

64 – Teaching and Learning Innovation

Action Item Template Response

General Action Item Information

Lead Division/Office: LT

Action Item Number: 64

Action Item Short Name: Teaching and Learning Innovation

Dependencies with other EP Action Items:

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I. DESCRIBE YOUR PLANS FOR IMPLEMENTING THIS ACTION.

In 1999, the number of general-purpose classrooms with installed technology on Indiana University campuses was limited; installations were done on a haphazard basis as one-time funds became available, with no plan in place for ongoing support, routine maintenance, or lifecycle replacement of key components. On some campuses the small number of installed technology classrooms made it difficult or impossible to even gain access to the technology that might enhance instruction.

As part of the first IT strategic plan, Indiana University developed a comprehensive, multi-classroom technology plan for general-purpose classrooms, scheduled by the Office of the Registrar. The plan, begun in May 2000 and completed in summer 2008, called for installation and support of technology in classrooms, and coordination of the design and renovation of classrooms to enable use of that technology. The plan called for more installed technology and less reliance on mobile equipment. At the beginning of the strategic plan only 12% of the almost 700 general-purpose classrooms had permanently installed technology; today the percentage of installed technology classrooms system-wide is over 88%.

Each campus has developed a standard installed technology package that provides consistency across classrooms. Standard equipment installed includes, at minimum, overhead transparency projector, video/data projector(s) or flat panel(s), computer(s), VCR/DVD player, laptop connection, document camera, sound system, a control system, and wired/wireless network access. Some classrooms include video cameras and recording capability, interactive pen tablets, and other specialized equipment. Installed classroom computers have the same standard software build as the computers in the student computer clusters, providing faculty and students with access to the same set of software resources. IP-based control systems allow remote access to monitor equipment functionality and allow staff to diagnose problems over the phone, and when necessary, take control of the system.

As we look ahead to the next generation of IT-equipped classrooms, the deliverables must address a wide range of teaching and learning innovations both in and outside of the traditional classroom. To achieve this goal, we must engage faculty to create a new, comprehensive classroom technology plan for Indiana University.

Specifically, we will:

1. Engage faculty in experimental projects that are intended to study the use of new and emerging technologies for teaching and learning.
2. Invite faculty to participate in focus groups designed to gather information on state-of-the-art classroom technology needs for the next generation of general-purpose classrooms.
3. In partnership with campus leadership at IUB and IUPUI, create a grant-based program to support the academic transformation of curriculum, teaching methods, and physical classroom spaces.
4. Develop and staff a physical experimental classroom space where faculty can evaluate new technologies in a more "hands on" environment.

ACCOMPLISHMENTS

BS 2000 Videoconferencing Upgrade (IUPUI). In partnership with the Kelley School of Business, University Architect's Office, Campus Facility Services, we enhanced the learning environment in BS 2000 to include upgraded presentation technology, additional projection screens to improve sightlines, and videoconferencing equipment so courses can meet with counterparts in India, China, and other international locations.

Experimental Classroom Space in IT 121(IUPUI). This space, designed to immerse students in a technology-rich collaborative learning environment, features five group collaboration tables (with a 40" flat panel display for each group), 25 laptop computers, portable whiteboards for group work, collaborative software applications, and a CopyCam system to capture and save whiteboard images.

Union Street Center Learn Lab Classroom (IUB). Offers enhanced opportunities for collaborative learning, within and beyond scheduled class time, as a result of its unique configuration and design. The classroom provides different spaces and facilitates different modes of instruction. This layout, combined with multiple digital projection sites, breaks down the traditional classroom hierarchy (i.e., rows of desks facing forward to a single instructor location), thus enabling the instructor to move freely across the room, engaging and interacting with the students.

Union Street Café Classroom (IUB). Created to challenge the traditional assumptions regarding classroom design. Specifically, the space is more like a café than a classroom, has informal seating (but for both informal and formal learning), emphasizes student-centered learning and provides a technology-rich environment. Like the Learn Lab classroom, the Café Classroom was designed to intentionally move away from the traditional classroom design to one that encourages more direct student interaction and engagement.

Node Classrooms (IUB and IUPUI). Steelcase Node chairs are tablet-arm chairs on casters, with tablets large enough for laptops. The casters allow students to easily move from lecture to group mode. Replacing traditional tablet-arm chairs with Node chairs appears to be a relatively inexpensive way to facilitate group work in existing classrooms without significant loss of seating capacity. Classrooms that have Node chairs include BH 336, BU 427, Cedar C114, and classrooms in Informatics in Bloomington and BS 2008 and IT 265 at IUPUI.

Redesigned Distance Education Classroom (IUPUI). ES 2101 was a distance education classroom with older videoconferencing and classroom technology and a physical environment that had moveable furniture that was made immovable due to microphone wires taped to the floor and fixed camera locations. In partnership with the School of Education and with the help of a Learning Environments Grant, the existing furniture was replaced with tables and chairs on casters so that the room can be easily reconfigured for whole class or group work, large displays for viewing remote sites and course content are available. Other flat panels with USB cameras and mics are positioned around the room for students to work in groups.

Interactive Eno Board in ES 1116 (IUPUI). In partnership with the School of Education, an Eno board was installed in ES 1116. The Eno board is an interactive white board that facilitates collaboration and allows interactive sessions to be saved and distributed. Most K-12 schools have “smart” or interactive white boards in their classrooms, and it is important for students majoring in Education to be familiar with the technologies commonly found in the learning environments they will be teaching in.

Immersive Classroom (Multiple Campuses). As a showcase project of the new Learning Technologies Collaboration Technologies Unit, we are in the design/build phase for three new immersive telecollaboration classrooms, currently targeted to be installed in IUB Wells Library Room 305G, IUPUI ICTC Room 121, and potentially a third room at IUN Hawthorne 329. Our classroom will borrow the café table seating concept of the Cisco Telepresence Active Collaboration Room (ACR), which inspires movement within the space. However, we hope to improve upon the ACR by focusing more attention on the technology feature set of the student tables themselves, with the goal of making each table capable of presenting or collaborating on computer or handwritten images among the students at the table, with the entire class/conference, or in breakout sessions with select remote students. In this regard, each student has essentially the same tools to present ideas as the instructor. Point of view and “life size” camera imagery will be achieved with automated camera positioning systems, which will be contextually programmed based on whether the instructor is in-room or remote.

Collaborative SCALE-UP Classroom (IUB). The former Geography Map Library in the Student Building will be renovated into a large collaborative classroom, following the principles of Student Centered Active Learning Environment for Undergraduate Programs (SCALE-UP). The project has received funding approval and is just beginning schematic design with input from departments who have expressed an interest in teaching in this type of environment, including Geography, Anthropology, Medical Sciences, Journalism, and Informatics.

Franklin Hall Reading Room Project (IUB). The former Grand Reading Room, to be known as Presidents Hall, is being designed for multiple uses as both a flexible technology-rich learning environment and a formal lecture space. The primary use will be as an informal learning environment where students can study individually or in groups. There will be several collaborative tables throughout the room with large flat panels and laptop connectivity for group work. A mix of moveable tables and chairs and soft seating will also be available. The formal speaker lecture setting will feature two large screen projected displays and seating for over 300.

Ballantine Hall 206 and 307 Classrooms (IUB). These two former office spaces will be renovated into classrooms that promote collaborative learning. The discussions on room design are just beginning. Possibilities include Node chairs and multiple projection locations, the availability of portable marker boards for group work, and the ability for groups to project their work wirelessly.

Collaborative Classroom in ES 1117 (IUPUI). Modeled after the experimental classroom space created in IT 121, with modifications based on lessons learned, this technology-rich learning environment will be installed in a general inventory classroom in December 2011. The room will feature six group collaboration tables, each with a large flat panel display, a dedicated CPU at each table along with two laptop connections, portable white boards for group work, collaborative software applications, and an Eno board.

Cavanaugh 008 Renovation (IUPUI). This major renovation project will create one new general inventory classroom and relocate two composition classrooms and a GIS classroom, as well as the IUPUI Writing Center. The general inventory classroom will be 50-52 seats and feature Node chairs to facilitate group work; the composition classrooms will feature group collaboration tables with CPUs at each student station and a large flat panel display at each table; the final design of the GIS classroom has not been determined, but it will feature CPUs at each student station. The composition

and GIS classrooms will also have collaborative software applications. There will be a printer area with a large plotter, and an informal student area in the corridor outside of the classroom suite. CA 008 is in Design Development with Construction Documents due mid-December with target completion by Fall 2012.

New Classroom Assessment Projects. In collaboration with the Office of the Vice Provost for Undergraduate Education (OVPUE) and the Center for Innovative Teaching and Learning (CITL), formal assessments of the Union Street Learn Lab and Café Classroom are underway. As a result of the Spring 2011 survey, an assessment has been designed that triangulates the data collection to obtain a richer understanding of how these spaces are being used by faculty and students. Another formal study of the Node classrooms is being undertaken comparing traditional and node classrooms and how interactions differ in these spaces.

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

The grant program will target a holistic, transformative course or curriculum redesign process that includes rethinking how courses are taught and considering the classroom and learning space designs needed to support these new teaching practices. To support faculty in the development of these grant proposals and for ongoing support of the grant recipients, a new method of support that includes both pedagogical and technical consultation/collaboration will need to be developed that draws on the skills of the consultants in the campus Centers for Teaching and Learning and other staff in UITS.

III. IDENTIFY STAKEHOLDERS.

Faculty, students, staff, and academic administration.