guidelines such as these will be necessary to produce the ideal instructional tool.

Instructional Design

In creating the web based instructional tool two processes of Instructional Design will be used: ADDIE and Rapid Prototyping. ADDIE (analysis, design, development, implementation, and evaluation) will be coupled with the strategies of Rapid Prototyping where several of the steps occur simultaneously with one another; the purpose for this will be time management.

Rapid Prototyping begins with the creation of a vision from a problem. Then it is explored with "...conceptual prototypes" (Cennamo & Kalk, 2005, p.8). "Experiment(s) with hands-on mock-up prototypes..." are

conducted and then "...pilot testing..." occurs with actual working prototypes (Cennamo & Kalk, 2005, p.8). As the prototypes are created in the early stages analysis is conducted to determine the needs of the intended audience.

These early stages are necessary to create an effective learning tool.

Often these two design models are coupled because of the need for both. Time is always of concern when instructors are trying to find a solution to a learning problem. With the use of the Rapid Prototyping model there is an "[emphasis on] ...feedback from learners early in the design process" (Cennamo & Kalk, 2005, p. 282). In the case of the traditional ADDIE process, the learner input does not occur until much further, in the implementation process, making it more difficult and time consuming to go back and revise the instructional tool for use.

Summary

There has been much research conducted on the effects of using technology in the classroom. Congress has mandated a rise in the reading rate of the children through the National Reading Panel (NRP); created by the National Institute of Child Health and Human Development

Reading. It covers several areas that are greatly important when considering the lessons needed to raise reading rates. These areas of concern are phonemic awareness, phonics, fluency, vocabulary, and comprehension. "Additional findings from the panel suggest computer technology can be a valuable tool when used as an instructional support..." (Pearman & Lefever-Davis, 2006, p. 311). Research suggests that the use of technology can help to raise the reading ability in the youth and meet the standards from the state. "Programs that are mastery-driven or require students to demonstrate task proficiency in terms of accuracy and fluency will move student progress forward, while programs that only require accuracy will not achieve their desired learning" (MacGregor, 2004, p. 1-2). Educators and designers need to be specific to the skills that intend to be improved upon when choosing technology to enhance their instruction.

Research is supporting the idea that technology benefits learning because of the wide range of resources for both student and instructor use. Modern technology does have great potential to improve teaching and learning, its success will be based on "...how we define educational visions, prepare and support teachers, design

curriculum, address issues of equity, and respond to the rapidly changing world" (Kleiman, 2007, p. 2-3). These are some of the issues that instructional designers will have to take into account in their developments. Though these developments will not happen over night, the age when an elementary classroom is capable of effectively incorporating technology into the regular instruction is not far off. The instructional tools developed need to follow guidelines so that an engaging and effective tool is produced. The key found throughout in research is to couple good teaching strategies in reading comprehension with effective technology learning tools.

CHAPTER THREE

PROJECT DESIGN PROCESSES

Introduction

In trying to meet the needs of third grade students and the need to improve upon their reading comprehension skills a website was created which focuses specifically on three areas in reading comprehension: inference, finding detail, and author's purpose. These three topics are the most difficult in the area of reading comprehension. Students need more time to practice the skills they acquire during language arts instruction. Being that this subject area is more abstract than that of mathematics, practice time in using the strategies learned is important for mastery of the concept to occur.

The website created is titled Master Readers, located at www.mastereaders.com, and a CD of the project can be found in appendix A. This title is significant because as teachers we are trying to build students to be master readers. The site itself houses two forms of learning tools that students and/or teachers will use. First are tutorials, which are used during regular instructional time. Second are PowerPoint presentations, which were created as self-directed activities for students to work

through to practice using the skills they learned from the directed lessons in class.

Students will use the site to build their skills in the three named areas of reading comprehension. The need to improve upon student learning in this subject area is continuing to be an issue. Students can gain mastery from the use of this instructional tool and will be motivated to continue becoming master readers.

Analysis

The analysis process for this project was made up of several steps. Data collection began with determining the needs description, or "...the analysis of a performance problem..." (Reiser & Dempsey, 2007, p. 14). This data came from examining test scores from the previous years' CST exams. Further learner analysis was conducted by means of the "...derived analysis method..." (Cennamo & Kalk, 2005, p.29). Collection tools such as online surveys and interviews were used to gather the information from participants. Data was gathered to better understand the different needs and ability levels of the purposed users of the project.

Based on the analysis that has been conduct several factors have been determined. The children are third graders; age eight years old, located in the Upland Unified School District. The class consists of twenty students and one teacher. There is an aide that comes into the room during a daily specified intervention time to help work on vocabulary development with the English Language Learners and other low performing students. The setting is in a traditional classroom where students are paired together in their seating so that some cooperative learning can occur. The room itself is very engaging with student work on the walls. Students enjoy reading and seeing other student papers. The expectations for good behavior and professional student conduct are emphasized and rewarded daily. Students are highly motivated and are challenged in their environment to perform to the best of their abilities. Students still however struggle with retaining reading comprehension skills.

Upland Unified School District uses a reading program published by Houghton Mifflin. This reading curriculum comes with several supplements that the teachers can incorporate into their lessons to help the students to read. Each lesson has a skill focus which also includes a spelling component, grammar, challenge reading selections,

lower skilled reading selections, black-line masters for teachers, supplemental books that follow the skill focuses, audio books, and assessments. The teacher for this class already uses all of these supplements and manipulatives in her daily lessons.

Through interviews with colleague teachers it was determined that in the third grade classrooms at Magnolia Elementary School reading comprehension is a consistent area of breakdown when students are tested (Signorio, C., & Gleason, T., Personal communication, January 18, 2007).

The analysis investigated many areas of CST scores from previous years and interviews with both colleagues and students. Due to the fact that the analysis and the project itself included observing and using third grade students a full IRB was composed for and granted by the California State University, at San Bernardino Institutional Review Board (Please see Appendix B). From there questions were developed for an online survey, which focused on teachers and their knowledge of basic technology. Additional surveys were created and linked to the website for alpha testing.

The CST scores from 2005 and 2006 in the area of language arts aided in determining the websites concentration areas. State, county, district, and local

school scores can be found at the California's Department of Education website, located at <http://www.star.cde.ca.gov>. Data was gathered from this site on third grade students in the 2005 and 2006 testing years and examined. The language arts portion of the CST is broken down into five areas - word analysis, vocabulary development, reading comprehension, written and oral conventions, and writing strategies. Focused on Language Arts, of the 476,819 students tested at the state level in 2005, 68% of those students were performing at a basic level or below, in terms of percentages this relates to students performing below a 70% proficiency (California Department of Education, 2007). In 2006, 466,735 students were tested and 64% were performing at a basic level or below. In San Bernardino County the percentage of students achieving a proficient score in the area of language arts was lower. In 2005, 75% of the 32,358 students tested were scoring at a basic level or lower (California Department of Education, 2007). In 2006, 31,752 students were tested and 70% were scoring at a basic level or below (California Department of Education, 2007). Though there are improvements in the percentages yearly the amount of students still not performing at the needed proficiency level is disheartening. In a more

narrow range, the Upland Unified School District also showed similar results. In 2005, 875 third grade students were tested; 56% of those tested performed at or below a basic level of achievement (California Department of Education, 2007). In 2006, the results were nearly the same, with 896 students tested and 54% scoring at or below the basic level (California Department of Education, 2007). It is clear that without some type of change in the instruction delivered, students will not meet the goal set forth by the NRP and the federal government by the school year 2013-2014.

The information gathered from the various levels: state, county, and district, did not warrant a specific area of concentration in language arts to be pin pointed.

Using a data collection program, Data Director, which as been acquired by Upland Unified School District, a more specific look into student scores was reviewed. At the local level language arts is also broken down into five areas of focus: Word Analysis and Vocabulary Development, Reading Comprehension, Literary Response an Analysis, Written Conventions, and Writing Strategies (Achieve Data Solution, LLC, 2005). Reading comprehension is the second largest area of focus next to Word Analysis and Vocabulary Development. Reading comprehension makes up 23% of the

overall CST test where Word Analysis and Vocabulary Development make up 31%. Educators can look up specific reading comprehension questions and see what standard they are related to in order to determine areas of weakness in this subject matter. Based on this information the concentration area became clearer.

Upland Unified School District also assesses students in the area of Language Arts every Trimester. The district English Language Arts (ELA) test is based on specific language arts standards and each question is broken down to assess a specific standard. The standards assessed in reading comprehension are as follows:

2.0 Reading Comprehension and Analysis of Grade-Level-Appropriate Text

2.2 Ask questions and support answers by connecting prior knowledge with literal information found in, and inferred from, the text.

2.3 Demonstrate comprehension by identifying answers in the text.

2.4 Recall major points in the text and make and modify predictions about forthcoming information.

2.5 Distinguish the main idea and supporting details in expository text.

2.6 Extract appropriate and significant information from the text, including problems and solutions. (Achieve Data Solution, LLC, 2005).

Learner data was also gathered through surveys conducted in an online format. Using the tools found at FreeOnlineSurveys.com a simple survey was created to identify the basic abilities of the teachers that could potentially use this tool in their instruction. (See appendix C) The results of this survey, though anonymous, influenced the software that was used and how the presentations would be displayed. The questions of this survey included items like:

- o Rate your knowledge in the area of technology.
- o Having a personal computer and what it is most used for.
- o Determining where most people use technology in their home and for work.
- o What it is used for in the classroom setting, if at all.
- o Personal attitudes toward bringing technology into the instructional setting.

The last question particularly focused on personal opinion in having technology in the educational setting today. All of the responses given showed a desire to bring in technology but at the same time there was uncertainty. One person stated that they were inspired to see the new technology that was out there to support student learning. They would like to see it "used more frequently in the classroom," however they expressed concerns that they too would need to "sharpen their skills" so as not to be a "determent to technology in the classroom." It was found at Magnolia School that there were at least two computers in every classroom. Some rooms have more computers available because teachers have brought in their own computers to be used in the classroom. This causes problems in the area of compatibility and consistence. With computers coming in from the outside having the same compatibility as other computers and programs is not likely. The technology team at Magnolia has collaborated with the technology team at the district level to install a computer lab housing thirty-two computers that are used by all twenty-five classrooms weekly. Software is still being discussed and purchased based on the needs of the students. Lessons are

tailored to fit grade levels that incorporate the districts technology standards.

Students were also surveyed in this analysis phase to find out their interests and incentives in reading. Students at this level are of mixed motivations. Most students want to excel in reading and perform to their very best. In today's technology world, books and reading are not as exciting and stimulating as video games are. Teachers agree that there is not the desire to read for pleasure among this generation as there was many years ago (Signorio, C., & Gleason, T., Personal communication, January 20, 2007). Many students stated that they enjoyed reading if they could choose their own book. Out of 20 students 14 said that they liked to read books that were simple and easy to read. Six students expressed interest in reading more complex leveled books. When asked about their knowledge of computers every one of them stated that they had computers at home and used them regularly for games, research, and homework. However, when posed with the question: "On any given day, when there were no chores or work to be done would you choose to sit and read a good book or play a video game?" 18 out of 20 said they would rather play the game. One of the biggest struggles in

teaching is to maintain student engagement and instill in students the motivation to learn.

With the data in place a clear direction was identified which could meet the needs of the federal government and the local schools. The creation of a website potentially held the key to active engagement in student learning while providing practice time which was clearly needed to obtain mastery of specific skills. The website focuses on the three key areas of reading comprehension: finding inference, determining author's purpose and finding detail. Based on the aforementioned CST scores and those obtained from the district these three focuses are determined as the most difficult for students to grasp. Fellow teachers agree that these three are difficult because of their abstractness and lack of practice support provided by the publishers. The website provides assistance to direct instructed lessons and/or guided activities to help students learn to use these strategies to help them become better readers. The instructional support tool incorporates the use of the Houghton Mifflin reading curriculum coupled with other reading comprehension teaching strategies. The objectives of the lessons or activities are based on the California Standards in reading comprehension as follows:

- 1.4 Determine the underlying theme or author's message in fiction and nonfiction text.
- 2.3 Demonstrate comprehension by identifying answers in the text.
- 2.4 Recall major points in the text and make and modify predictions about forthcoming information.
- 2.5 Distinguish the main idea and supporting details in expository text.

Supplemental lessons or support in practice have been created in the form of PowerPoints. These PowerPoints are contained on a web page, which is accessible to other third grade teachers. The content is separated into the different reading comprehension strategies and the outcomes though similar vary slightly based on the strategy that is being taught.

The success of the Master Readers website is determined by student test scores on regularly given assessments and teacher observations. Using the standards listed above students are assessed on their abilities to successfully determine author's purpose, find detail to support main concepts, and understand inferences in reading. Individual tests are given to assess student knowledge of the reading concepts. The questions are

specific to the standards discussed above. Other means of determining the sites successes are through student work.

Students are asked to complete specific tasks when reading passages on the site and student work can provide immediate feedback to the instructor of student knowledge.

Another determining factor to the sites success is how well students work through the site independently.

Students should be able to work through a given assignment within the time allotted. If students are completing the tasks within the time, then the assignment was purposeful.

If students are not completing the assignment in a given time period then the assignment may be too difficult for that students ability level and instruction should be adjusted. Overall success of the site is seen in how students support their answers to specifically derived questions on the three key concepts. Students must be able to support their answers with evidence from the passages and be able to cipher out information that assisted them in obtaining the answers they have.

Mastering these strategies will carry over into other curricula and will help students become better readers.

Design

The design for the Master Readers website was to assist student learning of the previously mentioned reading strategies. These areas of comprehension, inference, author's purpose, and finding detail, continually dominate as lower performing themes when tested using the Houghton Mifflin Reading Curriculum. There are many workbooks and supplemental materials available to teachers to support instruction in these areas, however it is often difficult to locate, cipher through, and implement the use of these various modes of material. The idea behind the website was to make all these materials centrally located for instructional purposes, and useable for direct instruction, small group instruction, and independent practice.

The ultimate purpose of Master Readers was to enhance student learning. Teachers have a wide range of strategies that are used to teach students to read and read effectively. The website is another tool for teachers to acquire and be able to easily bring technology into the classroom as a learning tool, not as an extra subject area. The idea was to make learning fun and engaging at the same time. Integrating technology into student learning captures students' attention because it

is self-paced and is more colorful and interactive than a standard worksheet. In daily instruction the website is used as a tutorial for students to learn through. During direct instructional lessons the teacher would show students a tutorial on how to find detail in a story. He/she would use the prescribed curriculum to direct the lesson but would incorporate the tutorial as part of the daily lesson. Students would then practice this skill while reading passages or stories from their textbooks. Students who master the concept being taught could then complete assigned tasks on the website independently to practice the strategies. Those who struggle with the concept would then be gathered in small group instruction at their ability levels. The website could be used as a small group activity that is completed with teacher guidance. Ultimately the objective is for all students to become proficient in a concept and to be able to use the site as an independent practice activity during specific times in the instructional day.

Technology is introduced to learners through teacher lead instruction and students are taught about the new instructional tools that provide them with practice in their skill building. Students need to be motivated to

want to learn and teachers can instill that motivation by making learning engaging and interactive.

The website was prepared for teachers and students to use, therefore based on the information obtained during the analysis phase the site needed to be user friendly. The content and structure of the site was kept simple. Basic colors were chosen, and simple navigation was used for the site. Each page has a title to help the user identify where they are in the site and the graphics were kept simple so not to take away from the purpose of the website.

The instructional tools created to support learning in the three focus areas were grouped together under the title Learning Tools and then grouped under individual headings. The purpose for separating the categories was to make finding the assignments simple. The website would have a homepage with navigational links to additional pages. There would be a page for inference, author's purpose, and finding detail. Additional pages would be added for Blackline masters, which instructors generally use to help focus the direction of student learning. Other pages on the site would also contain topics such as: references, games, and tutorials. A flow chart of the layout for the website can be found in figure 1.1.

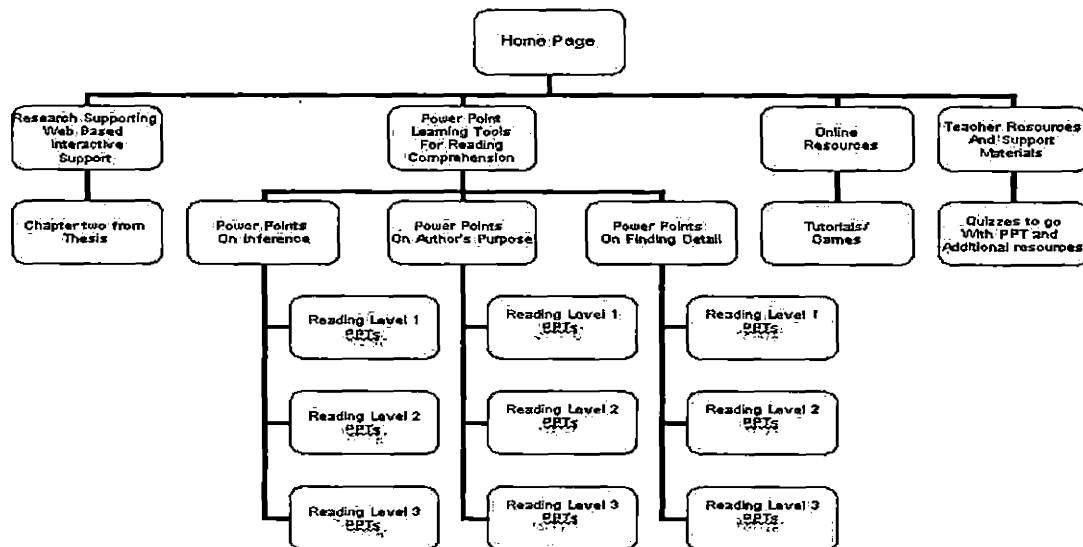


Figure 1.1 Master Readers Flowchart

The website allows for support material to be centrally located. The supplemental materials before were located on worksheets but with the use of the technology, the activities become more engaging and motivating for students to complete. Students would be able to regularly use the technology available and be excited by the presentation mode of the lessons rather than the simple drill and practice with paper and pencils.

During the analysis phases it was determined that the majority of the users and the school based computers had access to Microsoft PowerPoint therefore the instructional tools were developed with that in mind. The design of the Master Readers website started with the creation of

PowerPoint activities. Supplemental books found in educational supply stores were used to compile stories, which were written with one of the three focus areas in mind. The passages were retyped and presented in a PowerPoint format. Each of the 19 PowerPoints created were given a themed background and font. The colors of which were kept simple but contrasted to bring about the best presentation possible. Some of the PowerPoints were also enhanced with voice narration, animation, and video demonstration, using Camtasia Studio software. A site tour was created to help educators in the future use the site. The narration tool was also used to create tutorials for the website, which ideally are to be used with direct instruction.

Each PowerPoint has a written assignment that provides the learner with an opportunity to apply what they have learned from their instruction in reading comprehension. The assignment might be simply answering specific questions about a passage focusing on one of the three target topics. Students may also have to create written paragraphs explaining what they learned in the reading. Examples can be viewed in Figure 1.2. All assignments are purposeful and engage students in their learning. The PowerPoint activities should take an

average performing student about 15 minutes to complete. Accomplishment is important in supporting student success therefore a time frame is essential to establish so that all students can feel successful in completing an assignment in a timely fashion.

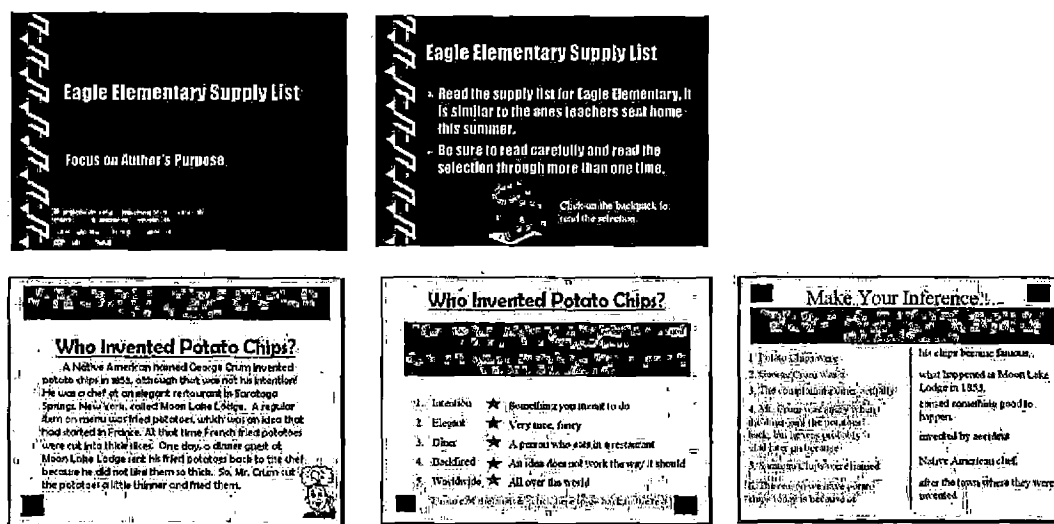


Figure 1.2 PowerPoint Example Screen Shots

The content organization is determined by the subject matter expert and involved input from other teachers in the same content area. Instructional strategies and content sources come from the Houghton Mifflin curriculum, which is currently being used regularly in the classroom.

The learning tool supports what is already occurring in daily instruction. Assessment is conducted in many

different manners. Assessments are based on the different types of learning: verbal information, intellectual skills, motor skills, attitude, and cognitive strategies. Student assessments include recalling facts, applying skills learned in reading comprehension to reading in other curricula, demonstrating their skills in written form, changes in attitude toward reading and keeping journals or taking written tests on the subject matter. The design of the instructional website supports the ways in which students are assessed.

The purpose of the instructional tool is to help enhance reading skills of students not to create more work for teachers. It is to provide students with more exposure to practice and use in developing their comprehension skills, not to replace regular classroom instruction.

Development

The development process began with the creation of the previously discussed PowerPoints. The second part of the development was to create a central location to hang the PowerPoint presentations and other additional resources. Yahoo! Small Business Web Hosting provided a

low cost way to maintain and upload files from the site-building tool chosen to use. The Yahoo! SiteBuilder was chosen as the website creation program because of its ease of use and the high quality site that could be created from it. Yahoo! SiteBuilder is produced and supported by Yahoo! Within the program there is the option to use template-based pages or the ability to create your own. The site building tool uses the html coding so viewing the site was available for all users. Yahoo! SiteBuilder also made attaching documents and short media clips simple and easy. The site-building tool automatically sets up contrast colors so that color schemes were easily assembled and viewable to all. As the individual creator one is able to establish personal pages to meet the objectives of the project and create a personalized navigation bar to meet the needs of viewers. Through the use of the website building program keeping the design simple and clean so to address the needs and fears established in the initial surveys of many teachers was simple. At the same time the site was created to be engaging and motivating to students.

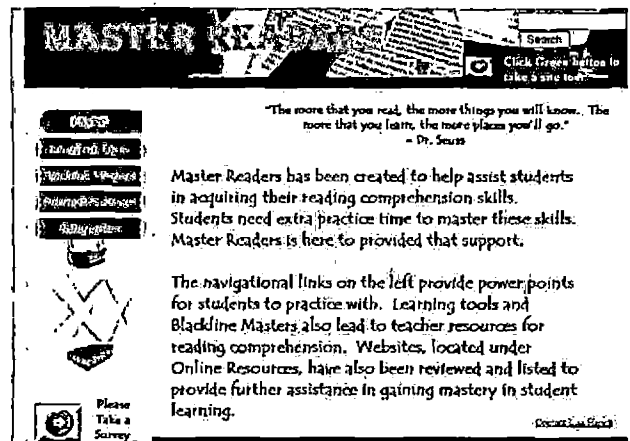


Figure 1.3 Master Readers Homepage Screen Shot

On the website each topic: inference, author's purpose, and finding detail, has its own individual homepage where the specified PowerPoint presentations were attached. Figure 1.3 demonstrates how the homepage was organized. Each of the three main learning tool pages had five to six PowerPoint presentations. The files were uploaded and contained on the web, but they were also kept on a personal home computer. Figure 1.4 is a screen shot displaying the layout of one of the three main learning tool pages. The site also had a page dedicated to games.

The games that engaged students in building reading comprehension skills were evaluated as to their effectiveness and added to the website. The games came from other open sites on the Internet. Such sites as

Gamequarium.com had learning games that dealt specifically with the three learning areas Master Readers focused on. All attached links were pre-evaluated by the creator for safety, content, and engagement.

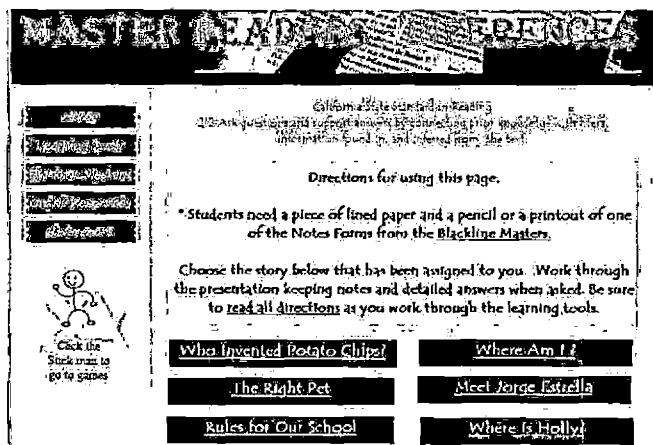


Figure 1.4 Learning Tools Main Page Screen Shot

During the development of the website simplicity was a focal point. The links to the additional websites, the PowerPoints, and other resources were all contained under broad heading such as: Learning Tools, Blackline Masters, Online Resources, and References. Each of the navigational buttons were contained on the left side of the website, and used color coordination to help the user know where he or she was located in the site. Each subsequent main page in the website had a brief

explanation as to what could be found on that particular page and third grade Reading standards were incorporated on each of the Learning Tools main pages.

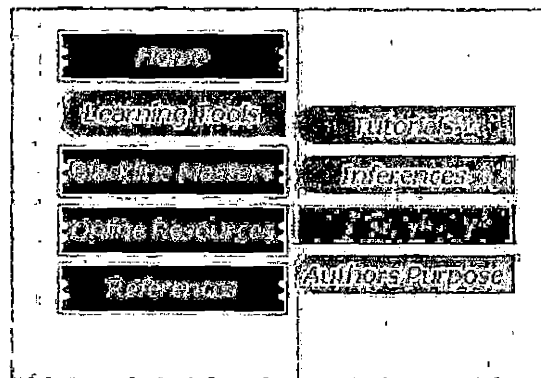


Figure 1.5 Navigation Bar

To determine that the web site met usability standards and that it functioned to the best of its ability the site under went several evaluations. Referring to the "Top Ten Mistakes" to be avoided set forth by Jakob Nielsen, the first set of evaluations was conducted. Nielsen is a subject matter specialist in web site building, he publishes articles about the top ten mistakes that builders make when creating a web site. Those mistakes can include: using frames, scrolling text, and constantly running animations (Nielsen, 1996). He advises to keep pages short and simple, provide updated

information and keeping away from non-standard link colors (Nielsen, 1996). The second evaluation was done using a web based evaluation tool. Watchfire's WebXACT was used to check for coding inconsistencies and other vulnerabilities. WebXACT found minor errors mostly in the animations that occurred on the site. The files contained on the web pages were functioning and useable by all. The evaluation tool notated that if there were documents contained on the site that were copyright protected that the web site should be password protected. Though the resources came from reproducible sources that can be found at any educational supply store and are permitted for copying and distribution, no clear parameters were defined as to their use on a website therefore it was decided that the site be password protected. By using a password it also helped in limiting the accessibility and aloud control over who viewed as it is still a work in progress. A temporary password was given to people who visited the site for evaluation purposes.

Alpha testing was conducted using five third grade teachers in the Upland Unified School District. These teachers worked through the site as educators and as if they were the students. They looked for grammar and content errors as well as usability, engagement and the

effectiveness of the learning tools. Teachers who went through the site provided feedback during August 2007. An online survey was created which addressed specific areas of the site including: navigation, engagement, and usability, results of the survey can be viewed in appendix D. Comments made by teachers included, "very professional and a site that looked teacher friendly," "I could see many students in my class benefiting from the extra targeted practice of LA standards."

After reviewing the alpha testing results modifications were made to the site. Dead links were reconfigured. Files that were noted as downloading slowly to personal computers were looked through and file size modifications were made, for example compressing a file so that it is a smaller download. Viewers also noted color distortions on differing computers, therefore the color scheme was adapted to be effectively seen and used for most computers. There were a few instances where the assignment took longer than 15-20 minutes to complete, so adjustments were made to conform to the time frame established in the design phase. When these changes were complete and uploaded to the site, Master Readers was ready for student use in beta testing.

Implementation

Master Readers started development in January 2007. The PowerPoint presentations were created and compiled in May 2007 to July 2007. Modifications were made throughout the summer of 2007 to meet the needs of possible users and students. The site was ready for the 2007-2008 school year that began on August 27th, 2007. Incoming students to the grade level were given a reading assessment to determine their needs and ability grouping. The John's Reading Inventory, which is widely utilized by educators, and the prior years CST scores were reviewed to establish a general reading level, focusing on both student comprehension and fluency at a given grade level.

After making the modifications identified during the alpha testing, students were able to begin using the site. At the yearly Back to School Night, held on August 30, 2007, parents were given information on the website's purpose and how it would be used to enhance their students' learning not to drive it. Parents were then given a week to review the site and submit their students' consent form. 19 of the 20 forms handed out came in. Visitor survey results can be viewed in Appendix E. Some of the comments made about the site included it being "Bright and organized, looks user friendly," "Concise,

easy to understand," "Engaging and content based, calibrated to the standards." The project flowed smoothly through the initial uses and reviews of colleagues. Parents were also excited to see the technology being used in the classroom setting. However, with technology came technical difficulties. Some of those difficulties were time management, computer availability, and how to incorporate the technology effectively.

The beta testing of the site was coupled with direct instruction in the specific areas in reading comprehension. The lessons taught in the classroom coincided with the scope and sequence laid out by Houghton Mifflin. The tutorials that corresponded with the lessons taught were used in instruction to demonstrate how to locate clues to the author's purpose, or how to find details to a main idea. Students also worked through a few of the PowerPoint activities in small groups with the instructor during designated small group sessions.

Due to lack of funds there were only two computers in the classroom for instructional use. Students would have had to pair up in order to complete the exercises on the website. Through good fortune the classroom was able to acquire three extra computers so that students could work independently on their reading skills. The first

independent use of the website occurred at the end of September 2007. The three focus areas had been gone through and taught at least once in accordance with the Houghton Mifflin curriculum scope and sequence. Students were then equipped with the proper knowledge needed to independently work through a given activity. As a class students went to the school's computer lab where instruction was given on how to navigate the site itself.

Rules were established for the use of the computers and expectations were given as to the quality of work that was to be produced. Students were also shown how to get to the games that were available for them to use after an assignment was completed. After the initial direct lesson on how to complete the independent activities students visited the computer lab weekly to complete an assignment in reading comprehension. The lab provided an opportunity for students to work through PowerPoints to sharpen their reading comprehension skills. It also provided a time when all students could be on a computer independently working through the same lesson rather than staggered throughout a week's time. Students were also required to complete an independent activity every two weeks through a centers rotation period that took place daily in the classroom.

The directed lessons and small group meetings continued in the regular instruction of the classroom. Students' use of the product was supported through the teacher. One on one time was provided as well as group direct instruction on specific topics. Often student would help one another navigate through the site to complete an activity if a fellow classmate was having difficulty.

Teachers also expressed interest in wanting to use the site as a learning tool during their designate computer lab time. Several small tutorial sessions were held on how to best use the site for fellow third grade teachers at Magnolia Elementary School. An online tutorial was also created and linked to the home page of Master Readers for other parents, and teachers to view if they wanted further information as to the sites capabilities.

Evaluation

Several forms of evaluations were used to decipher the effectiveness of the Master Readers website. The website itself under went several reviews by different groups of users prior to students using the learning

tools. The usability was evaluated by surveys and observations. Students' progress and growth was and continues to be measured by weekly student work and theme skills tests provided by the Houghton Mifflin publishing company on a weekly and monthly basis. These tests cover all the areas of reading comprehension. The overall effectiveness of the program was evaluated in December of 2007.

After the website was completely created and ready for viewing a small group of third grade teachers were gathered to evaluate the effectiveness of the learning tools. Teachers were taken to the website in a small round table discussion setting. They then independently worked through the site looking at the content and the effectiveness of the tools. From their observations adjustments were made to nonfunctioning links, grammar errors, and website color schemes. A second bout of evaluations was done using two modes of evaluations. The first was a free web based website assessment tool. Using WebXACT located at <http://webxact.watchfire.com/> a diagnostic was run to review the usability, quality, accessibility and privacy issues that the Master Readers website might have. The results showed that the site met the standards for an effective website. There were no

identifiable broken links and the site met the standards for accessibility using the W3C WCAG - AAA Compliance.

The second evaluation was made by a group of teachers from various grade levels. An online survey was created again using the site FreeOnlineSurveys.com where teachers would discuss their experience in using the site during an alpha testing period. Twelve out of twenty people participated in the website evaluation during the 2007 summer months. Teachers were asked specific questions concerning the areas of presentation, navigation, learning experience, and overall analysis. The reviews all proved very positive and minor problems were identified. These problems were with files opening properly and downloading times for users with older equipment. Some of the comments from the survey included: "I could see many student in my class benefiting from the extra targeted practice of LA standards," "I tried to think as a child and found [navigation and use] to be no problem. It looks like a great resource for our children."

Beta testing began at the end of August upon the beginning of the academic year for 2007-2008. Students worked through the site as a class, in small groups, and independently for the next three months. When the teacher introduced the site to the students, they became very

eager to start use of the learning tools. Students' motivation to gain the necessary information needed to independently work through the site was very high. Students were more focused on the content being discussed during language arts instruction and they were excited to meet in small groups to use the tutorials and practice other strategies for building their reading comprehension.

When the tutorials were being used with the direct instruction that occurred during language arts lessons, students were engaged and willing to participate in group led discussions.

After students were taught the expectations and requirements for completing the independent PowerPoint activities on the Master Readers website they were asked to write their work out using the provided forms. In the beginning student answers on their written work were simple and used incomplete sentences. After reviewing what a complete sentence was and how to "recycle" words from the questions asked students' work improved in quality. Through teacher observations students actively searched for answers by going back into PowerPoints looking for the correct wording for their answers. Students put more thought into their replies and supplied

the necessary examples or evidence to support their conclusions.

Student progress was also assessed using the Selection Tests and Theme Skills Tests provided by the Houghton Mifflin publishing company. These tests are specific to the reading comprehension standards that are taught and the tests were directly correlated to the practice in strategies that took place using the web site learning tools. All of these components are linked to the specifically identified California Language Arts standards for third grade. Students have taken four selection tests and three theme skills tests in reading comprehension during the period between September and November of 2007.

The average score of the four selection tests was 84.2%.

Compared to 2006, looking at the same tests, students achieved a 91.5% average. The theme skills tests in contrast to the selection test assess students on more specific aspects of a given standard. On the theme skills test in the area of Inference, in 2007 students cumulatively achieved a 90.5% average. In 2006, on the same test, students scored a 93.7% average. In the areas of Author's Purpose and Finding Detail, student assessments show an average score of 90.7% in 2006 and an average of 79.7% in 2007. At the completion of trimester

one in November of 2007, the average overall reading grade was an 86.7%. Comparatively in 2006, for the same trimester students achieved an average overall grade of 90.2%. Though these classes are from different years and their make-ups are not identical, there are similarities that make them comparable. 32% of the students coming into this third grade class tested at a basic level or below (below a 70%) on the CST from the 2006-2007 testing year. Students from the previous year had only 5% of the student population achieve below the 70% proficient mark on the 2005-2006 CST test in the same area. Based on the above percentages currently students seem to be lower achieving in reading than in the previous year. However, there are other circumstances which effect students' progress and their achievement levels that are not accounted for in this project.

Summary

Master Readers has been created to meet the needs of third grade students learning to better develop their reading comprehension skills. The website began as an idea and was developed over a years period. The idea was for the website to provided a positive learning

environment that supplemented the regular instruction that took place in the classroom. Students were given the opportunity to allow their minds to absorb and use the strategies that were taught to them. They were engaged in their learning and had a desire to want to perform to the best of their abilities. Students were excited about reading and reading instruction. Their attention was held through the use of the tutorials on the website and the interactive PowerPoints were stimulating to their learning.

The impact the website offered was felt as an increase of motivation in students. Students wanted to learn more about the strategies of inferring, finding detail, and what author's purpose was. Students wanted to become independent in these areas so that they could be able to complete the activities asked of them on the website. After the three-month period and extensive instruction using direct instruction, small grouping and independent practice students were becoming more confident in their skills for identifying these three areas in their reading. Based on teacher observations students participate more in class discussions and ask more complex questions about their reading rather than the basic, character, plot, and setting questions. They ask

themselves, who wrote the story, and why. They want to know why a character acted a certain way in a story and are able to find evidence in the story to support their claims.

Further evaluations will continue to take place and adjustments will be made to meet the needs of the learners. Students in this third grade class will continue to use the website as a learning tool to support their instruction in reading comprehension. Other third grade classes are beginning to use their computer lab time to provide specific reading skill practice and are starting to use the Master Readers website as one of those tools. Observing the increase in student motivation in the area of reading comprehension is exciting. Students should be engaged in their learning and it should be fun for them. Master Readers provides the opportunity for students to independently work on honing the skills they need to be master readers. The potential is there for students to benefit from the learning tools offered by the Master Readers website, however it is up to third grade teachers to utilize the site effectively and consistently for students to truly benefit from the opportunity it provides.

CHAPTER FOUR

CONCLUSIONS AND RECOMMENDATIONS

Introduction

Master Readers, like many other instructional tools developed by teachers, is considered a work in progress as it changes based on the needs of the learners. After the period of use from August 28, 2007 to November 30, 2007 several conclusions and recommendations have been reached. Students are eager to continue using the program and other instructors are interested in implementing the web site in their regular instruction. The web site had some shortcomings however it also had several successes.

Conclusions

The conclusions extracted from the project are as follows.

1. Student motivation has increased in reading, and interests are higher in understanding literature. Through teacher observations it was observed that students are more excited about reading. Students are expressing a vocal interest in what they read. They are intrigued and motivated by the use of technology and ask

regularly when they would next be able to use the website to complete their activities. More of their senses were used during the assignments on the website compared to those used with worksheets and textbooks. MacGregor stated that the more senses we incorporate into student learning the more the content will stick with them (MacGregor, 2004; Epp, 2006). That was true with the use of the Master Readers website.

2. Student participation has increased during language arts instruction. Several researchers discussed that the use of technology can help raise engagement and productivity in cross-curricular areas (Guthrie, 2003; McClain, 2000).

Students grasped concepts quickly and were able to apply skills that they learned through direct instruction and practice from the website to other forms of literature. They also became more effective readers, searching for information not simply reading words on a page.

3. Students are motivated to actively search for evidence and examples in text that support their claims in answering literature-based questions. Through guided practice and independent study

students were able to identify information that supports main ideas. Students could also decipher what authors were trying to convey in writing, and students excelled in understanding author's purpose in writing.

4. The Master Readers website provided valuable time for students to practice what they had learned through instruction. Students were able to apply their learning to make the concepts real and usable. Holzberg (2005) stated that providing down time where students could use their new information and try it for themselves would prove beneficial to the learner. They would be more able to retain the information rather than in a setting where new information is constantly coming at them.
5. Statistics gathered on current students in the third grade did not indicate that the Master Readers website learning tools had an overwhelming effect on student achievement. The website did prove beneficial as a motivational factor and did have an increase in student abilities. However, it is not the ultimate solution to resolve the low percentage of

students performing at basic or below proficiency levels in reading comprehension. Many factors are apart of making a master reader. Teachers agree that students need to have a solid home support system, a good grasp of vocabulary, good decoding skills, a high level in fluency, and a desire to read for them to become master readers (Personal communication, 2007).

6. Student test scores on similar tests taken in year's prior, record the same class average or less. Students learn at different rates and technology can help a struggling reader by providing practice time for them to use the skills they have been taught. However, in class practice time alone will not bridge the gap between high-level readers and struggling ones. Students need time to practice skills at home. Students' scores could also be affected by personal problems. A student may be having a bad day or have personal issues that they carry with them into the classroom that prevent them from performing to the best of their ability. The make up of a class academically also differs

from year to year, which can have a change on how classes are compared to one another yearly.

Recommendations

The recommendations resulting from the project are as follows:

1. J. Schacter stated that technology in schools has "...shown too few results for schools to be using it with vigor" (1999, p. 47). It is recommended that further trial testing and modifications be made to fully reach the needs of the third grade population so that it can become a larger component in daily instruction.
2. The website should be expanded to encompass all aspects of reading comprehension as all students struggle with other areas as well as the three identified as inference, finding detail, and author's purpose. The site should also make use of technologies that exist and that are being created such as hypertexts (Rickelman & Henk, 1990), and media-rich papers (Mott, Benus, & Neal, 2005). Using examples from programs like *Wordshark* (Hassett, 2006) could be beneficial to

students in presenting material in different formats.

3. The website should be tested for a longer period of time and include a larger population than the one used for this projects' purpose. Change will not happen over night but rather over a longer period of time. Students need time to absorb and use what has been taught to them. A longer trial period would help determine if the learning tools would ultimately have a positive effect on a students learning experience.
4. It is recommended that more games that focus on the specified comprehension skill be developed and implemented for student use. Holzberg stated (2005) that kids needed to rest their brains from incoming instruction so that they could make the most of their learning experiences. Having focused games for students to play could improve performance and would help students retain what they learned. Any games used would have to be appropriate to grade level, and content that is learned.
5. The website should also contain an area that is to be used for home extension activities, rather

than all the work being completed in class. Students should practice outside the classroom as well as when they are in class. Home - school connections are key in education. Having a website accessible to students at home can also assist parents in allowing children onto safe websites, that are engaging and educational as well as fun.

Summary

Based on the information derived from and created through the Master Readers website, the website was deemed successful in creating a desire to read well. Students have begun to use the site at home, on weekends, and over holiday breaks. Students enjoy being on the Internet and engaged in activities that they can complete independently and feel successful with. With further direct instruction and the use of small group instruction students can become master readers. The technology aspect can easily be incorporated into the learning environment as both a tool and incentive for students to become better, more strategic readers. Teachers can feel successful in using the site and their students will benefit from having

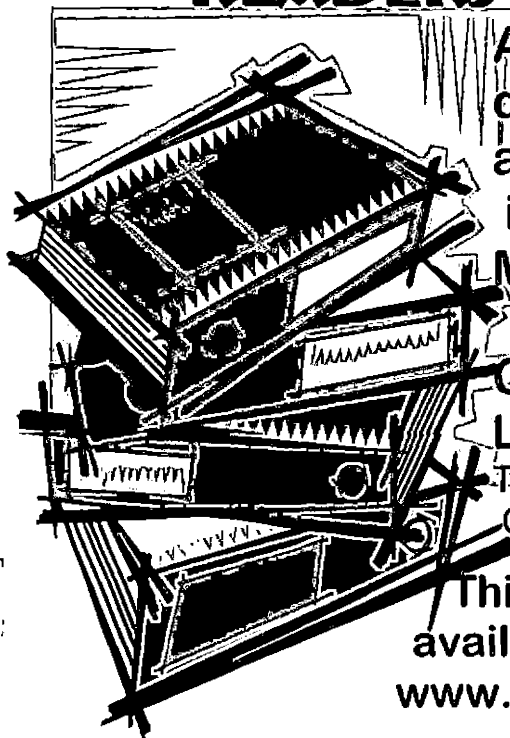
exposure to technology. Daily, students are bombarded with digital content through television, video games, computers, and phones, so why not use that technology to draw students into their own learning environments. Teachers are shaping our students for tomorrow and with the aid of technology our students can be better prepared, educated, and become the creative makers of the future.

APPENDIX A
CD OF PROJECT

Appendix A contains a CD of the project for Acquiring Reading Comprehension Skills in Third Grade Students Through the Support of Web Based Interactive Technology, the Master Readers Website.

CD MOVED TO BACK OF BOOK

THE MASTER READERS WEBSITE



A website
dedicated to
assist students
in becoming
Master Readers.

Created by
Lisa Harich
Thesis/Project
CSUSB 2008

This website is also
available for viewing at
www.mastereaders.com

APPENDIX B
CALIFORNIA STATE UNIVERSITY,
SAN BERNARDINO INSTITUTIONAL
REVIEW BOARD APPROVAL



**CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO**

5500 University Parkway, San Bernardino, CA 92407-2007

SPONSORED PROGRAMS

Institutional Review Board

(909) 537-5927

Fax: (909) 537-7028

<http://irb.csusb.edu>

May 30, 2007

Ms. Lisa Harich
c/o: Prof. Eun-Ok Back
Department of Science, Math, and Technology
California State University
5500 University Parkway
San Bernardino, California 92407

**CSUSB
INSTITUTIONAL
REVIEW BOARD**
Exempt Review
IRB# 06120
Status
APPROVED

Dear Ms. Harich:

Your application to use human subjects, titled, "Acquiring Reading Comprehension Skills in Third Grade Students Through the Support of Web Based Interactive Technology" has been reviewed and approved by the Chair of the Institutional Review Board (IRB) of California State University, San Bernardino and concurs that your application meets the requirements for exemption from IRB review: Federal requirements under 45 CFR 46. As the researcher under the exempt category you do not have to follow the requirements under 45 CFR 46 which requires annual renewal and documentation of written informed consent which are not required for the exempt review category. However, exempt status still requires you to obtain consent from participants before conducting your research.

Although exempt from federal regulatory requirements under 45 CFR 46, the CSUSB Federal Wide Assurance does commit all research conducted by members of CSUSB to adhere to the Belmont Commission's ethical principles of respect, beneficence and justice. You must, therefore, still assure that a process of informed consent takes place, that the benefits of doing the research outweigh the risks, that risks are minimized, and that the burden, risks, and benefits of your research have been justly distributed.

You are required to 1) notify the IRB if any substantive changes are made in your research prospectus/protocol, 2) if any adverse events/serious adverse events (AE's/SAR's) are experienced by subjects during your research, and 3) when your project has ended. Failure to notify the IRB of the above, emphasizing items 1 and 2, may result in administrative disciplinary action. You are required to keep copies of the informed consent forms and due for at least three years.

If you have any questions regarding the IRB decision, please contact Michael Gillespie, IRB Secretary. Mr. Michael Gillespie can be reached by phone at (909) 537-5027, by fax at (909) 537-7028, or by email at mgillespie@csusb.edu. Please include your application identification number (above) in all correspondence.

Best of luck with your research.

Sincerely,

Samuel S. Kushner

Samuel S. Kushner, Chair
Institutional Review Board

SK/mg

cc: Prof. Eun-Ok Back, Department of Science, Math, and Technology

The California State University

*Fishersfield • Channel Islands • Chico • Dominguez Hills • East Bay • Fresno • Fullerton • Humboldt • Long Beach • Los Angeles • Marikina Angeles
Merced • Monterey Bay • Nevada City • Pomona • Sacramento • San Bernardino • San Diego • San Francisco • San Jose • Santa Clara • Stanislaus*

APPENDIX C
SURVEY RESULTS ON TEACHERS'
TECHNOLOGY EXPERIENCE

Printer friendly page

Results for: Technology Experience

Download the results as a spreadsheet
(This file contains all of the data we have collected on your behalf)

Invitations Sent: 0
Invitations Accepted: 0
Invitations (e-mails) Bounced: 0
Untrackable Responses: 0
Total Responses Received: 8

Want to track who has or hasn't taken your survey? - click here for information.

1)

On a scale of 1-5 (5 being well versed) how would you rate your overall knowledge of technology in education?

Chart Wizard

	1	2	3	4	5	Responses	Average Score
	0 (0.00%)	1 (12.50%)	3 (37.50%)	3 (37.50%)	1 (12.50%)	8	3.50 / 5 (70.00%)
							3.50 / 5 (70.00%)


2) Do you have a personal computer? What do you use it for most often? Chart Wizard

	Percentage	Responses
No	0.0	0
Personal	12.5	1
Personal/Work	87.5	7
Work	0.0	0
Total responses:		8


3) If you answer included "work" to number 2 please choose the ones that apply to the question:

How often do you use the computer/technology in your classroom/work? (5 being most often) Chart Wizard


	1	2	3	4	5	Responses	Average Score
Presentations	2 (25.00%)	3 (37.50%)	0 (0.00%)	0 (0.00%)	3 (37.50%)	8	2.88 / 5 (57.60%)
Internet research (you)	0 (0.00%)	0 (0.00%)	4 (50.00%)	0 (0.00%)	4 (50.00%)	8	4.00 / 5 (80.00%)
Internet research (student)	2 (25.00%)	2 (25.00%)	2 (25.00%)	0 (0.00%)	2 (25.00%)	8	2.75 / 5 (55.00%)
Grading	0 (0.00%)	0 (0.00%)	0 (0.00%)	1 (12.50%)	7 (87.50%)	8	4.88 / 5 (97.60%)
Games	1 (12.50%)	1 (12.50%)	2 (25.00%)	1 (12.50%)	3 (37.50%)	8	3.50 / 5 (70.00%)
Locating lesson plans/support materials	0 (0.00%)	3 (37.50%)	2 (25.00%)	1 (12.50%)	2 (25.00%)	8	3.25 / 5 (65.00%)
Email	0 (0.00%)	0 (0.00%)	0 (0.00%)	2 (25.00%)	6 (75.00%)	8	4.75 / 5 (95.00%)
Web designing	5 (62.50%)	0 (0.00%)	1 (12.50%)	1 (12.50%)	1 (12.50%)	8	2.13 / 5 (42.60%)
Word processing	0 (0.00%)	0 (0.00%)	0 (0.00%)	1 (12.50%)	7 (87.50%)	8	4.88 / 5 (97.60%)
							3.87 / 5 (77.40%)

4) Do you allow your children or students to use the computer?  Chart Wizard




5) What do your students use the computer for? Please rate the usage of computer time.  Chart Wizard

	1 Never	2 Sometimes	3 Most of the time	4 Always	Responses	Average Score	
Games	0 (0.00%)	3 (37.50%)	4 (50.00%)	1 (12.50%)	8	2.75 / 4 (68.75%)	Chart
Academic Support (Internet/games)	2 (25.00%)	1 (12.50%)	4 (50.00%)	1 (12.50%)	8	2.50 / 4 (62.50%)	Chart
Word Processing	0 (0.00%)	4 (50.00%)	2 (25.00%)	2 (25.00%)	8	2.75 / 4 (68.75%)	Chart
Research (Internet/online encyclopedias)	1 (12.50%)	4 (50.00%)	1 (12.50%)	2 (25.00%)	8	2.50 / 4 (62.50%)	Chart
Free time	2 (25.00%)	3 (37.50%)	1 (12.50%)	2 (25.00%)	8	2.38 / 4 (59.50%)	Chart
						2.50 / 4 (62.50%)	

6) Would you support more technology in the classroom if used as a support tool for learning/teaching?  Chart Wizard



7) Please rate your willingness to try something new with technology?  Chart Wizard

	1 Very nervous	2 Somewhat timid	3 Calm	4 Excited	Responses	Average Score	
	0 (0.00%)	1 (12.50%)	2 (25.00%)	5 (62.50%)	8	3.50 / 4 (87.50%)	Chart
						3.50 / 4 (87.50%)	

8) Please leave your comments or opinions on the topic of technology in education. Would you like to see more used? Would you rather not have it in your classroom? What would be a deterrent for you not to have technology in your classroom setting?

(The last five responses are given)

- I would like to see more used and would like to learn more ways to implement it into the program standards.
- Technology is great and it really does help the students to learn further.
- In primary grades students need to learn to read and write using pen/paper and books. computer programs can enhance and support, but don't take the place of traditional learning. It is frustrating when students reach problems with computers when I'm teaching a group.
- I would love to have new computers that would run new software and be kid friendly. Old computer that continually break and freeze up are a deterrent.
- I would like to see the computer used more frequently in the classroom and school computer lab. It is exciting for my students to look up info. about animal/planet reports, typing poetry/stories, reinforcement of games/Centers. I am currently taking a Microsoft Word & Excell class to sharpen my skills so I will be more effective teaching computer skills to my students and not be a deterrent to technology in the classroom.

APPENDIX D
SURVEY OF THE MASTER READERS
WEBSITE - EVALUATED BY
EDUCATORS

Results for: Master Readers Website

1)

Personal Knowledge -

What type of platform are you using on your computer?

(not sure? find the "My Computer" icon on your pc and right click it, click on "properties" and a new screen will open and you can find this information there.)

	Percentage	Responses
Windows 98	0.0	0
Windows ME	22.2	2
Windows XP	33.3	3
Windows Vista	33.3	3
Apple	11.1	1
Other	0.0	0
Total responses:		9

2) Personal Knowledge -

Rate your ease of use in navigating a new website. (1 being not familiar - 5 being No problem)

	1	2	3	4	5	Responses	Average Score
	0 (0.00%)	0 (0.00%)	0 (0.00%)	3 (33.33%)	6 (66.67%)	9	4.67 / 5 (93.40%)

3) Presentation:

Rate the overall appearance of the website. (1 being not appealing - 5 being very appealing)

	1	2	3	4	5	Responses	Average Score
	0 (0.00%)	0 (0.00%)	0 (0.00%)	1 (11.11%)	8 (88.89%)	9	4.69 / 5 (93.80%) 4.69 / 5 (93.80%)

4) Presentation:

Do you like the title of the website - Master Readers?

	Percentage	Responses
Yes	100.0%	8
No	0.0%	0
Total responses:		8

5) Presentation:

In your opinion, does the color scheme appeal to students?

	Percentage	Responses
Yes	100.0%	9
No	0.0%	0
Total responses:		9

6) Presentation:

Regarding the graphics used on the website pages (not the learning tools), check all that apply:

	Percentage	Responses
entertaining	29.2	7
motivating	12.5	3
engaging	20.8	5
cute	16.7	4
bring character to the page	20.8	5
not needed	0.0	0
get in the way	0.0	0
no opinion	0.0	0

7) Presentation:

Overall impression of the site at first glance.

(The last five responses are given)

- good organization
- very well organized
- wow
- very creative and inventive
- Very creative

8) Navigation:

On the left hand side of the site there is a main navigation bar. Is it easy to understand? (1 being I don't understand to 5 being easy to understand)

1	2	3	4	5	Responses	Average Score
0 (0.00%)	0 (0.00%)	1 (11.11%)	1 (11.11%)	7 (77.78%)	9	4.67 / 5 (93.40%)

9) Navigation:

Does the changing of color in the navigation bar help you to know where you are in the site?

	Percentage	Responses
Yes	88.9%	8
No	11.1%	1
Total responses:		9

10) Navigation:

Does having a sub-navigation bar on certain pages help you to move through the site?

	Percentage	Responses
Yes	88.9%	8
No	11.1%	1

11) Navigation:

Was finding your way around the website simple?

12) Navigation:

There is a lot of information contained on this website; do you feel that the navigation bar helps to separate and categorize the different activities/tools available.

13) Navigation:

There are many links on this website. As you went through the site how often did the links work for you?

1 Never	2 Seldom	3 Half the Time	4 Worked Everytime	Responses	Average Score
0 (0.00%)	0 (0.00%)	0 (0.00%)	9 (100.00%)	9	4.00 / 4 (100.00%)

14) Navigation:

Overall tell me about your experience just moving through the site.

(The last five responses are given):

- Some links did not open, it might be my computer, but overall most worked great
- simple
- fine
- some problems with using the program on an apple but great work
- I had some trouble with the programs that were using Camtasia in their content but overall it was great.

15) Learning Tools/ Tutorials

There are many learning tools and tutorials contained on this site. All are divided into three categories : Inference, Finding Details, and Author's Purpose. I do not expect you to visit every single presentation under each topic but for those that you did try out please rate the following:

	1 Yes	2 Sometimes	3 Never	Responses	Average Score
Did the presentation open	7 (77.76%)	2 (22.22%)	0 (0.00%)	9	1.22 / 3 (40.67%)
Was the presentation engaging	9 (100.00%)	0 (0.00%)	0 (0.00%)	9	1.00 / 3 (33.33%)
Was the presentation kids friendly	9 (100.00%)	0 (0.00%)	0 (0.00%)	9	1.00 / 3 (33.33%)
Did you see the lesson as effective	9 (100.00%)	0 (0.00%)	0 (0.00%)	9	1.00 / 3 (33.33%)
Did you understand the objective of the lesson	9 (100.00%)	0 (0.00%)	0 (0.00%)	9	1.00 / 3 (33.33%)
					1.04 / 3 (34.67%)

16) What did you like about the presentations that you visited?

(The last five responses are given)

- the fact that kids could work through them at their own pace
- engaging, and capturing
- liked the presentation of similar class material in technology format
- exciting presentation
- engaging and creative

17) What didn't you like about the presentations that you visited?

(The last five responses are given):

- nothing
- that not all opened because of something called Java script, in camtasia
- some would not open properly because of needs for compatibility with my computer.
- nothing

18) Do you believe that after some simple training and modeling for students that they could navigate the learning tools portion of the website? Of course keep in mind specific directions would be given and independent work would not occur until there has been a complete "training period"

	Percentage	Responses
Yes	100.0%	9
No	0.0%	0
Total responses:		9

19) Would you use a website like this in your instruction? Check those that would apply.

	Percentage	Responses
Direct instruction (whole class)	31.8	6
Small group instruction	26.3	5
Independent instruction (LA Centers)	42.1	8

20) Last One!!

Overall do you feel that this website is user friendly, kid friendly, and prepared to help support the needs of learners? Please leave some comments:

(The last five responses are given)

- great job
- I liked the focus of the site there isn't much out there to support LA
- yes, kids will love it.
- Yes, great work, would love to see kids using this
- Great job, this took a lot of work to put together I hope that it works out.

APPENDIX E
SURVEY OF THE MASTER READERS
WEBSITE - EVALUATED BY
PARENTS AND VISITORS

Results for: Visitor Survey

1)

Personal Knowledge -

What type of platform are you using on your computer?

(not sure? find the "My Computer" icon on your pc and right click it, click on "properties" and a new screen will open and you can find this information there.)

	Percentage Responses	Responses
Windows 98	37.5	3
Windows ME	0.0	0
Windows XP	50.0	4
Windows Vista	0.0	0
Apple	12.5	1
Other	0.0	0
Total responses:		8

2) Personal Knowledge -

Rate your ease of use in navigating a new website. (1 being not familiar - 5 being No problem)

1	2	3	4	5	Responses	Average Score
1 (12.50%)	0 (0.00%)	1 (12.50%)	4 (50.00%)	2 (25.00%)	8	3.75 / 5 (75.00%)
						3.75 / 5 (75.00%)

3) Presentation:

Rate the overall appearance of the website. (1 being not appealing - 5 being very appealing)

1	2	3	4	5	Responses	Average Score
0 (0.00%)	0 (0.00%)	0 (0.00%)	2 (33.33%)	4 (66.67%)	6	4.67 / 5 (93.40%)
						4.67 / 5 (93.40%)

4) Presentation:

Do you like the title of the website - Master Readers?

	Percentage Responses	Responses
Yes	100.0	6
No	0.0	0
Total responses:		6

5) Presentation:

In your opinion does the color scheme appeal to students?

	Percentage Responses	Responses
Yes	100.0	6
No	0.0	0
Total responses:		6

6) Presentation:

Overall impression of the site at first glance.

(The last five responses are given)

- Very well set up
- At first glance the site is organized and simple.
- Fantastic
- bright and organized, looks user friendly.
- Everything pops up in a timely manner, so it makes it easy to go where you want.
- concise, easy to understand

7) Navigation:

On the left hand side of the site there is a main navigation bar. Is it easy to understand? (1 being I don't understand to 5 being easy to understand)

	1	2	3	4	5	Responses	Average Score
	0 (0.00%)	0 (0.00%)	0 (0.00%)	2 (33.33%)	4 (66.67%)	6	4.67 / 5 (93.40%)
							4.67 / 5 (93.40%)

8) Navigation:

Does the changing of color in the navigation bar help you to know where you are in the site?

	Percentage	Responses
Yes	83.3%	5
No	16.7%	1
Total responses:		6

9) Navigation:

Does having a sub-navigation bar on certain pages help you to move through the site?

	Percentage	Responses
Yes	83.3%	5
No	16.7%	1
Total responses:		6

10) Navigation:

Was finding your way around the website simple?

11) Navigation:

There is a lot of information contained on this website, do you feel that the navigation bar helps to separate and categorize the different activities/tools available.

12) Navigation:

There are many links on this website. As you went through the site how often did the links work for you?

	1 Never	2 Seldom	3 Half the Time	4 Worked Everytime	Responses	Average Score
	0 (0.00%)	0 (0.00%)	0 (0.00%)	6 (100.00%)	6	4.00 / 4 (100.00%)
						4.00 / 4 (100.00%)

13) Navigation:

Overall tell me about your experience just moving through the site.

(The last five responses are given)

- Moving through the site was simple and well explained on each page
- easy
- Very easy
- The toolbar to the left was useful, I enjoyed the blackline masters and the games were engaging.
- easy

14) Learning Tools/ Tutorials

There are many learning tools and tutorials contained on this site. All are divided into three categories: Inference, Finding Details, and Author's Purpose. I do not expect you to visit every single presentation under each topic but for those that you did try out please rate the following.

	1 Yes	2 Sometimes	3 Never	Responses	Average Score
Did the presentation open	4 (66.67%)	1 (20.00%)	0 (0.00%)	5	1.20 / 3 (40.00%)
Was the presentation engaging	5 (100.00%)	0 (0.00%)	0 (0.00%)	5	1.00 / 3 (33.33%)
Was the presentation kids friendly	5 (100.00%)	0 (0.00%)	0 (0.00%)	5	1.00 / 3 (33.33%)
Did you see the lesson as effective	5 (100.00%)	0 (0.00%)	0 (0.00%)	5	1.00 / 3 (33.33%)
Did you understand the objective of the lesson	5 (100.00%)	0 (0.00%)	0 (0.00%)	5	1.00 / 3 (33.33%)
					1.04 / 3 (34.67%)

15) What did you like about the presentations that you visited?

(The last five responses are given)

- They were creative and colorful and short
- Focused on key elements that were covered in class
- That they were kid friendly.
- engaging and content based, calibrated to the standards

16) What didn't you like about the presentations that you visited?

(The last five responses are given)

- Not a thing
- a couple didn't open (tutorials)

17) Do you believe that after some simple training and modeling for students that they could navigate the learning tools portion of the website? Of course keep in mind specific directions would be given and independent work would not occur until there has been a complete "training period"



18) As a parent do think that bring technology into the classroom could benefit students?



19) On a scale of one to three how would you rate the ability of this site to help assist your students' learning in the three key reading comprehension areas?

	1 Low	2 Moderate	3 High	Responses	Average Score
This site is exciting for the student.	0 (0.00%)	2 (40.00%)	3 (60.00%)	5	2.60 / 3 (86.67%)
Students could find motivation in using this technology.	0 (0.00%)	0 (0.00%)	5 (100.00%)	5	3.00 / 3 (100.00%)
The site addresses the key focus areas well.	0 (0.00%)	1 (20.00%)	4 (80.00%)	5	2.80 / 3 (93.33%)
The site is engaging.	0 (0.00%)	1 (20.00%)	4 (80.00%)	5	2.80 / 3 (93.33%)
					2.80 / 3 (93.33%)

20) Last One!!!

Overall do you feel that this website is user friendly, kid friendly, and prepared to help support the needs of learners? Please leave some comments.

(The last five responses are given)

- I am excited for students to use the site
- This is a great idea and a great way to start incorporating technology into the school learning environment.
- Absolutely. I tried to think as a child and found it to be no problem. It looks like a great resource for our children.
- As I stated earlier, it is definitely user friendly. The toolbars make it easy to navigate, and the activities were engaging. There was a variety of levels present for different learners, and the different activities kept it interesting. It wasn't all the same, read story and answer questions! The skills were incorporated in a variety of ways.
- Yes, yes, and yes. The content is good, but I would add a little more color to the home page.

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