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USING A TEACHER CREATED WEBSITE TO PROVIDE 24/7
ACCESS TO STUDENT ASSIGNMENTS AN ABSTRACT

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
Dianne Lenore Austin

June 2005


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June 2005

Approved by:



Brian Newberry, Ph.D. First Reader



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16-May-05
Date

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ABSTRACT

Websites created by teacher can increase accessibility to assignments while reducing the delinquencies that students have with submitting assignments. Teachers that post their assignments on a "teacher created" website give their students an opportunity to work on assignments at home, in a library, or at the homes of friends - virtually, anywhere there is access to a computer. By accessing "teacher created" websites, students are able to know the details of the assignments, due dates, and other important information. Parents are able to access the website for the same reason. There are several benefits for parents and students to be able to access "teacher created" websites. First, parents are "in the loop" regarding assignments, students, then, cannot use the excuse "there is no homework." Families are able to plan extra curricular activities based on prior knowledge of assignments. Furthermore, with parents and students both using "teacher created" websites to retrieve assignments, students performance is improved, as incorrect homework or late assignments will be reduced.

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DEDICATION

This project is dedicated to two very important men in my life - my husband Bradford Austin, for without his help, encouragement and inspiration it would have not been possible to completed; and my father, William Raymond, who instilled in me the courage follow my dreams and reach for the stars.

Editor's note: William Raymond passed away in July 2004.

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CHAPTER ONE

BACKGROUND

Introduction

The goal of this research project is to provide a website where parents and students could have increased accessibility to student assignments. Some excuses used by students are as varied as they are: "My dog ate it", "I forgot when it was due", "I lost the assignment", or "I wrote the wrong assignment down." This project identifies accessibility issues specific to the problem middle school students have in completing and submitting correct assignments in a timely manner. This situation has become a serious problem.

To help students correct this situation many teachers began posting daily and weekly homework assignments with due dates on classroom whiteboards. Students could copy the assignments in their student planners. However, upon checking the students' planners, it was found that many students were incorrectly copying the assignments or worse, not even writing them down. Additionally, when teachers made phone calls to parents about missing assignments, many of the parents complain about their inability to find out what the homework assignments were

and when they were due. In the article Homework Requires Teamwork Between Teachers and Parents (2001, Para. 4) Dr. R. Hanna states that, "without parents making it their responsibility to see what the homework is, making sure it is done, and providing guidance to the student when needed, homework assignments will not be done.

In the article Author Argues Amount of Homework Adds Pressure on Kids N. Hellmich (2000 Para.12) says "homework is especially difficult for children who do not have the correct assignments or a quiet, well-lighted place to study at home". With this in mind, the author wanted to discover that, if a teacher created website that provided students with homework information and other assignments was available, would it diminish the degree of delinquent and missing assignments that the students submitted? This information led to the research question that guided the development of this project: "Will increasing the accessibility for students to check their assignments decrease the delinquencies?"

Statement of the Problem

Many middle school students, and the students in this author's Mathematics and Science classes, are having problems completing and submitting the correct homework

assignments. To help alleviate the growing problem, school administrators installed a telephone system "The Homework Hotline". Teachers were encouraged to use the system to post assignments on a weekly basis. At the beginning of the school year each student was given an assignment journal with the "Homework Hotline" number printed on the inside cover. There is an area provided their teacher's telephone extensions. Students are able to call and retrieve their homework assignments easily.

Furthermore, the administrators sent information home for parents providing them with the necessary numbers and instructions so they could retrieve their child's assignments or leave a message for the teachers. However, because the system was new, the "hotline" reportedly was "down" for up to ten days in one month making it impossible for teachers to post their assignments in a timely manner. In addition, when the "hotline" is accessed to retrieve assignments, students still have to write down the assignment correctly from an audio message. The system is cumbersome and difficult and there have been numerous complaints about the system not being "user-friendly" when trying to obtaining the necessary information.

Purpose of the Project

The purpose of this project was to create a website that would assist students in the process of submitting the correct assignments with a minimal amount of frustration for all parties concerned: teachers, administrators, parents, and students.

A question raised by Piskurich in the text, Rapid Instructional Design, (2000), that needs to be considered is will fulfilling the needs of the students help them to accomplish more? This author believes that by creating an easy access to assignments and their due-dates it will fulfill this need of the students and help them to accomplish more. Another important question asked by the same text that correlates to the purpose of this project, is what will happen if this need is not met. If the students' need for knowing about their assignments goes unfulfilled, they will continue working on incorrect homework or submit homework late, both of which could result in their grades and their education suffering. Two additional questions from Piskurich book that are important to the purpose of this project are: is the need of the students related to students not knowing what to do or when to do it: and will the students be interested in learning and applying the information presented? In both

cases, the answer to these questions is "yes" - yes, the need is directly related to the students not knowing what or when assignments are due, and yes, a majority of the students will be interested in learning from the assignments they will be completing.

Significance of the Project

Homework, when utilized to strengthen the day's learning, can be an integral part of a child's education and a meaningful extension of the school day (Fink, 2003). However, how can students benefit from completing incorrect assignments if they do not know what the correct assignments are or when they are due? In the article Using An On-line Homework System Enhances Student Learning (Cheng, Thacker, Cardenas, & Crouch, 2004), the authors compared students in large introductory courses taught by interactive engagement and non-interactive engagement methods, with un-graded homework as well as with online homework. Their study also compared the understanding of students in different grade subgroups and significant increases for all students taught with online homework, indicating that graded homework increases student understanding of concepts. The authors noted that the increase was significantly higher for students taught with

the interactive engagement method *along with online homework*. A teacher-created website would provide students with the assignment information that is needed to re-enforce the concepts that were covered in class daily.

Limitations

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

1. Only sixth grade students were able to participate in the beta testing of the website because the school year ended before students in other grades could have the opportunity to evaluate the website.
2. The expansion of the website to include additional resources for the students to use was put on hold because of limited Internet resources.
3. The author had a steep learning curve when it came to the software (Yahoo site builder) that was necessary to create a website.
4. The author had limited knowledge of software packages, such as "Flash" or "Dreamweaver", to

create interactive activates for the students to use.

5. The 2003 - 2004 school year ended before testing of the project could be completed.

Definition of Terms

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

1. NCLB - "No Child Left Behind" is Federal Education Law passed in 2002 that ensures accountability and flexibility as well as increased federal support for using technology in the classroom.
2. "Homework Hotline" - a telephone system that was installed by the school to enable teachers to provide homework information for students and their parents

CHAPTER TWO

REVIEW OF THE LITERATURE

If a nation expects to be ignorant and free, in a state of civilization, it expects what never was and never will be.
-- Thomas Jefferson, 1816

Homework and Student Achievement

Generations of Americans have experienced homework, first as children and later as parents. There is strong evidence that homework improves student achievement, especially when it is coupled with strong parental support. Indeed, without parents making it their responsibility to see that homework is done, the best intentions of teachers will lead to disappointment. Researcher Romesh Ratnesar concluded that requiring a reasonable amount of challenging homework "encourages good study habits and acclimates students to self-directed work" (1999, Para. 2). Additionally, J. Bempechat, a professor at the Harvard Graduate School of Education, in the book Getting our kids back on track: Educating children for the future proffered that the assignment of homework "helps children to develop qualities that all teachers like to see in the classroom, such as persistence, diligence, and fulfillment" (2000, p. 25).

Homework proponents say it reinforces what a child has learned during the day and fosters self-discipline, independent learning, good work habits, and responsibility. It also provides parents with insights into what their children are learning during the school day.

Professor Bempechat suggested that schools should provide parents with a homework mission statement to establish homework expectations, goals and viable skill improvements. Further the professor stated that "the mission of homework should be to provide activities to integrate the efforts of school and home while expanding the intellectual, emotional, physical, aesthetic, social and moral growth of every student" (2000, p. 32). Homework provides a valuable and viable link between home and school that can reinforce school learning, provide practice, preparation and extension of knowledge and skills according to the needs, capabilities and interests of students.

In the article Homework's Powerful Effects on Learning Walberg, Paschal, and Weinstein (1985), reason that schools in which homework is routinely assigned and graded, tend to have higher achieving students. Other reasons (p. 76-79) that were stated are:

- Traditional homework assignments (pencil/paper work, preparatory reading assignments, etc.) in the early school years are not very effective and should be given sparingly, possibly not at all in primary grades.
- Elementary grade homework should focus on establishing study habits and learning skills.
- There is general agreement that the amount of homework increases significantly as a student progresses through school.
- Homework should be necessary and useful, appropriate to the ability and maturity level of students, well explained and motivational and clearly understood by students and parents.
- Students complete more homework when teachers make it central to course work, collect it routinely and spend class time reviewing it.
- Homework should be tied to current subject matter, assigned in amounts and levels of difficulty, which students can complete successfully.
- Homework should be checked quickly and returned to students with feedback.

- Giving homework on a regular basis may increase achievement and improve attitudes toward learning.

This author believes that homework may be a lifeline that helps promote academic and lifetime achievement. In the article Increasing Homework Motivation, S. Fink investigates the problem of motivating students to complete their homework assignments. It was discussed that systematic reinforcement increases the frequency and thoroughness with which homework assignments are completed. Fink further stated, "Homework, when utilized to strengthen the day's learning, can be an integral part of a child's education and a meaningful extension of the school day" (2003, Para. 5). A website that the student can access from home, or other locations outside of school, to acquire their homework and other assignments, will serve to optimistically increase their motivation to complete assignments.

The No Child Left Behind (NCLB), legislation was instituted because the former and current Presidents, and Congress, perceived there was a need to raise proficiency scores of America's students. Additionally, they recognized that raising student's achievement scores incorporates a student's prior experience and begins at

the most basic level in the home. The following is an excerpt from the introduction and overview of the NCLB legislation on the U.S. Department of Education's website, NCLB:

In this new era of education, children will no longer be trapped in the dead end of low-performing schools. Under No Child Left Behind, such schools must use their federal funds to make needed improvements. In the event of a school's continued poor performance, parents have options to ensure that their children receive the high-quality education to which they are entitled.

A teacher created website supports the NCLB legislation by helping students achieve and increase their learning by completing assignments. It provides students with more access to their assignments and other educational aids, thereby, making them more proficient in the future, giving them an edge when it comes to meeting test scores for the school.

According to the article Educational Technology Initiatives from the "No Child Left Behind" website for NYSUT (New York State United Teachers) leaders, it states that the Enhancing Education Through Technology (Ed Tech) program's primary goal is to improve student academic achievement using technology in schools. It is also designed to assist students in crossing the "digital divide" by ensuring that every student is technologically

literate by the end of the eighth grade. The article continues to say that teachers should encourage the effective integration of technology with curriculum development to establish successful research-based instructional methods.

Additionally, The No Child Left Behind (NCLB) legislation emphasizes the importance of leveraging the power of technology in all areas of K-12 education, from reading to science to special education. As a result, education leaders and teachers at all levels are expected to develop lesson plans and activities that effectively employ technology to enhance learning and increase student achievement. Using technology to improve curriculum, assessment and teaching is vital to NCLB programs. Using a teacher created website fulfills this requirement by providing students with increased accessibility to their assignments. The technology of the Internet becomes the tool to improve students' academic achievement.

The Battle over Homework

Taught a good curriculum with good techniques, American students, on average, have never been less able on graduation from high school; up to 70%, according to one study, are essentially, functionally illiterate.

By Jeanie Davis

Author H. Cooper, PhD, and chair of psychological sciences at the University of Missouri-Columbia in his book The Battle over Homework, reviewed more than 120 studies on homework. His findings showed that most parents felt their students were getting the right amount, while ten percent (10%) of parents think their students are getting too much homework. He went on to say that this "small but vocal minority is having an impact on local school boards (p. 31)." Cooper, who is one of the nation's leading homework experts, supports after-school assignments affirming that, as children grow older, the link between how much they do and how well they are doing in school grows stronger. "By middle school, students are at a point that they can gain from homework academically" (2001, p. 27).

In New Jersey, it was reported that the superintendent of schools imposed a homework policy limiting nightly assignments. Reportedly, congratulatory calls came in from parents across the country. Drawing on evidence from lesson observations, teacher interviews, and project reports, the pedagogical perspectives and strategies of teachers working to incorporate use of Internet resources and associated Information and Communication Technology (ICT) tools into homework and

other assignments in the humanities, social studies and science lessons in English secondary schools proves inadequate.

So why assign homework? One reason for homework is that it helps to shape behavior gradually. This author feels that all children should be doing homework, but the amount and type should vary based on the students' ages and their developmental levels. A teacher created website that provides what assignments are and when they are due, would help to support students' learning and, in the near future, refute Dr. Coopers' hypothesis that "the USA is no longer a superpower when it comes to education (p. 27)."

A History of Homework

About every 15 years, a new public attitude emerges toward homework. In the 1950s, when the U.S. grew nervous over Russia's launching of Sputnik, the nation's kids saw an upsurge in homework to prepare them for complex technologies. As we eased into the 1970s, the tenor of the times begged that less pressure and stress be placed on children. Then the mid-1980s report, Nation at Risk, alerted educators that kids were not reading at expected levels, and the catch-phrase "rising tide of mediocrity" was created. One of the suggested solutions was to increase homework the concern was about staying economically competitive with the Japanese.
Strauss, V.

About 100 years ago, top educators in the United States began to think that homework was not only a waste of time, but was unhealthy too. No one is quite sure how much homework was given a century ago; however, historians believe most assignments involved memorization. It is possible that, toward the end of the 1800's, some educators started to feel like many parents do today - sick and tired of having their children/students labor over hours of homework. General Francis Walker, a Civil War hero who became president of the Boston school board, thought that hours and hours of what he felt was boring homework, was making his own children nervous and tired. He persuaded the Board to order that math homework be given only in extreme cases (Strauss, 2003).

Homework did not really get back in fashion until the 1950's, after the Soviet Union launched the Sputnik satellite and sparked the great space race. That was when American schools decided that students needed to learn more math and science, and needed to study harder. Re-enter homework. Parents still complain that many students do hours of homework each night, even though a new report by the Brookings Institution shows that time spent on homework in the United States has increased from 16 minutes a day in 1981 to slightly more than 19 minutes

in 1997. Meanwhile, researchers keep trying to figure out what to do about homework.

Today educators are under pressure from school boards to cover more material, and in greater depth, without increasing the hours in a school day. "Data shows that homework accounts for about 20 percent of the total time the typical American student spends on academic tasks. Considering this fact, it is surprising how little attention is paid to the topic of homework in teacher education" (Cooper, 2001 p. 25). Furthermore, in some areas competition-driven parents are placing pressure on teachers to assign homework in order to ensure that children will get into the best colleges or universities. However, not all parents agree that more homework is the correct approach.

Homework was invented for a good reason and almost 70 percent of studies indicated that students who do homework have higher achievement scores than those who do not. Research has shown that benefits of homework vary according to the different subject areas. Assigned homework in the subjects of science and social studies has the largest impact on achievement, followed by reading and Language Arts (Cooper, 2001 p. 32).

Benefits of Homework

The point of homework, in most cases, is review, reinforcement and skill building. From the results of this author's research and personal experience working with students, some of the benefits that come from assigning homework are:

- To review the concepts covered during the day and to prepare for the next day
- To provide practice in skills and extension of knowledge
- To develop good study habits
- To teach time management
- To develop self-discipline and independence
- To develop responsibility and accountability
- To provide an appropriate intervention for students with diverse needs
- To provide a meaningful communication link between home and school
- To integrate the efforts of school and home

Teachers should assign homework tasks that reinforce skills that have been taught at school and hands-on projects in order to enhance concepts. Homework can be used by students as preparation for tests. Research

indicates that improved grades are parallel with the amount of homework completed, not the amount assigned. For homework to be effective teachers, need to be cognizant of the amount of time individual students take to complete the assignments. In addition, teachers need to have clear and specific methods of communicating homework to students; this is where a teacher created, and maintained website would be used.

Parents can help their children to understand the material that is being taught, however, students need to know what homework and assignments have been assigned by the teacher. It is important for students to understand that parents need to be aware of homework assignments. Hong, Milgram and Rowell (2004) stress this point that teachers are to assign homework, the parents provide an environment where the homework is to be done and students are to complete the homework. The challenge is for everyone involved to cooperate and share information about the students' homework. In addition, it is important for the parent and teacher to be in communication. Fink and Nalven's article Increasing homework motivation addresses the fact that when parents stress the value of homework and review their child's assignments, or when the child himself realizes that homework furthers their success in

school, the teacher can rely on well-done assignments (Fink & Nalven, 2003).

Using technology is a great way for this communication to take place. If the parent feels the homework is too lengthy, too demanding, they need to let the teacher know what their concerns are. Better communication is satisfying for everyone parents, students and teachers.

Instructional Design

Instructional Design is the systematic development of instructional specifications using learning and instructional theory to ensure the quality of instruction. It is the entire process of analysis of learning needs and goals and the development of a delivery system to meet those needs. Furthermore, it includes the development of instructional materials with hands-on activities along with the testing and evaluation of all instruction and learner activities.

In the text User-Centered website development: A human-computer interaction approach, authors McCracken and Wolfe, stress, "A big challenge in creating any website is to organize its information in such a way that it is useful and meaningful to users" (p. 43). This point was

kept in mind during the design and development of this author's website. Additionally, feedback received by the author from instructors and peers was incorporated. Moreover, authors McCracken, & Wolfe continued on stating, "Good content organization creates the foundation for effective navigation and is crucial to the success of the site" (McCracken, & Wolfe, 2004 p. 78). In general, the site proves students with assignments and related information on simple screens with small amounts of text and as much space as possible. The text cautioned that users do not like scrolling up and down a page to find what they are looking for. It was hoped that, by limiting the amount of text used on each page, feelings of being overwhelmed by too much information would be relived, so students will be more likely to read the material presented.

The website includes elements designed to provide information, to allow students to submit assignments, to receive feedback through e-mail, and to motivate students to complete and turn in their assignments. Referring again to McCracken and Wolfe, "A big challenge in creating and website is to organize its information in such a way that it is useful and meaningful to users (p. 46). McCracken and Wolfe's challenge to create a website whose

information was organized, useful and meaningful was a major factor in the site's design. In the text, the authors' continue on stating, "Good content organization creates the foundation for effective navigation and is crucial to the success of the site (p. 62)." The site is informative yet not complicated to use. A four-step implementation plan inaugurated. First, concerned parties were informed about the prospective website; then they were informed that it was operating; next, they were taught how to use it; and finally, there was a check for understanding by assigning work that could only be completed by using the website.

Summary

In summary, homework and student achievement, the battle over homework, the history of homework, the benefits of homework, and instructional design have been discussed. It has been demonstrated that there is strong evidence that homework improves student achievement, especially when it is coupled with strong parental support. In addition, it has been revealed that the mission of homework should be to provide activities that integrate the efforts of school and home while expanding the intellectual, emotional, physical, aesthetic, social

and moral growth of every student. Furthermore, homework provides a valuable and viable link between home and school that can reinforce learning, provide practice and an extension of knowledge using skills according to the needs, capabilities and interests of every student.

The battle over homework showed that most parents felt their students were assigned the proper amount, while others thought their students were getting too much. The history of homework noted that about 100 years ago, top educators in the United States began to think that homework was an unhealthy waste of time. However, in the 1950's when American schools decided that students needed to learn more math and science and had to study harder, homework again became a priority.

There are many benefits to homework. Research indicates that improved grades are parallel with the amount of homework completed, not the amount assigned. This research also illustrates that homework, while controversial, is a necessary tool that teachers can and should use to strengthen students learning.

Instructional Design is the systematic development of instructional specifications using learning and instructional theory to ensure the quality of instruction. The Internet is a good tool, easy to access and available

in many homes. The project's website will have the proper information available 24 hours a day, 7 days a week. The website is primarily for students that lose or forget to copy their assignments. Additionally, it is for parents who want to check and make certain that their children have the proper information. For those without access to the Internet, information will be provided about other resources, where they can access the Internet, such as the public library.

After problems of accessibility are solved, the website will not only give the students the information they need but will also gain and retain their attention.

CHAPTER THREE

PROJECT DESIGN PROCESSES

Introduction

The website was designed and developed to help students improve their accountability by increasing the accessibility to their assignments. The project identifies accessibility issues specific to the problem middle school students have in completing and submitting correct assignments in a timely manner. The dilemma facing students in submitting incorrect and/or late homework assignments has become a serious problem. To facilitate the students in correcting this situation, and submitting in the correct assignments on time, assignments with their due dates were posted on the classroom's whiteboard for the students to copy into their student planners. However, upon checking the students' planners, it was found that many students were copying the assignments incorrectly or not even writing them in their planners. In addition, when phone calls to parents were made about missing assignments, many of them complained about their inability to find assignment information especially, what the assignments were and when they were due.

Chapter Three documents the steps used in developing the project according to the ADDIE Model. Specifically: Analysis, Design, Development, Implementation and Evaluation.

Analysis

This portion of the design project addressed the different types of analysis that were conducted. First, the focus was on users and their needs. In the text, User-centered website development the authors McCracken, and Wolfe, stress that you need to know your users and what their specific needs are. In essence, what are you going to develop and why are you developing it? Since the users of the website were the sixth grade students in this author's class, the students and their specific needs were known. After having three class discussions on what information a website for the students should contain, the students concluded that, homework assignments and due dates were most important.

One of the questions that Piskurich posed in the text, Rapid instructional design learning ID fast and right, that needs to be considered when beginning the analysis of the needs assessment is, "will fulfilling the need help employees (students) accomplish more?" When

considering this question and the problem, the answer would have to be "yes". By fulfilling the need, that the students have to know what their assignments are and when they are due, they will be able to get more accomplished. Another relevant fact from the same text, is what will happen if this need is not met? In this situation, this author believes there are three possible outcomes:

- Students will continue either submitting in incorrect or late assignments
- The incorrect or late assignments will negatively affect student grades
- The students overall education will suffer

Finally, the text Rapid instructional design learning ID fast and right, asks the question, "is the need related to (in this paper case) students not knowing what to do or when to do it?" This question was pertinent to knowing the needs of the users and needed to be addressed in the analysis of the design. After analyzing the design criteria and needs assessment the answer is yes; yes, the need does directly correlate to the students not knowing what or when assignments are due.

Next, the audience and their characteristics were analyzed. This answered the question "Who is the project being developed for?" Furthermore, will the

users/students be interested in learning and applying the information presented? This is another point that Piskurich brought out. By observing, the students using the website, it was believed that the students were interested in learning. With a little encouragement, they would apply the information provided on the website to complete their assignments and submit them on time.

Next, who will be using the website?

- Parents and students from the author's classes having problems with the Homework Hotline (the school's telephone system for retrieving assignments)
- Parents and students from the author's classes who need to know what the assignments are and when their assignments are expected.
- Parents and students from the author's classes, with little knowledge of how to retrieve information from a website, will be able to access the website.
- Those in homes that do not have access will be shown how to access the Internet from local libraries and other available sources.

Furthermore, the information that would be available for the students was to be analyzed. In addition, the students would learn how to access and use the website. Moreover, how the success of the project would be measured was taken into consideration.

What information will be available to students and their parents on the website?

- Schedule of class topics for the next ten weeks.
- Math and Science homework assignments for the next three weeks.
- Bonus assignments available.
- Personal information for students and parents to get to know their teacher better.
- Additional web resources that would help both students and parents to enhance their education.

How will the students be taught?

- Students would be taught in class on how to access the Internet and the teacher's homepage.
- Parents and students will be given a letter with directions on how to access the Internet and the teacher created website.
- Parents of students that continue to have problems with submitting assignments will be personally contacted to make sure they have the instructions on how to access the Internet and the teacher's homepage.

How will success be measured?

- Number of hits on the web site.

- Number of assignments and homework that are turned in on time.
- Improvement in the quality of assignments and homework that is turned in by students.
- A short survey given to the students to find if they found the website useful.

After the needs of the students were assessed, a prototype of the website was created for the purpose of alpha testing. The web page was saved to a CD and then the students were asked to evaluate it during class. Once the sixty-eight students had an opportunity to evaluate the web page, they were asked to write their impressions and comments about the web page. The information gained from the alpha testing was analyzed and used to make changes before the web site was published.

Goals

The goal of this research project was to increase students' grades by providing a website where parents and students can have increased accessibility to their assignments. Web-based learning systems, if designed appropriately, offer many advantages over the traditional learning environments (Chan, 2004). The project identifies accessibility issues specific to the problem middle school

students accomplish more?" (2000, p. 63) When considering this question and the problem, the answer would need to be "yes". By fulfilling the need, students have to know what their assignments are and when they are due; they will be able to get more accomplished. Another important question from the same text, which is relevant to the project, is "What will happen if this need is not met?" In this situation, if the need is not met, there are three possible outcomes:

- Students will continue either submitting incorrect or late assignments
- The incorrect or late assignments will negatively affect student grades
- The students overall education will suffer

Instructional Features:

There are a number of things that were taken into account when developing the website for the students. First, the author wanted to be certain that a tool was being developed that would address the difficulties middle school students are currently facing incorrect and late assignments. Additionally, the author needed to make sure that the concept of using the Internet was presented in a way that would stimulate the students' interest in

completing and retrieving their assignments, while ensuring that the students would strive to meet, or in many cases exceed, the teacher's expectations. This website may best be examined with the instructional objectives of the state standards in mind. The website was developed adhering to the following instructional objectives:

- To raise the student's awareness of their classroom and homework assignments.
- To help students locate their homework and class assignments.
- To increase the student's ability to turn in accurate assignments on time.
- To increase the students proficiency scores on school and state testing.
- To allow students access to their assignments 7 days a week 24 hours a day.

Students would have classroom instruction and practice in accessing the website and running the program before they are expected to be held to the requirement of submitting assignments via the Internet. This website will be available for the students to use outside the classroom, but students will need to have signed

permission from parents and/or guardians before accessing the website. Furthermore, parents will be able to attend a workshop to receive instructions on how to use the website so then can help students when required. In addition, for parents that cannot attend the workshop, permission slips with directions attached would be sent home before students have access outside the classroom.

Design

When this website was developed, a number of things were taken into account for the students. First, the tool would address some of the problems that middle school students face, submitting incorrect and late assignments. Next, would the students be willing to use the web site to communicate with their teacher. Furthermore, the concept of using the Internet to stimulate the students' interest, in retrieving and completing their assignments.

John Keller's motivational strategies include four major categories: Attention, Relevance, Confidence, and Satisfaction. Keller's "theory of familiarity" falls under relevance stating that teachers need to help learners make sense of new information by relating it to something they already know, or something they have already experienced. Familiarity, the ability to adapt instruction by using

examples and concepts that relate to a learner's prior experience to help them understand and acquire new knowledge, is a crucial component of relevance. To help students become proficient and master the state standards, they need to have fun as they acquire and internalize this new knowledge. As students become familiar with using the teacher created website to locate their assignments, they will be motivated to complete and submit the assignments.

Furthermore, Keller's motivation theory states that satisfaction is essential to gaining the learners attention and motivating a response. Satisfaction consists of Natural Consequences which provide learners with opportunities to use newly acquired knowledge or skills in a real setting; Positive Consequences, which provide feedback and reinforcement that, sustain the desired behavior, and Equity, which maintains consistent standards, clarification and consequences for task accomplishment. The equity method for increasing the motivation of learners was used in the design and development of the website to clarify assignments and the due dates for assignments. Student must see a high probability of succeeding to be motivated along with believing that choices and effort relate to success and reward.'

Design Scheme

The design scheme used for the website was task oriented. The main tasks involve the students logging on to the website and selecting the homework button on the left hand side, or clicking on the star next to the homework heading from the box in the center of the page. Once the homework page appears, students will find their homework assignments listed for next ten weeks in both Math and Science. The following screenshot is an example of what the students would see:

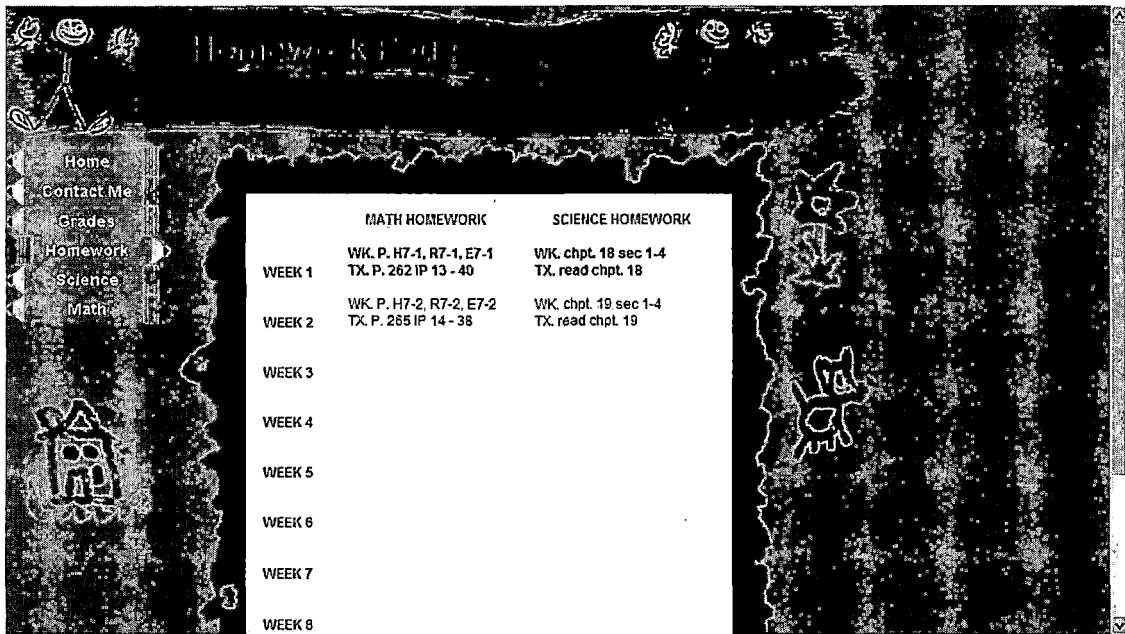


Figure 1. Example of Homework Page

By selecting the "bonus button" students will be able to find any "extra credit", or bonus work, that is available during the current grading cycle. Additionally,

students will be able to see the topics that will be covered during the current grading cycle and print off any study guides that correlate to each topic. In the center of the homepage, students will find the link that allows them to post their weekly journal entries at anytime during the week in order to receive full credit. Finally, if students are experiencing problems, they can send the teacher an e-mail by using the "contact button".

Organizational Structure

This program uses a command type structure, which was chosen because the students can access the website and then command it by clicking on the correct button to take them to the assignments they need to complete. Limiting the navigation of the website by forcing the students to use buttons helps to ensure that all users will proceed through the site on a predetermined pathway. This helps to eliminate the possibility of students missing important information.

Content Organization

The website includes elements designed to provide information, allow students to submit assignments, receive feedback through e-mail and motivate students to complete and turn in their assignments. The screen colors and

playful clip icons were chosen in order to catch the attention of students. The icons were placed on the background to offer contrast between screen elements and the background. This helps information and task directions to stand out from the background and improves clarity. A verbal and written welcome message was added to the splash page to help make students and their parents understand the intent for the website. This welcome message does not appear on each page because is it not needed. A standard font (Arial 12 point) was used to soften the text and ensure that when students access the site on computers outside the classroom the text would be display correctly. All page elements were aligned with the center of the page so users are not required to search the screen for material. After navigating through a few pages, users should begin to recognize this alignment and be able to anticipate the layout, which provides the site with continuity making it easier and faster for students find the material.

Navigation buttons (pencils) were chosen to add a sense of academics to the playfulness of the color scheme and icons chosen. The location of navigational bar stays stationary on the left hand side of the page further adding to the sites continuity.

Development

When beginning to think about what type of design plan to use, it was decided to go with a backwards design plan. The first question that was asked was what should the end item to look like? Next, what types of assignments do the students submit and are the assignments submitted on time? Therefore, the first step in the design plan was to make sure that the assignment information provided to the students/parents on the website would give the students enough information for them to submit quality assignment in a timely manner. If the students cannot understand the requirements of the assignment, or time line, then how can teachers expect students to turn in good quality assignments on time. The second step was to make sure that access to the website was easy to obtain. If students have problems accessing the website then it would be no better than the Homework Hotline that the school's administration provided. Therefore, a website was created with an address that the students and the parents could relate to, and remember, without much problem their teacher's name. Hence, the site's address is "http://mrsaustin.myteacher.info". The third step was to make sure that the website operated smoothly and had a

style that would catch and hold their attention. The following is a screenshot of the home page.

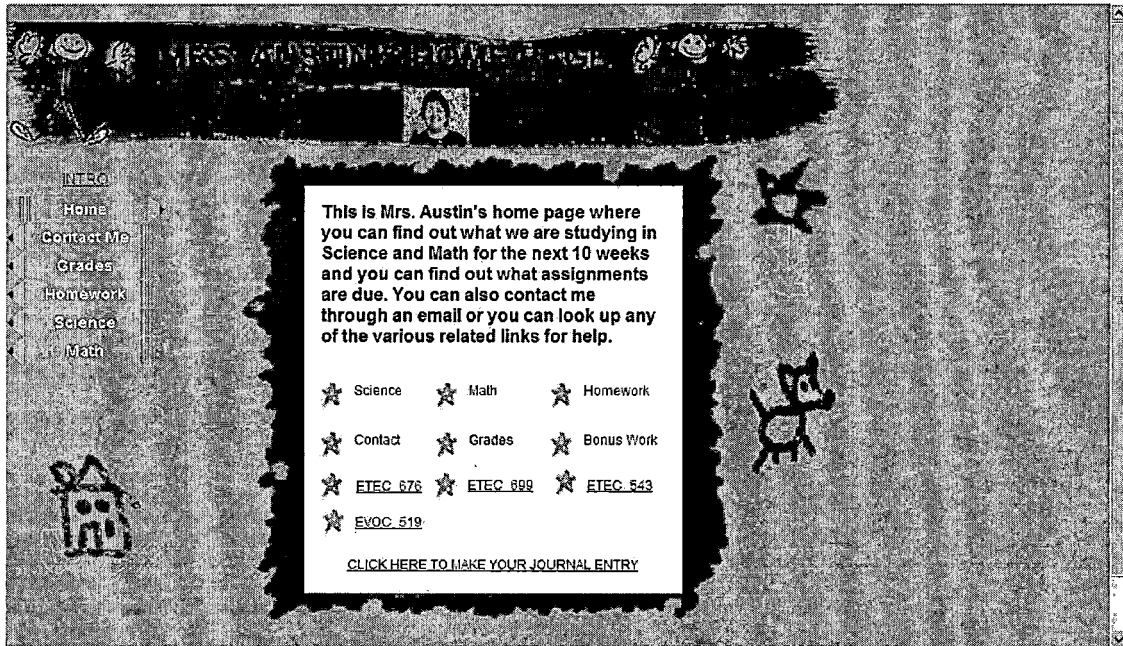


Figure 2. Example of Web Site Homepage

To help keep the students interest in the site some humorous audio, which varies with each page was introduced.

Implementation

The plan to implement this new system for class assignments and homework was to send out preliminary letters to inform the parents that the website would be available in the near future. In addition, the students were told that the author was working on it so that they would get used to the idea. After, the initial information

was disseminated, it was ensured that each student knew how to access the Internet and navigate through the various websites. When each student had a rudimentary understanding of how to get on the Internet, they were introduced to the website and shown how to navigate through the site. Finally, another letter would be sent out informing the parents that the website was up, running, and that students knew how to access and use the website. If they had any questions, they could ask the students or call the teacher for instructions on how to access and use the website. After the information was disseminated, on how to access and use the website, assignments and homework could be assigned that can only be completed and submitted by using the website. This will help teachers ensure that the students would acquire practice using the Internet to enhance their education.

Students will have classroom instruction and practice in accessing the website and running the program before they will be held to this requirement. The website will be available for the students to use outside the classroom, but students will need to have a signed permission from parents and/or guardians before accessing the website. Furthermore, parents will be able to attend a workshop to receive instructions on how to use the website so then can

help their students when needed. In addition, for parents that cannot attend the workshop, permission slip with directions attached will be sent home before students could have access outside the classroom.

Evaluation Results

The fundamental design of the website/project was to be a resource for students and their parents to be better informed about class assignments and their due dates. In the text User-centered website development: A human-computer interaction approach the authors McCracken and Wolfe stated that a "site that is easy to use has a much better chance of surviving than one that doesn't" (2004 p. 42). This statement, and the authors' comment, that websites will "communicate more effectively with your intended audience if it's usable" (p. 42) were especially true when the target audience is sixth grade students and their parents. The website provides Math and Science homework assignments for the current quarter by week, bonus work, quarter grades, a contact link, and an area where students can make journal entries. The goal was to provide an easy to navigate website that students and their parents would use to locate the needed assignments with minimal amount of frustration. It is hoped to be able

to add a discussion board where students can submit questions on their assignments and receive peer feedback, even though the website has not yet reached this stage in the development process.

To obtain beta testing data that was needed to evaluate the website, five of the author's colleagues were asked to visit the website and then answer a short survey about the experience. Additionally, students beta tested the website by logging on and submitting a journal entry for Science to see if they would be able to complete that activity. First, by having the teachers beta test the website and then answer the survey questions to find out what suggestions or comments, improvements could be made to the overall usability of the site. Second, by having students (the targeted audience) beta test the website, and make journal entries, it can be seen if the instructions provided were easy to follow in order to complete the activity.

Since the website was designed to be a resource for students and their parents, the hands-on portion was the focus of the field-testing for the students in the author's fifth period Science class. The 32 students in the Science class were given oral instruction in the classroom, written instruction to take home and a

demonstration on how to access and use the website to make a journal entry. The site was designed with sixth-grade students at the middle school in mind; however, feedback at teachers from all three-grade levels who might benefit from website of this type was desired. Consequently two eighth-grade Science teachers, one seventh grade English teacher, one seventh-grade Math teacher, and one sixth-grade Math and Science teacher were selected as beta testers.

Each of the five teachers who agreed to help with the testing received instructions on how to access the website. They were also given a survey to complete after they were able to visit and evaluate the site. The survey questions focused on the effectiveness of design, the ease of navigation, and locating information. A large place for comments was provided at the end of the survey in an attempt to entice teachers and students to give suggestions for improving the website and making it more helpful to the students and parents that would be using it. Copies of the teacher and student surveys are in located in attachment B.

In general, positive feedback was received from the beta testing; however, some of the feedback on the design of the site was critical with many suggestions for

improvement. It was suggested that the section containing the student's grades be place in a secure password protected area. Another suggestion was that samples of assignments should be posted for the students and parents to use as a guide. Most of the teachers surveyed felt the website was an excellent resource for students and parents and wondered how they could have their own website similar to the one they evaluated.

Eighth grade teachers said the background was too juvenile for their students but the younger sixth graders would enjoy it. All teachers suggested that the site needed to have homework abbreviations explained, or provide a key, to alleviate confusion. The teachers who viewed the site liked the fact that the students' grades could be posted; however, they said there should be a separation between them because they all seemed to run together. Password protection was needed here as well. Finally, some of the teachers made the comment that there needed to be a link to state standards so the students and parents could see they were being followed.

Overall, the teachers liked the website and listed the following features as enjoyable:

- The pencils used for navigation

- The background of the science page, because it matched the topics that are being covered
- The background on the math page
- The fact that the parents were able to contact the teacher via e-mail, because it would allow teachers to receive feedback on assignments.

Of the 32 students assigned to evaluate the website by filling out the on-line journal entry page, six students said they could not find the website and handed in the paper. Three students did not even try to access the site and thought the assignment was "stupid". Twenty students had no problem with making the entries, however, three students asked to use the computers in the classroom because they did not have access to the internet at home. Twenty-one of the twenty-three students who completed the assignment said that they enjoyed using the website better than having to write in their journals by hand. Two of the students did not like the activity because there was no way to spell check the work before submitting it.

Summary

In summary, the Internet is a tool that many homes have available and is easy to access. A teacher created website that contains the proper assignments for students

to retrieve can assist students who lose or forget to copy their assignments in class. This will also assist parents who desire to check that their children are completing the correct assignments. Homes with out access to the Internet will be provided with resources, such as the public library, where they can use the Internet.

The design of the website was twofold. It is to provide students with homework information while grabbing their attention and maintaining it. It is informative, yet not complicated to use. A four-step implementation plan was introduced to everyone concerned about the prospective website. Once they were notified the site was operational, users were trained on how to retrieve and submit information. Finally, student understanding was checked by giving an assignment that had to be completed using the website.

By completing this project, the author used many of the concepts that were learned from the text User-Centered website development: A human-computer interaction approach by McCracken and Wolfe. In addition, the author learned that, without proper planning, a project such as this would be useless to the students because they would not be able to utilize it much like the Homework Hotline. Furthermore, from the research and testing that was

accomplished for the design process it was discovered that the problem of students submitting incorrect and/or late assignments was worse than first thought when the project was begun.

CHAPTER FOUR

CONCLUSIONS AND RECOMMENDATIONS

Introduction

A record of the information gleaned from this project is included in chapter four. Recommendations extracted from the project are presented as well as a revision plan. Finally, the Chapter ends with a conclusion.

Recommendations

Generally, the feedback that was received was positive; however, some of the feedback on the design of the site was critical. Many suggestions for improvement of the website were received. Most of the teachers surveyed, felt that the website was an excellent resource for students and parents to keep in touch with their teachers, find their assignments and other information. Some of the teachers wondered how they could have a website similar to the one they reviewed. After the teachers were told how the website was created and maintained, they asked if the author would be willing to create websites for them.

The Eight Grade teachers said that the main page's background was too juvenile for their students, but they felt that the younger sixth graders would enjoy it. All the teachers thought the homework page was great but

suggested that there needed to be a key for the abbreviations to help alleviate student confusion. Furthermore, the teachers commented that they liked the idea of being able to post students grades but the grades needed to be separated because they all seemed to run together. There was also some concern about the need for the grades to be "password protected". Finally, they suggested that it would be helpful to provide a link to the state standards so that students and parents could see that the lessons were standards based.

Features that the teachers liked were the navigational pencils that were used on the left side of every page. They thought that the backgrounds for the science and math pages were outstanding because they matched the topic being covered. All the teachers said that they liked the parents being able to contact them by email so they could send and receive feedback on assignments. Most of the teachers were interested in the journaling capability of the website and said that it would be something that they would use. In conclusion, the teachers liked the welcome message and other audio features.

Finally, by completing the research for this project, the author discovered that there is a link between

students using a teacher created web site to retrieve assignments and then correctly submit them. However, further research and testing is required to determine if the link that was discovered has the constancy that would validate the alpha and beta testing results.

Plan for Revision

Some very valuable information was gained from the surveys that were returned and the beta testing that was conducted. Based on the feedback received, plans have been made to incorporate changes that match the suggestions made by the author's colleagues. First, on the main page there will be a link added to the state standards. Next, on the homework page, a key will be added that explains the abbreviations. After reviewing the comments and suggestions that were made for improving the area for student grades, a different format for easier viewing and password protection would be used.

In the future, plans are being made to add more content, such as scavenger hunts, web quests, a discussion board, and additional resources (such as case studies) for completing assignments over and above the textbook. The author also is investigating the possibility of adding a streaming audio button to clarify assignments even more.

Other lessons that were learned were that some students approach technology with the same halfhearted attitude they do their classroom assignments. However, some of the students that do not try in class get excited about the technology and jump right in and start working.

Conclusion

In conclusion, the Internet is a tool that many homes have available and is easy to access. The website will have the proper information available 24 hours a day, 7 days a week for students that misplace or fail to remember to copy their assignments, for those that do record the information, and for their parents who want to check to make sure their children are doing all they can to get the education they deserve. For those homes that do not have access to the Internet, they will be advised about public resources for Internet access.

The "user-friendly website" was designed to gain and retain the students' attention while providing them with the information they need to be successful. A four-step implementation plan was used where everyone concerned about the prospective website was informed. Once informed that the site was up and running training would be provided on how to use the site. Finally, student

understanding will be assessed by assigning work that can only be completed by using the website.

When this project was started, the author was one of few teachers who saw the need to have a teacher created website for their students to access assignments, grades and other information. Since that time, the school district where the author teaches, has been awarded a Science and Technology Enhancing Literacy Learn and Academic Rigor grant (STELLAR). Part of grant money included the implementation of e-chalk, a website that teachers can use to post assignments and announcements, have on-line discussions with their students and communicate with parents and students by using e-mail. At the start of the 2004-2005 school year, all Math and Science teachers, this author included were required to use e-chalk. All have e-chalk account as well as their students.

E-chalk, not unlike a teacher created website, benefits students by providing them access to internet links on the class web page to enhance curriculum. The e-chalk web site gives students a way to look up homework and assignments, participate in online discussions, and to participate in school surveys. Using e-chalk, teachers can customize their list of assignments, allow students to

store electronic work in an online "digital locker" and access it from any Internet-connected computer. Finally, students can use e-chalk, as well as a teacher created website, to email homework, messages and questions to their teachers. Because e-chalk is a commercially available program that is ready to use and easier to manipulate, the teacher created website that was the focus of this thesis is on hold until the end of the 2004 - 2005 school year when more time will be available to incorporate the planned changes.

APPENDIX A
CD OF PROJECT

APPENDIX B
WEBSITE SURVEY

Teacher's Website Survey

Please take a few minutes to complete the following survey after you have visited the website. Circle the number that best reflects your experience using the Website. Please be honest with your feedback, any comments or suggestions you have to improve the website will be greatly appreciated. Use the following scale to answer the questions:

5 = Strongly Agree 4 = Agree 3 = Neutral 2 = Disagree 1 = Strongly Disagree

1. The website's purpose is clear and easy to understand?

5 4 3 2 1

2. It was easy to find the assignments and information.

5 4 3 2 1

3. Navigating the site was easy.

5 4 3 2 1

4. The colors chosen for the site were pleasant and complimentary.

5 4 3 2 1

5. The website was professional in appearance and content was applicable.

5 4 3 2 1

6. Links were appropriate.

5 4 3 2 1

7. Students assignments and due dates are clearly presented.

5 4 3 2 1

Additional comments /overall evaluation of the site: _____

Students' Website Survey

Students please take a few minutes to complete the following survey after you have visited the website and posted your Science journals. Circle the number that best reflects your experience using the Website. Please be honest and give any comments or suggestions that you feel will improve the website. Use the following scale to answer the questions:

5 = Strongly Agree 4 = Agree 3 = Neutral 2 = Disagree 1 = Strongly Disagree

1. It was easy to find the assignments and information on the website.

5 4 3 2 1

2. It was easy to navigate through the site.

5 4 3 2 1

3. Were the website's colors were nice to look at.

5 4 3 2 1

4. It was easy post your Science journals.

5 4 3 2 1

5. I enjoyed using the website and would like to use it again.

5 4 3 2 1

This space is for any comments you would like to make about the website

REFERENCES

- Bempechat, J. (2000). Getting our kids back on track: Educating children for the future. San Francisco, CA: Jossey-Bass.
- Davis, J. (2000). Schools piling on too much homework, psychologists say. Retrieved November 15, 2004, from <http://www.foxnews.com/health/111100/homework.sml>
- Chan, T. (2004). Teacher-oriented adaptive Web-based environment for supporting practical teaching models: a case study of "school for all." Retrieved December 8, 2004, from EBSCOhost database.
- Cheng, K., Thacker, B., Cardenas, R., & Crouch, C. (2004). Using an online homework system enhances students' learning of physics concepts in an introductory physics course. American Journal of Physics, 11, 1447. Retrieved November 21, 2004, from EBSCOhost database.
- Cooper, H. (2000). Homework research and policy: A review of the literature. Retrieved November 15, 2004, from University of Minnesota, College of Education and Human Development Web site: <http://www.education.umn.edu/carei/Reports/Rpractice/Summer94/homework.htm>
- Cooper, H. (2001). The battle over homework: Common ground for administrators, teachers and parents. Thousand Oaks, CA Crown Press, Inc.
- Hong, E., Milgramand, R., & Rowell, L. (2004). Homework motivation and preference: A learner-centered homework approach, theory into practice. Retrieved February 26, 2005 from <http://tip.psychology.org>
- Keller, J. (1983). Keller's ARCS model of motivation. Retrieved January 16, 2005, from <http://www.ittheory.com/keller1.htm>
- Keller, J. (2000). ARCS - motivation theory. Retrieved May 26, 2004, from <http://ide.ed.psu.edu/IDDE/ARCS.htm>

- Keller, J., & Suzuki, K. (1988). Use of the ARCS motivation model in courseware design. In D. H. Jonassen (Ed.) Instructional designs for microcomputer courseware (pp. 25-42). Hillsdale, NJ: Lawrence Erlbaum.
- Fink, S., & Nalven, F. (2003). Increasing homework motivation. Education, 3,31. Retrieved November 17, 2004, from EBSCOhost database.
- McCracken, D. D, & Wolfe, R. J. (2004). User-centered website development: A human-computer interaction approach. Upper Saddle River, NJ: Pearson Prentice Hall.
- Hellmich, N. (2000). Amount of homework adds pressure on kids. Retrieved April 16, 2004 from <http://www.detnews.com/2000/schools/0010/13/e06e-133319.htm>
- Walberg, H., Paschal, R., & Weinstein, T. (1985). Homework's Powerful Effects on Learning. Educational Leadership, 42(7), 76-79.
- Ruthven, K., Hennessy, S., & Deaney, R. (2005). Incorporating Internet resources into classroom practice: Pedagogical perspectives and strategies of secondary-school subject teachers. Computers and Education, 1, 34. Retrieved November 18, 2004, from EBSCOhost database
- Strauss, V., (2003). Life support: A history of homework: How much is too much? Debate has simmered for 100 years. Retrieved May 14, 2004, from <http://www.post-gazette.com/lifestyle/20031106life6.asp>
- Hanna, R., (2001). Homework requires teamwork between teachers and parents. Michigan Education Reporter. Retrieved April 16, 2004, from <http://www.mackinac.org/pubs/mer/article.asp?ID=3765>
- Piskurich, G., (2000). Rapid instructional design learning ID fast and right. San Francisco, CA. Jossey-Bass/Pfeiffer.

- Ratnesar, R. (1999). The homework ate my family. Retrieved April 16, 2004. from <http://www.time.com/time/2003/kids/homework.html>
- Smith, P., & Ragan, T. (1993). Instructional design. Upper Saddle River, NJ: Prentice-Hall, Inc.
- U.S. Department of Education's overview to NCLB. Retrieved May 26, 2004, from <http://www.ed.gov/NCLB/landing.jhtml>