Integrating Palm Handheld Computers into Pre-Service Teacher Education Program

M. Lynn Lester
Assistant Professor
Graduate Education Department
Clarke College
United States
llester@clarke.edu

Mr. Jim Osterberger
Archdiocese of Dubuque
Director of Educational Planning
dbqpln@arch.pvt.k12.ia.us

- **Abstract.** Preservice elementary students equipped with Palm Pilots to facilitate connections and curriculum development in our Professional Development schools. The PT3 Palm program at Clarke College has created a climate for college faculty, students, K-12 teachers and students to facilitate building collaborative models for exploring learning together through use of Palm handheld computers. This program facilitated through the elementary and secondary pre-service teachers and education faculty at Clarke College. The use of handheld computers has greatly facilitated the learning process. Research findings conducted through the Palm Research Hub Grant supports engaged learning. The Palm by its very nature of being "hands on" engages students through the senses of touch, sound, and sight; reinforcing multiple intelligences.

In partnership with the Archdiocese of Dubuque Research HUB grant Palm handheld computers were distributed to education faculty and pre-service teachers at Clarke College. The faculty in the education department and pre-service teachers at Clarke College attended workshops to be trained in implementing Palm technology in the classroom.

Palm handheld computers have enhanced the learning process for students by actively engaging them through a variety of sensory modalities. Pre-service teachers easily adapted to Palm technology. This technology is integrated into the development of lessons/concepts as an appropriate learning tool. Project based learning models are used with students with a variety of abilities, learning styles and intelligence's to benefit all learners. Pre-service teachers engage in forums for "structured conversations" to generate more "educational uses" for the Palm.

Pre-service teachers use Palm Pix cameras on field trips and outdoor exploration projects. Students utilize Thought Manager software to record thoughts and ideas, make sketches and draw maps. Go and Tell software allows students to organize pictures taken with the Palm Pix camera and make comments about the images. PalmPix cameras and Thought Manager software allow students to record images and ideas as they see or think of them. While this would be possible by using digital cameras and pencil and paper, the immediacy of Palm technology allows students to stay focused on projects.

The following are two examples written by pre-service teachers in grades three through six in Language Arts and Math. Palm technology was integrated into fourth through sixth grade literature circle discussions of various novels. The FlingIt program was used to download web pages related to novels. For example, one group is reading Natalie Babbitt's Tuck Everlasting, a book about a family who discovers a fountain of youth. An article about the fountain of youth legend was downloaded as well as a Web page of a fountain of youth tourist attraction in Florida. A photo of Natalie Babbitt and some biographical information about her was also downloaded. These sources where shared through the "beaming" function of the Palm.

For math the BubbleBlasters program was used with third graders to review for their timed tests. Students made up three quizzes on addition, subtraction and a combination of both operations. The program transforms these quizzes into review games. It displays each question on the screen one at a time, while bubbles for different answers scroll into view. When the student sees the correct answer, he or she clicks on it to make the bubble "burst". The students enjoyed using the program and it served as a helpful preparation for their tests.

The main challenge encountered with pre-service teachers is how to inspire and maintain a high level of creative motivation required to effectively integrate Palm technology into the PDS program. Every student quickly developed skills to use the Palm as an effective personal organizer. They keep track of observation assignments, class schedules, faculty schedules, school events, addresses, e-mails and to-do lists. These features are obvious and required minimal training.

Guiding students toward taking the next step into creative integration is the focus of current training on the Palms. Researching Palm resources for lesson plans, organizing student projects, and creating new ideas to improve the teaching and learning process are the goals we are concentrating on during the second year of this Palm grant.