Implementing a Laptop Program within a College of Pharmacy

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INTRODUCTION

There has been a lot of change within pharmacy education over the past 15 years as schools and colleges of pharmacy, either independently or collaboratively with their institution, have invested in the use of technology for the processes of teaching, learning and assessment. One of the changes brought with the evolving technology is the onset of laptop initiatives. Theses are programs in which students bring either a provided or pre-determined laptop to classes and the use of technology within the program is greatly enhanced. Implementing a laptop initiative is a long term process requiring planning, implementation and budgetary support. This article provides an overview of the different ways a laptop initiative can be implemented, the pros and cons of different methods, the reasons for starting a laptop initiative, and some general challenges.

BACKGROUND

According to a national study of college students regarding technology use "Students preferred a moderate use of information technology in their courses and expect faculty to use technology well." (Kvavik & Caruso, 2005) This study also noted that "The primary benefit of technology in courses is convenience, followed by connectedness" and 41% of the students said they preferred their professors to use information technology moderately in class. Students in the survey most commonly said that convenience was the primary benefit of the use of technology in courses and that virtual connectivity was second. The same survey also found that students attending college brought along technology other than computers.

In a different study on student use of technology over 57% of respondents indicated that their colleges provide wireless access, a 15% increase from the previous year. (Hawkins, Rudy & Nicolich 2004) In addition, 34% of respondents indicated that their colleges had wireless access in classrooms. A recent study of colleges and schools of pharmacy found that 65.1% of respondents indicated that the primary place for course offerings was wireless, 34.1% had a laptop or learning technology requirement, and 66% had students bringing personal laptops to class (Robinson, 2007). Finally, a review of the pharmacy education literature finds a number of references to publications about the use of technology (hardware, software, etc.) within colleges and schools of pharmacy, but only a limited list of publications specific to laptop programs within colleges and schools of pharmacy (Munar, et al, 2006; Alsharif, et. al. 2006) Pharmacy is becoming more and more evidence-based and informatics driven, so student use of technology early and often is a strong reason to engage in a laptop program.

TYPES OF LAPTOP PROGRAMS AND STRATEGIES FOR IMPLEMENTATION

There are several different ways a laptop program can be implemented. What follows are the most common strategies for implementing a laptop program and the issues arising from each of the approaches.

Required Purchase Program

In the required purchase program the laptop is the property of the student unless there is some mechanism by which the laptop is purchased back. Given the speed with which technology evolves, the length of time a student owns the laptop can lead to the dating of the technology. The amount of time the student owns the laptop can also relate to the physical wear and tear as well as support, which can be more challenging the longer the laptop is in use.

Since the laptop is required it is necessary for the institution to have replacement laptops for temporary use in the event the student's laptop does not work,

which could require the institution to purchase or lease similar laptops and incur the expense. In addition, the laptop purchase program should have warranty coverage for any required offsite repairs and a loaner available in this event. As discussed previously, onsite laptop support should be provided. Finally, pre-planning for laptop distribution is required as well as for any additional support related issues.

Required Lease Program

A lease program is designed to standardize the laptop but the institution retains ownership of the laptops. The institution can set the length of the lease, which can allow for the periodic refreshing of the technology. It is possible to construct different lease alternatives with two of the most common options being "fair market value" lease or "dollar buy-out." The first involves paying the going fair market value for the laptop in the event the student, or the institution, purchases it. Since the purchase price at the end of the lease would be higher, the lease cost for the term of the lease contract is lower. The second lease option, the "dollar buy-out," entitles the student or institution to pay very little for the laptop and consequently the lease costs are higher.

In addition to being able to update the technology, laptop lease programs can provide for loaner laptops within the agreement. This means that if a student has a major problem with a laptop, others of the same make and model are available for short-term use. Since the institution owns the laptops it is possible for the institution to restrict the installation of non-academic or un-approved software. This represents a proactive means of technical support; the addition of unapproved software on a pre-imaged laptop can be a source of a variety of problems.

The cost of the laptop within the lease program can either be paid by the institution or by the student. It can be easier to handle it as a part of the student fees and it is important to communicate that the fee is not only a laptop rental but also includes software licensing, printing costs, and other infrastructure related expenses.

The University of Charleston School of Pharmacy has implemented a 2+2 laptop lease program to meet the needs of the 4-year professional pharmacy program. This means the school can refresh the technology and limit the physical wear and tear on the laptop. The first two-year lease is at fair market value and the laptop is returned to the vendor at the start of the students' third professional year (2-years in to the program). The second two-year lease is a dollar buy-out and the institution will pay the dollar and provide the laptop to the student when they graduate. In order to provide the laptop to the student, the laptop image must be returned to its original, factory preset and any software placed on the laptop using University licensing is removed. For every twenty-five laptops leased laptops the School of Pharmacy obtains one loaner for possible use. Finally, students are required to sign a lease agreement stipulating the appropriate and inappropriate uses of the laptop.

Students are Required to Provide their own Laptops

With this type of laptop initiative, the student is provided with a list of technology requirements, possibly even brands to choose from, and then required to provide their own laptop prior to a specified identified date. This type of laptop program removes the work associated with the imaging, distributing and tracking the laptops as needs to be done within the lease or sometimes sale program. It does, however, still require monitoring to ensure that the technology and software requirements are met by the students when bringing the laptop to campus.

Technical support can be both an advantage and a disadvantage. Some level of support needs to be provided, but it can be less than that of a required lease or purchase program. That is the advantage. The disadvantage is that it is possible for students to arrive with different laptop models, hardware and software versions, etc. In this case support becomes a challenge due to the number of variables that result, so the take away message is that it is better to have specific requirements and have the students sign an agreement that they have met the technology specifications.

The use of specific software packages that are either costly to the student or are available only by an institution site license can represent a challenge in this type of laptop program. Student purchased and installed software requires appropriate installation and upgrading, which could be a problem with less technological or financially able students. In the latter case the institution-owned software can require installation support and then verification of removal after the use is complete.