TEACHING AND LEARNING TECHNOLOGY ROUNDTABLE (TLTR)

2015-2016 TECHNOLOGY PLAN FOR SUNY POTSDAM:

Redefining the Classroom

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Submitted on ___________

To Dr. Margaret Madden, Provost and Vice President for Academic Affairs
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Introduction/Background

The planning subcommittee, on behalf of the entire TLTR, has over the 2014-2015 academic year continued to advance its Technology Plan; presenting it to administrative and faculty governance. Recognizing that a full technology upgrade is underway on campus and that a combined services resource center is being assembled, we offer this 2015-2016 plan as a bridge between last year’s plan and next year’s - when the landscape of classroom and teaching technology access and utilization may look very different than today. To that end, the theme of this year’s planning report is *redefining the classroom*.

The Planning Subcommittee compiled an inventory of instructional spaces with full or partial projection classrooms and computer labs. We found that there are approximately 147 instructional spaces of which 103 are equipped with mini labs, web only kiosks, full or limited projection, or hands on labs/computer labs. This means that approximately 70% of instructional spaces are equipped with some type of technology. This indicates that barriers to instructor access to projection technology may largely relate to class scheduling. High demand times for full or partial projection classroom are from 10 am to 2 pm Monday through Thursday and, as noted in last year’s report, there are critical limitations for faculty to access the teaching technologies they require during those times. The Planning Subcommittee stresses that there is still a dearth of smart classroom technologies on campus.

Last year we submitted a 3-point plan identifying three critical goals for improving, supporting and aligning teaching and learning services for all faculty at SUNY Potsdam. The 3-point plan included classroom upgrades, campus wide Wi-Fi and an endorsement of the instructional development and support center. The critical goals were identified as; a) gradually easing long-term costs associated with teaching technologies, b) increasing student enrollment and retention rates and c) increasing efficiency by aligning campus wide efforts that support faculty and student learning through academic technologies. For this report the goals will remain in place but a future-oriented strategy will be additionally proposed.
# Progress over the Past Year

A full *fork-lift* upgrade of campus technology, including greatly improved campus wide Wi-Fi, is now underway. Upgrades are being made to the physical network infrastructure including the replacement of network hubs as-well-as the transitioning of the network from *homegrown* monitoring and maintenance systems onto more stable and industry designed platforms. Full datacenter and network upgrades are scheduled for completion by end of summer 2015. Additionally, software and service upgrades have taken place throughout the spring of 2015 resulting in more efficient use of teaching and management software; resources that we often take for granted and rely on in effective teaching.

In the 2014-2015 report we requested the conversion of nine classrooms to full projection with an additional five *Smart* classrooms to be added before 2016; to date only two upgrades to *Smart* /projection classrooms have been initiated (excepting what individual department budgets were able to provide). Given the large scale changes CTS is undertaking with network infrastructure and the highly anticipated stability these changes will bring in terms of teaching and learning technologies used on campus, we have reviewed and are proposing a realignment of our planning priorities. The reworking of the campus’ IT infrastructure has depleted both budgets and manpower and we recognize the extensive limitations this has created in terms of support for comparatively “small fixes”. It is disappointing that these budget constraints could not have been anticipated in the 2014-2015 planning report, and moving forward we are excited to work in an environment where long-term budgets are established and readily available for review such that any planning undertaken on campus can work within the campus’ fiscal realities.

In these challenging fiscal times, the TLTR has identified a prudent way forward that improves our capacity to teach with technology over the long-term and begins simply with our proposal for a new definition of the classroom. Re-visioning what defines a classroom offers two key benefits. First, it aligns the definition of the classroom with the realities of the requirements of teaching in the 21st century, and second it transitions certain base technologies from being “extras” added into existing spaces through technology budget lines to being infrastructural elements that leverage building-maintenance budget lines. Essentially, technologies in classrooms have been treated in the past as add-ons, we propose instead that these resources are
now infrastructure; we would no sooner expect that a classroom not have electric lighting than be without network and projection capabilities. No matter how much or how little faculty members utilize technologies in the classroom we must face the reality that we are no longer able to teach effectively while standing in empty boxes!

The New Vision of the Classroom on Campus

Fundamentally we are calling for an updated definition of a classroom. Classrooms have been defined in the SUNY System (see http://www.sucf.suny.edu/sunyfac/PSI-Manual/Definitions.htm) as a “room used for all classes which do not require special purpose equipment for student use”, where as lecture halls “are distinguished from classrooms on the basis of size and layout. Lecture halls generally contain 50 or more fixed seats, arranged in a tiered fashion with fixed aisles”.

Our proposed redefinition of a classroom is an attempt to update the above definition to keep pace with the realities of the college learning environment; where, digital data projection is not an exception but a norm. If we compare the above definitions with the SUNY definition of a laboratory we see that labs are “distinguished from classrooms on the basis of equipment in the room and by its limited use; a room with specialized equipment such as laboratory benches, language labs, CAD stations, media communication labs, musical equipment, instructional shop equipment, etc., which is used for instructional purposes is a Class Laboratory”.

We propose that SUNY Potsdam serve as a model within the SUNY system and redefine a classroom to reflect the realities of our teaching. This new classroom definition in practice combines elements found in the existing definitions of classroom, lecture halls, and laboratories.

Classroom 2.0

We propose that Classroom 2.0 be defined as:

*A media friendly, interactive, and collaborative group learning environment with seamless access to the College’s full information environment equipped with responsive, intuitive controls available to the instructor. Classroom 2.0 must be adaptable and able to facilitate rapid growth in technology.*
We propose the following classroom standards to be applied uniformly in Classroom 2.0:

i. Dimming options for lighting and window treatments that afford adequate darkness (i.e. screen can be free of light from windows)
ii. Projection screens should not interfere with black/white boards or vice versa.
iii. A clear image is available for every seat in the room with moveable tables and seats
iv. Screen size should be maximized relative to the size of the room
v. Technology podiums must have clear, updated, image-based tutorials for using hardware and accessing software. These tutorials must be updated with hardware or software upgrades.
vi. Start-up time for computers and data projection cannot exceed 5 minutes (or half the time between classes).
vii. Appropriate room security with the corresponding access/information transferred in a timely fashion to faculty, particularly for electronically keyed rooms.

Class Laboratories are distinguished from classrooms on the basis of kinds of equipment in the room and by their limited use; “a room with specialized equipment such as laboratory benches, language labs, CAD stations, musical equipment, instructional shop equipment, etc. which is used for instructional purposes is a Class Laboratory” (SUNY Space Type Code Definitions).
Like the lecture and classroom definitions the Lab definition needs updating to include the infrastructural learning technologies. Presently, Stowell 217 provides a prototype for the reimagined Class Laboratory designed in the Computer-Based Collaborative Learning Environment (CBCLE). The CBCLE allows users an integrated technologic experience; where teaching and learning can be carried out across platforms with particular accommodation of collaborative data collection, audio, imaging and display capabilities. The CBCLE physical configuration includes movable tables and multiple data and electrical outlets. These features help students configure the Classroom Laboratory space both physically and virtually enhancing their face-to-face and/or electronically mediated team-based collaborations.

Justification and Examples

The proposed redefinition of a classroom can be a catalyst to address two of the major goals articulated in last year’s planning document. The first of which was to increase and sustain
student enrollment and the second was, to bring down long-term costs by creating adaptable classrooms to accommodate rapid and ongoing changes in technologies. Similar to purchasing “bricks” to finance new construction it may be possible that through philanthropy, grants, and fundraising we can create departmental teaching technology “diamonds”.

An example of this idea can be found at SUNY Canton in the renovation of Cook 100 into a “Wall Street inspired business Classroom”

A $20,000 pledge from Alesco Advisors helps students access and analyze current financial information as part of their business education. …The new learning space in the recently renovated Cook Hall Room 100 features a large interactive touch screen display showing financial indicators and an LED stock ticker displaying real-time stock prices of major companies. The classroom was designed specifically for students taking classes in the Finance, Management, Business Administration and Accounting programs. (SUNY Canton Website)

Creative funding models can be tricky and can drift into ad hoc planning for equipment and ongoing support, especially financial planning for eventual and inevitable upgrades. To avoid this risk, creative funding models must include participation by campus IT to ensure the funded classrooms can be maintained in the present and on into the future, and can be integrated into existing campus systems. There is a risk of disrupting continuity in implementing projects without overall communication, collaboration and coordination with key departments. However, with collaboration amongst the development team, CTS and stakeholders, we can be reasonably certain of an organized and productive process. This calls back to a point made earlier in this document regarding the need for accessible long-term budget projections so that responsible and sustainable goals can be made by the stakeholders in our campus community.

A Central Technology Resource Center (part of the Faculty Development Center)

The third goal in the 2014-15 plan was to increase efficiency by aligning campus wide efforts that support faculty and student learning through academic technologies. The concept of the library evolving into a resource center looks to be a trend at many universities as the physical inventories of libraries are shrinking while the virtual resources are expanding. Clarkson University’s Educational Resource Center (ERC), St. Lawrence University, and SUNY Canton
have gravitated toward a hub of centrally located combined information services. This is a compelling model as it centralizes teaching technologies and locates them alongside the technical support services. Therefore, we recommend that CTS, the “Help Desk” and related services move out of Stillman and into the hub of support services. There should no longer be a gap between traditional library services and information and communication technologies. Again, this proposal echoes elements of our proposed classroom redefinition; information and communication technologies are not exceptions or additions to our Potsdam experiences, they are fundamental and infrastructural; continued separation increasingly forces a false dichotomy – duplicating facilities and often times frustrating users.

Other Technologies/Services to Implement
Lecture Capture Technology

The ability for faculty to record and archive their lectures may add another dimension to the advancement of teaching and learning technologies over the long-run. The process often referred to as “Lecture Capture” is a generic term and involves both hardware and software components and can be accomplished in several ways. Laptops and other hand-held recording devices are the quickest way to accomplish a straight recording of lecture material. Audio only or an audio-visual recording could be made in the classroom, in the field, or in the instructor’s office.

A second type of recording includes not only of the instructor but includes accompanying material. This combines both video of the instructor and direct digital input of the presentation material (Prezi, Keynote, PowerPoint). When finished, it allows the viewer to switch focus between watching the presenter and viewing the material.

With the growth of online program offerings it may be prudent to address the infrastructure to enable this technology. An instructor can evolve from writing lesson plans to recording their lectures at their desk or in the classroom for quick conversion to an online platform. Various software packages, including Avatar creation software, can enable an instructor creative freedom beyond simply capturing a talking head. Avatars are entertaining and animated versions of the instructor with many options in virtual reality teaching with the possible benefit of a more marketable course design. (See http://www.educatorstechnology.com/2013/02/8-great-avatar-creation-tools-for.html).
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Since Kellas is scheduled for a complete renovation in 2016, the wiring and infrastructure for lecture capture equipment might be a prudent first step in advancing teaching to include the creation of avatars for use in education.

The Ongoing Issue of Faculty Utilization

Among faculty, there is a wide range of attitudes toward adoption of new technology and techniques. Some are eager and able; and they drive change. Others are eager but lack time to experiment, select, and learn the new approaches that work for their teaching style and discipline. Various faculty members have customized approaches to utilization that have worked well for decades and continue to work for them. Other faculty are resistant to change even when a change is critical – in part because they’ve seen fads come and go (and had some bad experiences), and in part out of a high level of comfort in the status quo.

Foisting new technology on faculty by edict reduces faculty effectiveness and erodes trust, even if the technology may improve some metrics or meet compliance goals. With the many launches of new technologies, it is important that users see a definite benefit before widespread introduction. It is therefore crucial that technology be intuitive, easy, and reliable. Ideally, change is driven by early adopters showing such a compelling case that other faculty want the new technology to be available to them (for example, the campus-wide desire for more smart classrooms). At present this dynamic occurs but is largely informal and hence limited, via individual effort and participation in groups such as the TLTR. A formal program for enlisting and encouraging early adopters may be in order – to try new technologies and techniques, winnow out the ones that don’t work, work out the kinks in the ones that do, and then demonstrate their effectiveness to colleagues. This will help reduce overall technology costs by ensuring new technology is tested, validated and tuned before introduction, and costs and support burdens are well understood. Some formal approaches may already exist on campus; if so they need to be remodeled, re-invigorated, and re-marketed.

One way faculty and administration might work through these inconsistencies is to begin to schedule classrooms so that resources are more easily shared and utilized. For example, the computer assisted design studio (CAD lab) in the Performing Arts Center is a valuable resource that is currently underutilized. To enable this sharing would require software and systems that
provide better transparency into College resources and improved means of scheduling/reserving them. To ensure its use, such a system should integrate intuitively into the information environment experienced by faculty, staff, and students. Such systems may be costly, but this must be balanced against the cost of underutilized resources -- and even the cost of not knowing how much waste occurs due to underutilized resources.

Conclusion

The directions proposed above with regard to teaching and learning technologies on campus can accommodate the growth of SUNY Potsdam and will afford us a more competitive position within the increasingly post-secondary landscape. If we accept a fresh approach with a focus on evolving through innovation we can lead the SUNY system in redefining the classroom, rather than proposing patchwork fixes, and in adjusting the way we think about our support resources to better enable us to meet our campus wide goals and commitments toward student enrollment and retention and decreasing long-term costs through the alignment of support services.