How are the Wireless Mobile Labs Being Used?

The Office of Educational Technology is one of the units in the College of Education (COE) at a Midwestern university. The main goal of the OET is to support the effective integration of technology and learning for COE faculty, staff, and students. One of the services that OET offers is the mobile wireless computing labs. OET has six mobile wireless computing labs as a resource for instruction. Four Windows XP mobile labs, with a total of 60 computers, and two MAC OS X mobile labs, with a total of 30 computers, have been used throughout the College of Education building.

The purpose of this study is to understand the effectiveness of the mobile wireless labs and how they are used in instruction by the College of Education faculty and staff. In this context, effectiveness means successful usage of the mobile wireless labs. By examining the effectiveness of the mobile wireless labs, the Office of Educational Technology can determine whether or not its services are effective and what needs to be done in order to improve its services for meaningful teaching and learning.

The research questions are:

1. What are OET’s objectives to offer these labs to the COE’s faculty/TAs? How do they meet these objectives?
2. How are the six mobile wireless computing labs used as a resource for instruction?
3. What kinds of training programs have been offered to the instructors on how to use these labs?
4. Are instructors satisfied with the quality of technical support available to them?

The data sources included observation of classrooms, a paper-based survey, and informal individual interviews. The main focus of these observations was as follows: How these labs are being used? What kinds of problems are being encountered? How do instructors solve such problems?

The paper-based survey was designed to evaluate instructors’ attitudes toward technology integration into classroom instruction. The survey included 16 questions with some attitude scale questions as well as 5 open-ended questions and 2 questions asking
about background information (e.g. department name, status), and 1 question on classroom in which they teach. The main questions pursued in the survey were 1) Instructor’s general perceptions about the use of technologies in classroom, 2) self-evaluation of their use of technologies, 3) problem-solving strategies, and 4) obstacles/problems they encounter when using the wireless mobile labs.

The informal one-on-one interviews focused on how the wireless mobile labs were being used, the kinds of problems the instructors encountered, and the quality of technical support available to them.

A number of conclusions can be drawn from the mobile wireless lab usage. Based on the data collected via observations, paper-based survey, and interviews, there is a relatively high level of satisfaction for the integration of wireless lab in instruction and for the technical support needs. Even though many participants indicated that the classrooms where they use the Mobile wireless labs were appropriate, a few of them were not satisfied with their classrooms because of the weak signal. The interview and observations data indicated that the instructors used the wireless labs in many different ways. Finding information and designing web-pages were the two important issues related to weak signal. The participants expressed their concern about the weak signal came up during the interviews, class observations, and on the survey. Most of the participants’ reactions indicated that there is a huge demand to use the Mobile PC Labs.

Technical support is a crucial aspect to consider. Even though half of the participants reported the overall quality of assistance as excellent, the Office of Educational Technology should consider improving its services in order to reach all of the mobile users’ needs and demands. Most of the participants complained about time constraints in going to the office to check out and return the equipment. Most participants indicated that even though they made reservations before hand, sometimes the mobile labs were not charged so they couldn’t check them out.