

Des Moines Area Community College Utilizes Handhelds for On-the-Go Education

- 11/01/04



The Des Moines Area Community College (DMACC) in Iowa is on the leading edge with wireless technology that is helping to replace rigid class schedules and enhance conventional teaching techniques. DMACC's high-tech Synerg.e Center at the college's West Campus (online at www.dmacc.edu/west) is applying mobile solutions that bring the classroom to the students when and where they want it, while adding new opportunities for interaction with instructors and peers.

Accredited by the North Central Association of Colleges and Schools, and approved by the Iowa Department of Education and Iowa's Board of Regents, DMACC offers more than 75 career programs. The college's six campuses offer courses in traditional studies such as math and history, as well as courses in areas such as business information management, network management and telecommunications.

The ultramodern Synerg.e Center serves more than 1,000 students and is one of the first academic facilities in the United States to fully utilize wireless handheld technology for the delivery of course content. Handheld computing devices deliver many of the same benefits for education, business environments and everyday life such as:





- Anytime, anywhere access to data
- Ease of use
- Low cost
- Versatile use from a single device
- Organization to help prioritize schedules, tasks and data

Working Without Wires

At the West Campus and Synerg.e

Center, students are as likely to have Hewlett-Packard iPAQ handhelds stuffed into their pockets as they are cell phones. HP iPAQ Pocket PCs (www.hp.com) are requirements for many students. They are used inside and outside of the classroom to access digital textbooks, review lecture notes, and conduct research without ever stepping into a library. In the classroom, instructors rely on electronic smart boards instead of blackboards, with students transmitting the information instantly to their handhelds.

All required course materials, syllabi and even campus news are delivered through the college's Web portal, which automatically formats the data to fit the iPAQ screens. In certain classes, students also use their iPAQs to test the network equipment and systems that they are learning to administer and repair.

And with 24/7 wireless access, classes are never really dismissed since course content and even exams are often available online. With e-mail and Web forums, class sessions often happen when and where the student wishes - providing flexibility for busy students. In addition to portability and convenience, the HP iPAQs serve to engage students in ways that traditional classrooms cannot. Their high-resolution LCD screens and pen interfaces provide an interactive experience that enhances the learning process.

DMACC students are continually finding new ways to use handhelds. For example, some students have purchased keyboard attachments that allow them to write more detailed notes and even full-length papers directly on their handhelds. Web surfing, downloading and listening to music, e-mailing and text messaging, and playing games in campus sponsored competitions are also frequent iPAQ activities that transform the handhelds into work and play tools.

While data can be maintained on the handhelds' interchangeable memory cards, students' notes and course materials are also saved to a storage area network (SAN) - eliminating concerns about irreplaceable information on lost, stolen or damaged devices. Working closely with HP and other technology partners, the Synerg.e Center has been able to create a workable wireless

infrastructure on a limited budget that delivers the mobility and flexibility which is attractive to current and future students.

A Textbook Case

For students at DMACC's West Campus and Synerg.e Center, the iPAQs provide a highly affordable option compared to desktop or laptop computers. As digital textbooks are 33%-66% less expensive than traditional bound textbooks, students are able to justify the cost in four or five semesters. In addition, the lightweight handhelds alleviate the burden of constantly carrying around heavy books.

Digital textbooks are also easier to keep current since it is much simpler and less costly for publishers to revise them. In contrast, traditional bound textbooks must often be used for years without updates due to printing and distribution costs. In addition, digital textbooks' electronic searching and bookmarking capabilities are useful when studying.

And while text can be easily read on iPAQ screens, students also have the option of viewing content on larger monitors by using PCs that have been equipped with card readers. During the beta phase of the Synerg.e Center's wireless project, a college partnership with book publisher McGraw-Hill enabled participating students to receive digital textbooks for free.

Proving Ground for New Technologies

The wireless project at the West Campus and Synerg.e Center coincided with a broader DMACC objective to eliminate the technological separation between its six campus locations, which are spread across more than 11 counties in Iowa. The campuses also were on different operating systems and desktop standards, with no shared storage processes for data. Today, while the West Campus is still the proving ground for new technologies, all six campuses are networked, standardized on HP desktop PCs, and operate their own mini-data centers that communicate using T1 and dual T1 lines. Using HP StorageWorks Enterprise Modular Array with Veritas software (www.veritas.com) for storage management, DMACC's Ankeny Campus serves as the network hub and is also where reliable storage, backup and recovery systems for all the campuses reside. In addition, helping to simplify administration, Altiris software (www.altiris.com) is used to install and manage desktops and servers throughout the college.

Due to the success of the wireless initiative at the West Campus and Synerg.e Center, wireless pilots are also beginning at other DMACC campus locations. For its mobility initiatives, DMACC has partnered with top technology solutions providers including HP. Through these partnerships and the technology that can be offered, the West Campus and Synerg.e Center have been able to better attract students.

The West Campus and Synerg.e Center are committed to the use of new and emerging

technologies to increase learning and enhance student motivation. As students come to expect more options and greater flexibility in the delivery of course content, schools and colleges need to respond.

- *Dr. Anthony Paustian*