

69 – Mobility for Teaching and Learning

Action Item Template Response

General Action Item Information

Lead Division/Office: Learning Technologies

Action Item Number: 69

Action Item Short Name: Mobility for Teaching and Learning

Dependencies with other EP Action Items: 40, 68

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I. DESCRIBE YOUR PLANS FOR IMPLEMENTING THIS ACTION.

A large component of emerging learning environments will focus on mobile technology/mobile devices. While many aspects of the future development of mobile technology cannot be predicted, there will nevertheless be opportunities that a nimble university can seize upon to create a superior academic and social campus environment for mobile computing.

It is critical that Indiana University be quick to recognize the most promising opportunities so that time to implementation can be made as short as possible. To succeed in this recognition/implementation, Indiana University should:

1. Build relationships with existing/new external partners in the mobile computing arena, so as to best position the university to implement most promising technologies in the most efficient, well-supported fashion. This will include work with commercial vendors, as well as continued engagement with the open source community.
2. Develop an internal process/infrastructure (e.g. support, implication of mobile technology for teaching and learning, development of mobile computing applications) for review/implementation of most promising mobile technologies, with emphasis on integration with the university's course management system.
3. Develop, to the greatest extent possible, both of the above points.

ACCOMPLISHMENTS

The 2011 iConference was held March 5, 2011 from 9-3 at IUB campus, free to IU students, faculty and staff. Following up on last year's highly successful 2009 iPhone Conference (also held on the IUB campus, and which drew 200 attendees), the 2011 iConference presented more about application development for the Apple iPad, iPhone and iPod Touch, and network with experts from Apple and the larger community. The next conference is planned for spring, 2012 (March 2-3, IUB).

II. WHAT ARE THE POLICY AND PRACTICE IMPLICATIONS OF YOUR PLANS?

Mobile technology will continue to rapidly improve in all areas, including processing power, storage, screen resolution, network bandwidth, software platforms, and price-to-performance ratio. The mix of mobile devices on campus will change substantially over the next five years. If we define a "smart phone" as one with at least third-generation (3G) networking speeds and open to the development of application by third-parties, we can estimate about 10% of current student mobile phones are smart phones. However, by fall of 2010, that percentage will likely rise to nearly half, and by fall 2012 will reach 85%. It is also estimated that, during this time period, all released smart phones will include Wi-Fi capability. This is an important factor in how these devices could be utilized for teaching and learning, as their ability to connect to a local WiFi network allows them (for example) to be used as participation/response tools in the classroom: An instructor can solicit feedback on a question, and students can signal their response via their smart phones, which are connected to a local application (e.g. Oncourse) via the university WiFi network.

Today, the vast majority of IU's entering freshmen own laptops; however, few routinely carry laptops to campus. As laptops become lighter with longer battery life (e.g. the evolution of the "Netbook"), laptops are likely to become a more prevalent on-campus tool. In the near term, mobile devices will continue to struggle with the tradeoffs between larger units with superior input and output function versus lighter, more convenient (i.e. easy to carry) models. That said, as mobile access to essential course curriculum material becomes a priority, larger screens will become important, which in turn will favor laptops and netbooks over smaller smart phones. In the longer term (5+ years) speech recognition and new output methods such as heads-up displays and projected screens may solve many of these problems.

Ultimately, the increased student reliance on mobile devices will have a profound effect on the instructional model. These devices will:

1. Provide a platform for delivery of essential text-based and multimedia instructional material.
2. Act as a two-way communication device for in-class polling and test taking.
3. Serve as a mechanism for discussion/interaction outside of the traditional classroom (e.g. collection of information, both text and multimedia-based, "in the field").
4. Serve as a platform for students to create entirely new models of collaboration that are currently not available or imagined.
5. Allow for innovative approaches to research, as in-the-field data collection/analysis will be greatly enhanced as data move quickly and securely from the investigator's device to the server.
6. Facilitate new audiences/collaborations of new audiences joining the virtual university, thus opening the resources of Indiana University to those who would otherwise never physically set foot on an IU campus.

By no means will the mobile device of the next decade replace classroom instruction. However, the combination of high-resolution video, high-speed transmission of data, and multi-endpoint video conferencing will enable new modes of learning anywhere and at anytime, which will serve as rich supplements to in-class instruction.

III. IDENTIFY STAKEHOLDERS.

Given the already pervasive nature of these devices, the current large number of stakeholders will only grow larger. Students, faculty, and staff who physically attend the university, as well as those who utilize the mobile computing infrastructure to connect virtually, are all critical stakeholders.