Using handheld in Schools Article Summary

Article Summary:

The article Using Handheld Technologies in Schools is a very in depth article that outlines the many use of handheld and the practicality of incorporating a variety of teaching and learning, administrative tasks, and communication and collaboration in schools. The article provides ten reasons why technology introduced through handhelds have a promising future in schools. The reasons vary from making learning more interactive, more enjoyable, and more customizable to enabling learners to communicate in new ways with their peers, with teachers, and with others throughout the world.

It also provides a glimpse into the cost effectiveness of having handhelds over in room personal computers or desktops. With basic handhelds loaded with just academic software, schools can block purchase them for around a $100.00 dollars compared to the $1000.00 dollars needed to purchase a desktop model personal computer. Another aspect that was noted in this section of the article was classroom or lab space of housing desktops compared to the small and mobile docking stations of handhelds.

The article then provides a brief history of handhelds before it breaks down all aspects and capabilities of a handheld device. It uses terms and definitions to walk readers through all of the input and output functions available on standard models such as operating systems, on-screen keyboard, character recognition, synchronizing, memory, ports, touch screen, and other peripherals.

After educating readers with a broad and very general overview of handhelds it focuses in on key aspects that are critical to handheld functionality, which is networking using a Bluetooth Wireless Network also known as 802.11b or Wi-Fi/Wireless Ethernet. It provides a strong argument for using WI-FI over the conventional CAT 5 Networking Cables. With WI-FI there are no wires to run and connections are not limited to a particular room or work station because of port access. The article hits on aspects of WI-FI such as price and access areas to date infrastructure access areas cost between $179.00-$500.00 dollars whereas point-to-point access ranges through the use of network cards combined with other services such as mobile phones and satellite connections.

The last section of the article provides considerations one must look into when purchasing a handheld device. The considerations range from size, weight, appearance, power supply, capability vs. ease of use, memory, available software, screen display, peripherals, and cost. Each consideration is followed by a short overview of what is available and the purpose it serves and why it is important when selecting a handheld.

The article concludes by pointing out the pros and cons of using handhelds in schools. Each list discusses in some detail the ups and downs of handhelds in schools. Many of the advantages were discussed throughout the article and it seemed to save the cons and

disadvantages of using handhelds in a school environment. Some of the educational concerns consisted of compatibility of systems and software, cheating, distraction, lack of effectiveness built on research, infrastructure, ownership, professional development, replacement, safety, screen readability/resolution/size, security, and of course tech support when things go wrong. Reference sections are located throughout the entire article, which allows readers who require more information or research to quickly access immediately by clicking a link or by reading a brief citation of what each links explores.

Article Application:

This article applies to my own developing unit because it provides a great overview of the capabilities of handhelds, which will allow me to know the parameters and limits in which I will be able to create my lessons. As part of my instruction, I will probably have my students also read the article, so they acquire a good overview of the product before they use it. This will ultimately save valuable instruction time as many of their questions will probably be addressed as they read the article.

Using handheld in Schools: Pilot Project Article Summary

Article Summary:

The article Using Handheld Technologies: Pilot Project in Schools takes a close look at a pilot program using handheld devices in two different schools in two different states. Teachers, Specialist, and a few Technology Directors who participated in the pilot program discuss the program, their experiences, and lessons learned. Each participate covers a different topic question, which provides insight into a successful incorporation of handheld technologies into the classroom.

The topic questions addressed by the participants throughout the article include:

1) Why did your school district initiate a project on using handheld technologies in the classroom?

2) Tell us about your project: goals, who is/was participating, how long it has been/was in operation, and products you used.

3) What was the reaction by students to the handheld technologies? Teachers? Administrators?

4) Describe the training you conducted and tell us what training you think is essential for anyone considering a handheld implementation for the classroom.

5) What were the most successful uses of the handheld technologies by students? Teachers? Administrators?

6) What recommendations would you offer to schools and districts considering implementing handheld technologies?

After reading the article I noted that for the most part each question received a positive response, while at the same time pointing very few critical pitfalls. Implementing the use of handhelds in school leads one to believe that it means only for use by just students for academic purposes, but as the article points out handhelds are also used heavily by faculty and administrators for a variety of reasons. Faculty members interviewed say that they use handhelds to track student performance, to share compiled information with other teachers in a condensed format, while at the same time improving and increasing technological performance and proficiency. Administrators and office personnel on the other hand use handheld technologies to access student data fed into a central database by faculty members. The data therefore is easily accessed when needed during conferences, observations, or when requested by a parent.

Faculty and administrative understanding of the handheld and its capabilities in the school system was accomplished through guided instruction over various programs and applications such as spreadsheets, digital grade books, and learning management. One participate describes in detail the various training workshops that were offered in order to create a shared understanding of the handhelds capabilities as well as what the are capable of during for student's in regards to academic achievement. The shared understanding workshops consisted of an overview of the organization capabilities of the handheld, but many felt that it was not necessary because they were already familiar with various organizational programs similar to the ones used in a desktop computing environment. Many faculty members felt that small group instruction was the most effective training they received because it allowed teaching teams to develop and brainstorm creative ways to use the new technology in the classroom. Many stated the most difficult part of learning to use handhelds in school was getting used to tapping and typing on the condensed screen.

When asked what the students felt about the use of handhelds in school the support and enthusiasm was overwhelming because many see it as a way to link all of their together in an interesting format. If anything the handhelds created a shared cross-curricular awareness among the students. The students tended to spend more time exploring the new technologies and finding innovative ways of connecting and sharing the material and class work the teachers ever imagined. The most successfully implemented and used tool was the beaming feature because it increased teacher-student interaction while in school. This interactive feature was capitalized on and therefore teachers from all subjects began using the beaming feature and developing content that could be delivered using this feature.

Article Application:

The article applies to my own developing unit because it provides insights into the success and hurdles of introducing handhelds in school. The insights provided an

overview about how different people and students will react to the use of the new technology. This informative article will help make implementation easier on me. It will be easier because I have the pilot programs practical experience and research documentation to refer back to help me answer any questions I may have as I proceed with implementing my unit plan. I will be able to capitalize on the pilot programs success, while at the same time avoiding pitfalls and recreate and improve areas they pointed out as needing improvement or more focus.

Probing Untested Ground

Article Summary:

The article "Probing Untested Ground" takes an in-depth look into how students react to and learn from the integration of handheld technologies in the classroom. Its primary focus was on putting handhelds into the hands of two different groups of students who would perform the same experiment. The experiment was cataloging temperatures using a data probe connected to the handheld. For the most part, students enjoyed using the technology and it proved beneficial to gaining an understanding about their environment, while at the same time increasing student to student collaboration. Collaboration was a pretty significant part of this research study because it was noted that collaboration and independent study went hand and hand when handhelds were used as part of the instruction. Prior to actually utilizing the temperature probe and handhelds, students were introduced to the devices and the various software programs that were available to assist them when it came time to conducting the actual field experiments. After the classroom instruction, students were taken into the field which consisted of the schools playground and a neighboring pond. The field study helped to improve collaboration because students shared information and notes remotely be using the beaming feature. This meant the sharing of information was instantaneous because students did not have to wait to return to a traditional classroom environment to discuss their finding and conclusions about temperature change. The field study allowed for various scientific processes and methods to be vicariously learned without students even realizing that learning was taking place. This allowed the teachers a venture into a more in-depth discussion of the scientific terms and definitions that complemented the field study. The study overall allowed the teachers to engage and challenge every student by using higher order critical thinking skills.

A second part of the study of integrating handhelds in the classroom consisted of looking at how quickly students from the different age groups familiarized themselves with the new technology. In the beginning of the study, it was noted that students in the fifth grade learned how to manipulate the handheld devices much faster than that of the second grade students. The second grade students required more time in the traditional classroom environment learning how to operate the device, but were just as secure in their ability to figure it out through their own exploration as their fifth grade counterparts. Since one of the studies primary focus was on student collaboration, it was quick to point that once the

field study or exercise was complete and the students returned to the traditional classroom setting they were less interested in learning. This was because they did not have their hands physically on a handheld device while the lesson was wrapping up. It was noted that students in the field each played a role in the research because one held the probe and the other operated the handheld. However, once back in the classroom student collaboration and interest were again regulated by the constraints of limited handheld devices. The end result of the study suggested that in order for students to be fully engaged throughout an entire project then every student would have to have their own handheld device. However, it was noted that even though limited by the number of handheld devices students had gained a better understanding of their environment through investigation, critical thinking, and collaboration skills.

Article Application:

This article will prove beneficial in the implementation of my handheld unit in the classroom because I am now aware that it may not require as much pre-instruction time in order for the students to be able to manipulate the handheld devices. It suggest to me that students in this technology driven generation already know how to manipulate such devices and when faced with learning a totally unfamiliar technological device the learning curve will be decreased. The learning curve decreases because they quickly adapt tricks and techniques from other sources such as the personal computer, cell phone, or handheld gaming systems such as Nintendo's Gameboy. As a teacher this will ultimately leave more time for field research, implementation, and evaluation.