

TRAINING THE ELEMENTARY TEACHER: IMPLEMENTING
EFFECTIVE INSTRUCTIONAL STRATEGIES THROUGH
TECHNOLOGY INTEGRATION IN THE CLASSROOM

A Paper

Presented to

The Department of Instructional Design and Technology

EMPORIA STATE UNIVERSITY

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science

By

Mike Wilbur

February, 2007

Dr. Armand Seguin, Chair

Dr. Jane Eberle

TABLE OF CONTENTS

Chapter 1- Introduction	1
Chapter 2- Review of Literature	2
Chapter 3- Design Model	8
Chapter 4- Results	15
Chapter 5- Conclusion	17
References	20
Appendices	22

Chapter 1

Introduction

Andover School District has embarked on a mission to increase its use of effective instructional strategies in the classrooms in order to increase student success in the classroom and on state assessments. The district has identified a set of strategies and indicated that they are to be incorporated into each lesson; utilizing as many of the different strategies as possible within a lesson. In addition to simply instructing through these strategies, administrators feel the best way to improve student performance is through effective teaching that integrates technology into classroom lessons.

In recent years, our ability to incorporate technology within each classroom has expanded. Every classroom now contains a minimum of three computers, has the ability to utilize a mobile wireless computer lab (C.O.W.S.), or a combination of the two. Proper training on how to integrate technology into our lessons will allow teachers to meet the new expectations our district has for technology use.

The first area of focus for this project will be to determine a technology program, or tool, that will be beneficial for elementary students. Secondly, I will need to find a way to integrate the technology with the required instructional strategies that our district has indicated are essential for effective instruction. The final stage of the project will be to create training for teachers while providing an example of how to combine the previously mentioned elements so that students will benefit from the technology.

Chapter 2

Review of Literature

When computers first arrived in the early 1980's, teachers faced several problems; poorly conceived plans to integrate the technology, poor training to use computers, and teachers did not fully understand the role that these machines should play in their classroom (Bauer & Kenton, 2005). As technology has changed so has the attitude of teachers towards technology. Most educators have come to welcome the limitless possibilities of the Internet over the narrow scopes of textbooks (Bauer & Kenton, 2005). However, for the remaining teachers who still have some trepidation in integrating technology, a well planned training program could be useful in calming their fears.

According to Sparks (1999), the impact technology can have on a student's learning is wasted unless the teacher is trained to use that technology and actually implements the technology in class. In a study performed by Harold Winglisnky, based on the 1996 National Assessment for Educational Progress in Mathematics, found that students who were taught by teachers that utilized computers for simulations and applications scored up to a half grade better than those students who did not use such simulations (Sparks, 1999). The increase in scores seems to be an indicator that instructing, not simply drilling, with technology components enables a student's ability.

There is additional growing evidence that increasing technology use in the classroom during instruction can have positive effects on students' scores in the core areas of math, science, and English (Kennewell & Beauchamp, 2003). In a research study of children ages 7 to 9, Steve Kennewell and Gary Beauchamp studied the effects of technology in the core areas. Their research indicates that interactive whiteboards, networked computers, and software such as

PowerPoint were influencing factors in student achievement. The whiteboards were considered more effective for gaining and retaining student attention on subject matter than other display methods. PowerPoint was felt to add an aspect of visual display not available in non-technology based instruction. While there were mixed feelings as to the effects of student's writing abilities, all participants in the study, adults and children, agreed that students were more motivated to write when allowed to compose on the computers. The study concludes by recognizing that although the technology did motivate students in the classrooms, and appeared to have advantages when utilized for instruction rather than free play. However, they also recognized that more research needed to be conducted in order to determine the exact role that the technology had on student performance (Kennewell & Beauchamp, 2003).

Lisa Guernsey (2001) stated, in *PowerPoint Invades the Classroom*, PowerPoint has successfully invaded classrooms. She interviews several teachers, the most relevant a Kindergarten instructor, who utilizes the software program in her classroom every day. The teacher sings the praises of the software, claiming that PowerPoint is "sensational for oral language development in children of this age." While the article seems to praise PowerPoint, it also includes a short section which demonstrates middle school age students in a computer classroom that do not share the same enthusiasm as their elementary aged counterparts, or even students who use the program to complete assignments in core subject areas. Included in the article is a brief statement alluding to the fact that students may become more concerned with the glamour involved in creating such presentations instead of the thinking skills required to create a stimulating presentation.

Another technology tool I felt worthy of integrating into an elementary classroom was a WebQuest. These Internet-based projects are often suggested to enhance elementary curriculums

(Dodge, 1995). These projects are guided tasks utilizing the Internet as a resource. Educators often utilize this tool as a way to motivate students to use higher level thinking skills such as analyzing and synthesizing information (Macgregor & Lou, n.d.). Macgregor and Lou (n.d.) conducted research on 2 fifth grade classrooms based on their use of WebQuests. While their main focus of the research was how effective preparation, or lack of, in creating WebQuests impacted student learning; they also noted student attitudes and performance while utilizing the WebQuest. The study demonstrated that without proper guidance, such as mapping templates or cues for organizing information, implementation of WebQuests were not as successful as teachers would like.

After reviewing several articles that involved implementing technology in an elementary classroom, I found repetitive themes. Technology is a wonderful tool that can be utilized to motivate students in the classroom. These tools are only as good as the planning and organization of the lesson they are paired with. And finally, the instructional strategies that are used in conjunction with technology are equally important, if not more so, than the technology itself.

It would be remiss of me not to include some research into effective instructional strategies and incorporate them into my example for the teacher training I will conduct. Robert Marzano, Debra Pickering, and Jane Pollock (2001) state that there are nine instructional strategies that should be utilized in every classroom including strategies that are very prevalent in our district: identifying similarities and differences, summarizing and note taking, cooperative learning, utilizing advanced organizers and several others.

These strategies have been proven to increase student percentile gains in the range of a 22 percentile increase by utilizing questions, cues, and advance organizers, to a 45 percentile gain through the mastering of identifying similarities and differences (Marzano, et al., 2001). The need for implementing these types of strategies in each classroom becomes very apparent when viewing those numbers. Most instructors in our district will see the value in the implementation, or continuation, of these instructional strategies.

Creating training to help elementary teachers integrate technology into their classrooms can sometimes be difficult in our school district. The record keeping tasks of varied subject matters that pertain to student performance in our district has begun to be detrimental for the advent of new instructional tools that require teachers to spend more time outside of their classroom learning how to implement or utilize this new concept or tool. These feelings of frustration are not unusual. In a research study conducted by John Bauer and Jeffrey Kenton (2005) demonstrating that 30% of teacher frustration was due to lack of time to plan for technology integration. Those frustrations warrant consideration as they can be applicable to any classroom. Finding a way to limit those frustrations when implementing new technologies within a school should be imperative when designing the training.

The Far West Laboratory presented an article that describes effective implementation of technology into the K-12 classroom on a local, state, and federal level. In essence, the article states careful planning with teacher involvement is needed when developing technology training in order to produce sustained integration of the technology by teachers; if teachers are not interested in the training they are less likely to use the technology (Cradler, n.d.). The latter is particularly true in our district. Several technology trainings have been offered, but attendance has been limited.

The prescribed approach by Far West provides each teacher with a framework for implementation that includes instructional strategies, objectives, students' needs and assessment strategies (Cradler, n.d.). The article also identifies specific steps that need to be addressed when planning classroom implementation: student and instructional needs; specific activities to meet needs; applications that are technology-based to support instruction; have available individual staff development, if only for technology support; performance-based assessments; ensure that all classrooms have the technology resources needed; and commitment from the school to ensure proper funds are secured for continued implementation. (Cradler, n.d.) After the planning stage, it becomes important to give the teachers a reason to use the technology, as well as utilizing technology with current curriculum instead of allowing the technology to dictate what the curriculum may become (Cradler, n.d.)

Far West Laboratories based much of their information on research obtained from the California state funded technology programs, and a study on teacher-application of telecommunications and Internet resources. While it is unclear how much information is gathered from which sources, leaving some doubt as to how unbiased they may have been in their own study, several of their ideas are supported in other articles.

In his article, Glenn Brand (1997) states that the Office of Technology Assessment, within the U.S. Congress has identified the lack of teacher training as the largest problem in integrating technology into curriculum. Brand goes on to identify several influencing factors as to the importance of proper training, many of these matching those presented by Far West

Laboratories. Brand's additions for successful implementation of technology in the classroom are finding the level of various technology interests of the staff prior to training, collaborative development, and teacher recognition. Peer coaching is an excellent means of instruction as it addresses individual needs and modeling allows for novices to observe experts to help them overcome fears that may have even after training (Brand, 1997). In addition, if teachers are to add another task to their daily routine, they should be provided incentives or recognition for their efforts (Brand, 1997). The importance of something so simple is often overlooked by administrators. The failure of training programs can be attributed to a lack of several key components including the lack of reward or celebration for accomplishments that promote the desired changes (Ferguson, 2006).

Chapter 3

Instructional Design Model

In developing my project, I wanted an instructional design model that was easily adaptable to my needs and one that would be most effective for my project. I chose to utilize the A.D.D.I.E. instructional design model (Figure 1). I felt this choice of design model would allow me flexibility while still incorporating the distinct structure I would need in the creation of my project.



A.D.D.I.E Model

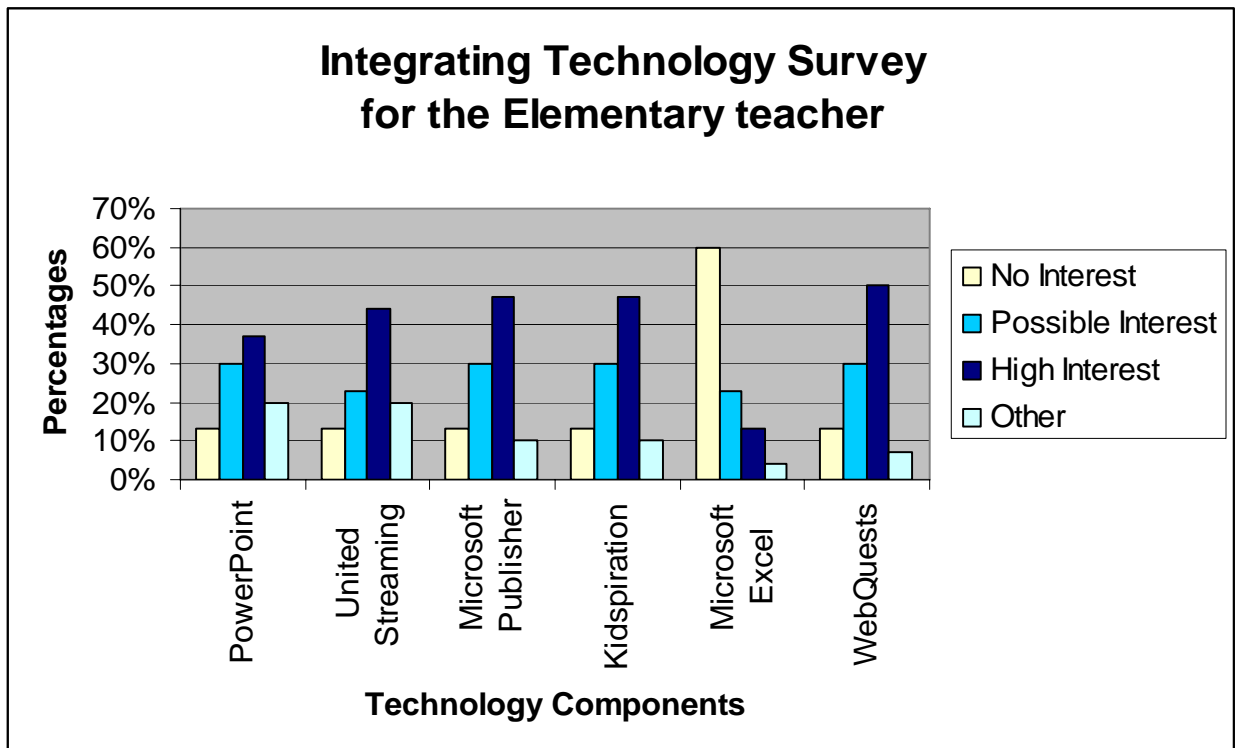
Figure 1: Instructional Design Model

Analysis

First, I had a discussion with the district technology team to educate myself on the available technology tools or software programs that were available in all elementary buildings. The technology team informed me of results from a recent district wide survey that included information on software programs and tools that were available, but not being utilized in the district. Reasons for the limited use of these programs and tools were attributed to a lack of training or a lack of ability to easily and effectively implement them in daily lesson plans. The three programs that most elementary teachers identified most desirable were: United Streaming; a website that contains streaming videos and instructional tool to accompany the videos,

PowerPoint, and Microsoft Publisher. One comment that was stated on several surveys was the desire to receive training on creating WebQuests. Next, I created a survey (Appendix A) for my needs analysis that was sent to all elementary teachers via district email allowing them to express which software programs they would be most interested in learning about. It was decided not to offer training on various types of technology tools, such as interactive whiteboards or handhelds, because the technology department already had trainings planned for the spring. After allowing a week and one reminder two days prior to the survey return deadline, I received 82 responses, from my peers. To focus on one area I eliminated the technology components that received the highest marks in the No Interest category, Microsoft Excel, and began to focus on the results of the components that scored highest in the High Interest and Possible Interest categories. Three areas of interest stood out from these results: PowerPoint, WebQuests, and Microsoft Publisher (see Figure 2).

Figure 2: Needs analysis survey results



Based on these results, I requested a brief meeting with the staff from each building during a district in-service day to discuss these options further. I used the short meetings to conduct an informal task analysis to find out what staffs needed to learn about the three categories that they had shown the most interest in and what preferences they had in regards to training methods. After discussing these options with the various staffs, it became obvious that there was more of a training need for WebQuests than incorporating the other two software programs. Typical responses included, “We can help each other on Publisher and PowerPoint projects, but we haven’t created a WebQuest before.” Another comment summed up several responses as well, “I have seen a WebQuest before, but really never used one. I would be much more interested in learning more about that than sitting through another training on PowerPoint basics.”

Another point that became evident during the discussions as I explained that WebQuests could be posted on their school’s website was the staffs’ abilities to utilize web design software. Few of them had created websites before, and those with some experience had utilized different design software including: Mozilla; Dreamweaver; SOCS, a program that teachers could use to create a single webpage; or Microsoft Word. Staff in all buildings felt very comfortable with Microsoft Word, so I began to design a plan utilizing that software as the method for classroom implementation.

Design and Develop

I designed this training to include the components, coupled with an explanation of each, of a WebQuest: Introduction, Task, Process, Evaluation, Conclusion, Teacher page, and Credits (Dodge, 1997). My instruction employed two different font colors to help teachers rapidly

identify the significant information. I included only brief instruction as to the effective instructional techniques that could be incorporated into a WebQuest; during the in-service discussions most staffs were aware of many of the effective instructional strategies I had originally intended on including in the training. The training included information as to the effectiveness of WebQuests and an example of a WebQuest for various grade levels and subject matters. Finally, I needed to provide training on how to create bookmarks in a Microsoft Word document so that teachers could use the bookmarks as a navigation bar for their web page if they so desired and show them how to save the document as a web page.

I decided that an accessible website would be the easiest way for each staff member to access the training. In that manner, administrators would not have to relinquish faculty meeting time, and those teachers who were uninterested would not have to receive the training. Within the website I included training and information on how to create a WebQuest as well as a tutorial for converting a Microsoft Word document into a web page. Instructions for loading the site to the internet would not be needed as each building uses their computer lab instructor to update and maintain teacher web pages.

Storyboards were used to select the content of the site and the look I intended to use. Utilizing the storyboards allowed me to identify non-significant features from my pages and remove them. Eliminating all but the essential visual elements allows for a better project and invites your participants to focus in on the intended material (Lohr, 2003).

The homepage included instructions for completing the training, and a link to a Flash presentation. The Flash presentation contained a brief introduction to WebQuests and the components utilized in constructing these types of projects. I also added research information

that demonstrated why WebQuests were so effective to increase the desire to utilize them within the classroom. The majority of instruction and resources for the training were on the remaining pages.

The WebQuest page contained links to various printable sources that would aid in comprehension of subject matter were embedded throughout the written instructions; including an additional Flash presentation for a review of effective instructional strategies. I utilized a Camtasia video presentation to review the process of constructing, and the components contained within, a WebQuest. The video contained examples from a sample WebQuest that I had previously created. At the bottom of this page were examples of musical and primary projects that were completed by other teachers. In addition, a link to cut-and-paste templates was made available for teachers to use.

In trainings, staff members might be reluctant to learn if information is not readily available about the task to be learned (Atlas, Cornett, Lane, & Napier, 1997), therefore a resource page was created that contained Internet links to several credible sights that discuss the value of WebQuests, more information and templates to create them, and additional examples for teachers to use. Since many WebQuests have already been created for almost every subject matter, links were provided to various databases filled with WebQuests that teachers are free to reproduce. This strategy was utilized to help satisfy the varying levels of WebQuest awareness that I encountered in my interviews with staff members.

The tutorial page contained the information on how to create bookmarks, which would act as anchors when posted on the Internet. The act of creating the links was demonstrated through the use of a video which was created with Camtasia software. This tutorial also

demonstrated how to create a navigation bar on a Microsoft Word Document utilizing a simple table in conjunction with the anchors. Atlas, et al., (1997) stated that animation by itself may not be appropriate for demonstrating larger tasks because people have difficulty remembering all the information without text or a form of outline as a reference. Therefore, I included written instruction in conjunction with the multimedia component for this video tutorial.

Implementation

I had planned to load my website to a secure district server and utilize an internet-based summative survey, which was created on SurveyMonkey.com, which accompanied my training. Ongoing security issues prevented my site from being loaded onto the server and my website was eventually loaded to a web hosting service. However, the summative surveys were simple for me to electronically gather and analyze the data when someone had completed the survey.

Staff members were sent an email asking for them to complete the training with the necessary information in regards to this project and the appropriate Internet address for my website. An email was also sent to the building administrators with the suggestion that their staff members could use this training as part of their Professional Learning Community meetings (PLC's). Administrators were told that this training could take as little as 30 minutes, but if they allowed an appropriate amount of time to view the attached resource links, could take closer to one hour. Staff members were asked to complete the training within a three week period that included two in-service days. The timing of the implementation was deliberate as many staff members have continually complained that they were out of topics to discuss during the PLC time that was given each in-service day, normally one to two hours, and this would allow them to explore a topic in which they had shown interest.

Evaluation

A summative evaluation was included with the training. Teachers were asked to complete the online survey after they had finished with the training. The survey included questions in regards to their knowledge and confidence levels prior to, and after, their online training experience. Additionally, teachers were asked to rate how they felt about the site itself and the information within the site. A section was added for instructors to identify the grade level or subject area they taught so that any concerns about the training could be examined in regards to specific grade levels. I felt including the question in regards to grade level could be of assistance in refining my training for future use. If a suggestion was made in regards to some form of missing information, I could track which grade level made the suggestion and then compare that suggestions with the notes I had taken during the staff interviews. This would give me the ability to see if a new problem had arisen during instruction or if it was a pre-existing condition that was not effectively addressed within the training.

Chapter 4

Results

After allowing approximately three weeks for teachers to utilize the training, I closed the summative evaluation. Response to my training was quite limited in the beginning. After two weeks only 14 of the elementary teachers had filled out my survey. I sent a district wide email, including elementary administrators, as a reminder asking for individuals to take a few moments to fill out the survey if they had completed my training. After the third week, 48 of the elementary teachers in the district had completed the online survey, mainly intermediate level teachers, and my window of opportunity had closed. The completed surveys I did receive indicate a positive learning experience for the teachers (Appendix C).

The summative evaluation utilized rating scales and open ended questions for suggestions or thoughts that were not covered in the previous questions. The first portion of the evaluation dealt with the learner's knowledge of the material presented prior to the training. Over 60% of the respondents identified having little knowledge of WebQuests or how to create them. The remaining categories showed mixed results prior to the training with 87% of those responding indicating that they had average or better knowledge of effective instructional strategies; 50% felt that they had below average knowledge in how to create a web page using Microsoft Word, with only 25% of the responses indicating an above average ability to create a web page using Microsoft Office.

The next section of the evaluation asked the evaluators to describe how they felt about their abilities and knowledge of the training content areas after completing their training. A vast majority of the teachers (88%) felt that they now had above average, or better, knowledge of

WebQuests. The same could be said in regards to their ability to create a WebQuest, although 12% still felt like they had below average abilities in this area. 100% of the respondents indicated that they now had above average or better knowledge of effective instructional strategies. Only 12% of the teachers felt that their ability to create a web page in Microsoft Office was remained below average upon completing the training.

The respondents were then given a chance to provide feedback based on the information and tutorials they had experienced on question 4, which was open-ended. It was my intent to use the suggestions to better my training or provide more exact instruction. There was only one entry for question 4; the respondent enjoyed the tutorials, but found one of my links was not directing them to the correct location. Luckily, this person was in my building and was the first to complete my training because I had asked her to preview it before I opened the training to the rest of the district. The early detection of this problem, and the early response, allowed me to correct the problem prior to other teachers completing the training.

The last section of my training evaluation asked teachers to evaluate how the information was presented and the design of the site itself. In regards to the information provided and how it was presented, 88% or more of those responding felt that the formats I chose and the amount of information provided in all three areas of the training were above average or better. The information and instruction provided for WebQuests and effective instructional strategies rated the highest with 100% of the respondents feeling that it was above average or better. The design of the website, ease of use, and quality of the instructional components received above average or better scores from 100% of the responding teachers as well. Question 6 was the evaluators chance to add suggestions for the appearance and usability of the site, only one of the comments was a suggestion for improvement and I deemed it to be irrelevant to the appearance of the site.

Chapter 5

Conclusion

This project began with three areas of focus. First, identify a technology tool that was beneficial to the elementary classroom. Once I found such a tool, I needed to integrate it in the classroom while utilizing effective instructional strategies with that technology. Lastly, create training for integrating technology and effective instructional strategies in elementary classrooms.

Is technology useful in the elementary classroom? The answer was met with mixed results in the literature I reviewed. Several of the articles praised technology and demonstrated that it had increased student performance in various areas. I found that many of the researchers realized that while classroom instruction had been enhanced by technology, there was no method to create a quantifiable result that indicated the technology itself had provided the improvement in student scores. In fact, several of the readings stated that new instructional strategies utilized by the teacher might be the variable that caused an increase in student scores instead of technology. In my readings it became apparent that the use of technology, if nothing more, can motivate students or create more of an interest in a lesson. Motivated and interested students are more likely to perform better than those who are not (Kennewell & Beauchamp, 2003). Keeping this in mind, technology can be a good tool to enhance instruction when teachers are properly trained to use such technology.

After researching WebQuests, they seemed a natural fit for the elementary classroom. They can easily incorporate a variety of the instructional strategies that should be present in an effective elementary classroom. They provide a format for instruction that preys upon students'

interests in the internet and allows them to work in cooperative groups if deemed appropriate by the teacher. The tasks allow teachers to facilitate learning using a variety of instructional strategies and existing WebQuests are easily adaptable to the desired grade level. The only limitation on integrating instructional strategies and this technology lie in the creativity of the instructor. Even that limitation can be overcome due to the thousands of previously created WebQuests available through the resource links I provided within the training.

Based on personal reflection, I would have changed two elements in this training. I believe participants might have been more satisfied in regards to their ability to create WebQuests if there were a formative evaluation during training. If I required them to email me a copy of a WebQuest they created, we could go discuss the process together with their example. This was considered in the design and development stage of this project, but considered unnecessary due to the amount of templates and resources provided within the training. However, adding this additional step would provide evidence of their comprehension in the art of creating a WebQuest. It could also provide a form of peer coaching which is supported by Brands (1997) as one of the most effective ways to overcome technology fears that some teachers may have when trying to implement a new technology.

I would also add an incentive for completing the evaluation. Providing an incentive that is valued by the teachers should increase the response rate to the survey and any future formative evaluation (Ferguson, 2006). A majority of the responses were from intermediate level classroom teachers and may not create an accurate view of how the training was received by all areas of elementary teachers. However, based on the data available, this training seemed successful.

Peer review of the training received good marks and the participants seemed satisfied with their experience. The training is available for viewing at <http://mikestraining.tripod.com>. Teachers in my district have a desire learn about new technologies that are useful in their classrooms and can easily implement on a daily basis; WebQuests served this purpose. I was able to find a technology tool that any teacher can utilize within their classroom, and it is completely adaptable to any subject area. All of the effective instructional strategies that we are currently being asked to implement in our classrooms can be easily integrated into this tool. Finally, and possibly the most important component of any successful training within my district, the training was based on the individual needs of teachers and was fundamentally sound through the use of an effective instructional design model.

References

- Atlas, R., Cornett, L., Lane, D.M., & Napier, H.A. (1997). The use of animation in software training: Pitfalls and benefits. In M.A., Quinones and A. Ehrenstein (Eds.) *Training for a rapidly changing workplace: Applications of psychological research* (pp. 281-301). Washington, DC: APA.
- Bauer, J., & Kenton, J. (2005). Toward technology integration in schools: Why it isn't happening. *Journal of Technology and Teacher Education* 13(4), pgs. 519-546. Retrieved January 26, 2007, from WilsonWeb database.
- Brand, G. (1997). What research says. *Journal of Staff Development*, vol. 19,1. Retrieved January 25, 2007, from <http://www.nsd.org/library/publications/jsd/brand191.cfm>
- Cradler, J. (n.d.). *Implementing technology in educations: Recent findings from research and evaluation studies*. WestEd. Retrieved on January 23, 2007, from <http://www.wested.org/techpolicy/recapproach.html>
- Dodge, B. (1995). *Some thoughts about webquests*. San Diego State University. Retrieved on January 27, 2007, from http://webquest.sdsu.edu/about_webquests.html
- Ferguson, R. (2006). 5 challenges of teacher professional development. *Journal of Staff Development*, vol. 27,4. Retrieved January 26 from WilsonWeb database.
- Kennewell, S., & Beauchamp, G. (2003). *The influence of a technology-rich classroom environment on elementary teachers' pedagogy and children's learning*. Paper presented at IFIP Working Groups 3.5 Conference: Young Children and Learning Technologies. University of Wales Swansea. Retrieved January 25, 2007 from Portal database.
- Lohr, L., (2003). *Creating graphics for learning and performance: Lessons in visual literacy*. pp. 283-303. Upper Saddle, NJ: Merrill Prentice Hall.

References

- Marzano, R., Pickering, D. & Pollock, J. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Sparks, D. (1999, February). Plugging educators into technology. *Results*. Retrieved Jan. 25, 2007 from <http://www.nsd.org/library/publications/results/res2-99tech.cfm>

Appendix A

Please indicate your answers to the following questions in the table below by placing a mark in the appropriate column. **Please return to Mike Wilbur @ MES by Feb. 1.**

Frequency of occurrences for the following questions:

1= Never 2= Rarely; maybe once semester 3= Often; several times a semester or more

		1	2	3	Other
1.	How often do you use technology in the classroom?		13%	83%	4%
2.	How often do you create PowerPoint files to instruct?	37%	37%	23%	3%
3.	How often is it that students use PowerPoint as a means of assessment?	60%	30%	10%	
4.	How often have you utilized PowerPoint presentations that you have found on the web?	47%	50%	3%	

Level of personal interest in the following categories:

1= No interest 2= Possible interest 3= High Interest

		1	2	3	Other
5.	Learning to use technology at your grade level.	3%	7%	80%	10%
6.	Learning to use PowerPoint at your grade level.	10%	33%	37%	20%
7.	Learning how to use United Streaming.	10%	23%	47%	20%
8.	Learning how to use Microsoft Publisher.	13%	30%	47%	10%
9.	Learning how to use Kidspiration.	13%	30%	47%	10%
10.	Learning how to use Microsoft Excel.	60%	23%	13%	3%
11.	Learning to create WebQuests. *WebQuests are fun research activities through the Internet that students can complete on their own without much verbal guidance from the instructor.	13%	30%	50%	7%

Please write a short response to the following questions.

12. Which grade level/subject area do you teach? _____

(subject area: Music, PE, Art, Computer)

Approximately 10% of respondents taught subject areas only. The remainder of participants were classroom teachers.

Appendix A

continued

13. If you chose to mark “other” in a category, please explain your reasoning in the space provided

All comments are summarized or paraphrased from the original comments.

1. Comments involved accessibility due to limitation of portable classroom.
2. Not utilized in the Kindergarten setting (only two comments).
5. Taught multiple levels in a subject area making it difficult to pin down a level
6. Previous training, already in use, only wanting to know advanced aspects of PowerPoint.
7. Previous training, no training needed because you just need to download videos.
8. Previous training, too hard for my grade level.
9. Already using it in the classroom.
10. I don't use Excel for graphing purposes at my grade level.
11. Kindergarten students can't search the internet by themselves, too hard for my grade level.

14. Are there any programs or technologies that were not included in this survey that you have a high interest in learning about?

Interactive whiteboards- 13% of respondents

ELMO (solid paper projection system)- 3% of respondents

Podcasting- 3% of respondents

Advanced PowerPoint- 3% of respondents

Appendix B

1. On a scale of 1 to 5, with 5 being the highest, please rate the following categories based on your feelings or knowledge prior to your training.						
	1	2	3	4	5	Response Average
Knowledge of what WebQuests were	25%	38%	12%	12%	12%	2.50
Your ability to create WebQuests	62%	0%	12%	25%	0%	2.00
Knowledge of effective instructional strategies	0%	12%	12%	50%	25%	3.88
Knowledge of how to create a webpage in Microsoft Office	25%	25%	25%	25%	0%	2.50
2. Based on a rating scale of 1 to 5, with 5 being the highest, please rate the following categories about your knowledge or feelings after completing the training.						
	1	2	3	4	5	Response Average
Knowledge of what WebQuests are	0%	0%	12%	50%	38%	4.25
Your ability to create WebQuests	0%	12%	38%	38%	12%	3.50
Knowledge of effective instructional strategies	0%	0%	0%	75%	25%	4.25
Knowledge of how to create a webpage in Microsoft Office	0%	12%	38%	38%	12%	3.50
3. Based on a rating scale of 1 to 5, with 5 being the highest, please rate the following categories based on your feelings about the training.						
	1	2	3	4	5	Response Average
Amount of information provided on WebQuests	0%	0%	12%	38%	50%	4.38
Amount of information provided on effective instructional strategies	0%	0%	0%	50%	50%	4.50
Amount of information provided on creating web pages in Microsoft Office	0%	0%	12%	50%	38%	4.25
Format of information for WebQuests	0%	0%	0%	38%	62%	4.63
Format of information for instructional strategies	0%	0%	12%	38%	50%	4.38
Format of information for creating a webpage in Microsoft office	0%	0%	12%	38%	50%	4.38

Appendix B

continued

4. What suggestions about the how information was presented, or the information itself, would you care to make?

The tutorial was great!

5. On a scale of 1 to 5, with 5 being the highest, please rate the following categories based on the website itself.

	1	2	3	4	5	Response Average
Readability of text throughout the site	0%	0%	0%	25%	75%	4.75
Ease of navigation through the site	0%	0%	0%	25%	75%	4.75
Quality of video components	0%	0%	0%	0%	100%	5.00
Ability to view video and presentation components	0%	0%	0%	0%	100%	5.00
Overall design of site	0%	0%	0%	0%	100%	5.00

6. What suggestions do you feel could make the appearance and usability of the site friendlier?

1. It has a great wealth of helpful information

2. Add information on each page that identifies you and lends credibility to the site. Add the date last updated.