January 2015

Learn@UW
Executive Committee

Roadmap Report

1 INTRODUCTION

The growth and vitality of technology within higher education has become increasingly evident. Students now study, learn, and communicate with faculty and peers through an array of technology platforms. The academic experience has become reliant on technology and online systems that universities must focus on investing in the implementation and maintenance of cohesive and comprehensive systems, while simultaneously keeping up with the rapidly changing technology environment. The University of Wisconsin System (UWS) has tasked the Learn@UW Executive Committee, in conjunction with the Common Systems Review Group, to tackle these challenges.

Prepared by the

Roadmap Task Force

Formed by the Learn@UW Executive Committee

University of Wisconsin System

Technologies in higher education are evolving at the greatest speed of our time. Traditional technologies have new and more frequent functionality enhancements, allow for integration and plug-and-play with other applications, and have an indistinct place in the future of higher education. As many hypothesized about the future of traditional education systems, social and mobile technologies are becoming ubiquitous, found in the hands of almost all students and faculty. These technologies provide ease of use and create interactive and collaborative spaces, and subsequently increasing the expectations of members of our higher education communities.

With these changes in expectations and needs of students and faculty, the Learn@UW Executive Committee determined in order to best meet these ever changing and rapid demands of learning technologies in the classroom, UWS needs to move beyond the day-to-day business focused on fiscal considerations of current traditional, large-scale technology systems, of which have been acquired. Rather than having UWS traditional systems drive us into the future, there needs to better understand these changing campus requirements in light of the sweeping national trends. To bring such an understanding, the Learn@UW Executive Committee formed the Roadmap Task Force.

1.1   ROADMAP TASK FORCE

The Roadmap Task Force was formed by the Learn@UW Executive Committee as a response to the growing issue of wanting to build capacity for preparedness while simultaneously adhering to fiscal constraints. In consideration of the Common Systems Review Group (CSRG) Roadmap (see Appendix A), the Roadmap Task Force was formed and has worked closely with the Learn@UW Executive Committee while informing the CSRG for the last year (2013-2014) of said efforts, including developing a trajectory, implementation of the plan, and production of a strategic directioning report, or roadmap, proposed later in this report.

Our Goal

Develop a roadmap identifying strategic directions for learning technologies over the next three years within the University of Wisconsin System.

The Roadmap Task Force is composed of five Learn@UW Executive Committee members (see Appendix B), including members that are considered national leaders in instructional technologies, are faculty or work with faculty on a consistent basis to advance learning through technology, and/or are in administration participating in campus level and intercampus strategic planning and programming. Together with the engagement of key stakeholders within UWS, the Roadmap Task Force looks to determine where we are as a System and as individual campuses, in order to inform our direction in the next three years.

2   BACKGROUND

The Learn@UW Executive Committee has a long history of oversight specific to learning technologies for UWS starting with the original transition to the Learning Management System (LMS), Desire2Learn (D2L) operating within the purview of the Commons System Review Group (CSRG). The CSRG provides oversight and leadership for large information technology systems used by institutions in the University of Wisconsin System.

2.1   LEARN@UW EXECUTIVE COMMITTEE

The Learn@UW Executive Committee, originally labeled D2L Steering Committee, was formed in 2003 to oversee the transition from WebCT and BlackBoard to D2L. The new committee was formed with the endorsement of Senior Vice President for Academic Affairs, Rebecca Martin. To be consistent with how other technology oversight committees are named, the committee recommended changing the name to Learn@UW Executive Committee. Although that particular function is no longer needed, overseeing the technology trends and tools that support teaching and learning across UWS, including the LMS and its associated applications, is a continued priority.

The Learn@UW Executive Committee is charged with not only overseeing technologies related to online education, but all technologies that support instruction. In the current higher education technology climate, the mission of the committee is to provide vision, strategic direction and oversight for instructional applications and tools that support teaching and learning across UWS. Specific responsibilities include planning, budgeting, advocating, fostering collaboration, and resolving differences in priorities. While actionable items and outcome are necessary to progress UWS, the Roadmap provides a foundation to inform future materialities.

> The mission of Learn@UW Executive Committee is to provide vision, strategic direction, and oversight for instructional applications and tools that support teaching and learning across the University of Wisconsin System. Specific responsibilities include planning, budgeting, advocating, fostering collaboration, and resolving differences in priorities.

The committee is made up of two types of members, those based on their specific job and those appointed to represent specific groups. Senior Vice President for Academic Affairs appoints or appointed committee members who represent specific groups with a three-year term and no term limit. Committee members include the following individuals: the UWSA CIO, the UWSA Director of Learning Technology Development, and a Learn@UW Sponsor. Representatives from the following groups also make up the committee: UWS Academic Affairs, two UWS campus Chief Information Officers, one LTDC representative, one Provost, two Deans, two faculty members, and one undesignated.

2.2   COMMON SYSTEMS REVIEW GROUP

Additional efforts to provide UWS's campuses, students, faculty and staff, with more efficient and better quality technology systems are supported by the Common Systems Review Group (CSRG). CSRG was created in 1998 to provide oversight and leadership for large information technology systems used by all

or most of the fifteen institutions in the University of Wisconsin System. Each UW institution has a representative on CSRG, either a Chief Academic Officer, a Chief Business Officer or a Chief Information Officer. By 2007 the CSRG had a portfolio of seven major common systems. CSRG hired Strategic Initiatives, Inc. in 2007 to help it develop a long range plan, or information technology roadmap, to enable better decisions about adopting or rejecting new applications, to understand how ongoing applications might fit together to offer the best value for the investment, and to demonstrate how large cross-institutional IT projects might enable the UWS to better achieve its long-term business goals. The CSRG roadmap is reviewed and updated on an annual basis.

3   PROCESS: BUILDING THE ROADMAP

In higher education, numerous organizations are developing plans for the future. The New Media Consortium, EDUCAUSE Learning Initiative, and the Chronicle of Higher Education have all predicted up and coming trends in higher education. Each system and institution is left reflecting on these predictions in relationship to their own priorities. Other higher education systems, like UWS, are looking to find collaborative ways to share resources to best support the teaching and learning of all students within their institutions. For instance, the State University of New York has launched initiatives and allocated financial and human resources to prepare their system to move into the future with a focus on open resources. Moreover, in UWS, several campuses have developed their own strategic plans and initiatives around technologies to facilitate teaching and learning.

In addition to external indications for the necessity of a strategic roadmap, internal evidence based on results from faculty surveys illuminated strong recommendations for roadmap building. In a System wide initiative spearheaded by the Learn@UW Faculty Survey Task Force, faculty and staff from the UWS community were surveyed about their opinions on the current LMS system and resource availability for teaching and learning with technology. After careful analysis, one focal recommendation made by the task force was the creation and utilization of a roadmap.
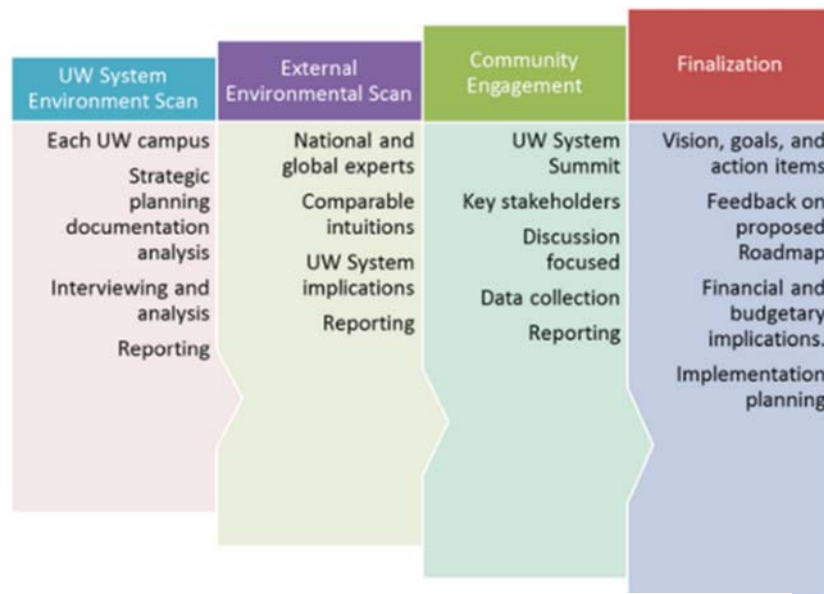

Figure 1 Process Map

The time was ripe for Roadmap Task Force to develop a process to assist the Learn@UW Executive Committee in providing strategic direction for UWS. In doing so, the Roadmap Task Force took particular care in determining the process to ensure rigor and engagement of voices at all levels within UWS and beyond (see Figure 1). Four key phases

were identified in the process: The UW System Environmental Scan, External Environmental Scan, Community Engagement, and Finalization.

3.1   THE UW SYSTEM ENVIRONMENTAL SCAN

Although the Roadmap Task Force represents four UW campuses and UWSA, the campuses bring diverse values and priorities, while sharing in the interest to best serve their students. Several campuses have developed their own campus planning documents, including documents specific to academic, instructional, or learning technologies. Most schools and colleges on campuses have their own academic plans and illustrate the role of technology in helping them fulfill those plans. The Roadmap Task Force wanted to gather and analyze this data to ensure that any strategic direction highlighted an understanding of the campus plans, including prerequisites and priorities.

The Learn@UW Executive Committee has led many initiatives to better understand the needs of the UWS campuses. These efforts include faculty surveys, student surveys, LMS exploratory pilots, and emerging technology initiatives. Each of these initiatives produces reports that were included as part of the environmental scan. The Roadmap Task Force understood that beyond the text and with the fast moving demands of our time, the data collection needed to go beyond analysis of the documents. Therefore, with the lead of the Provosts, the Roadmap Task Force looked to identify key leaders on campuses in academic and learning technology that could be engaged to share in more detail future learning and programming plans that may require UWS resources.

MindWires Consulting was contracted to perform the document analyses and the interviews of key campus leaders. A UWS Internal Environment Scan Report, which was later combined into one Environmental Scan report was produced (See Appendix A). The report informed the Roadmap.

Figure 2 Phil Hill, MindWires Consulting

3.2   EXTERNAL ENVIRONMENTAL SCAN

As mentioned, there is an array of national and international organizations that are assisting higher educational institutions to better identify the future trends in education and help prioritize efforts (New Media Consortium, EDUCAUSE Learning Initiative, and the Chronicle of Higher Education). Furthermore,

there is an assortment of System organizations that have created plans and identified resources needed to foster in the future of teaching and learning for their students.

Again, MindWires Consulting was contracted to perform the external environmental scan. MindWires has previous experience working with system-level organizations to product strategic visioning and planning. An External Environment Scan Report, which was later combined into one Environmental Scan report was produced (See Appendix A). The report informed the Roadmap.

3.3   COMMUNITY ENGAGEMENT

The Roadmap Task Force determined it was pertinent to the process to move beyond initial data collection through interviews with key stakeholders. In order to acquire a more robust understanding of the needs and expectations of the UWS community, face-to-face interaction and engagement was necessary. Holding an in-person summit with faculty and staff deeply invested in the future of technology across the UWS was the decided way to create an environment where essential conversations could happen. Conversations that would ultimately inform the Roadmap Task Force on campus values, priorities, and needs for teaching and learning with technology over the next three years.

First, around 60 UWS constituents, all identified by the Provost and/or Provost designated campus representatives as leaders and organizers of the future of technology on their respective campuses, were invited to attend the *UWS Roadmap Summit*. Then on June 4th and 5th these carefully chosen individuals came together at UW-LaCrosse to share what current technology endeavors were happening on their respective campuses, to hear about the external and internal scans for learning technology planning, to provide reactions to the report, and to participate in small-group discussions surrounding key questions and issues of the learning technology community.

The two-day Summit was structured to provide opportunities for exposure, discussion, and reflection. As a result of initial interviews held by MindWires, a large amount of individuals expressed a desire to share in their endeavors and hear from other campuses as to their work. Therefore, lightning round panels throughout the day provided an opportunity for each university to share current projects and success regarding learning technology on their campus. In brief presentations, the UWS community gained a better understanding of what sister colleges were doing across the state, (a sharing exercise that proved to be much desired by the attendees, moving forward). Each of the four lightning rounds had at least three schools represented and focused on a particular element of the learning technology ecosystem.

Figure 3 Roadmap Summit

Invaluable discussions emerged during the "Key Issues" breakout

sessions. Groups of 20 to 25 individuals had the chance to weigh in on matters such as the alignment of instructional needs and learning technology systems, how to enhance UWS's capacity to explore emerging technologies and pedagogies, and how collaboration across campuses could enhance responsiveness to increasing technology demands. Note-takers in each breakout group ensured the important discussions were recorded to ultimately impact the Roadmap Task Force's future decision-making and roadmap creation. Furthermore, ideas, concerns, and themes that emerged from the first day of breakout sessions helped inform the topics of discussion on the second day. This malleable approach to discussions reinforced the exploratory nature of the summit. At the forefront of the Summit's goals was the exploration of the learning technology community's perceptions and needs for the future of technology in UWS. Allowing feedback to inform future discussion did just that.

Finally, the Summit agenda included daily reflections where all attendees reconvened to summarize the lessons, discussions, and concerns shared throughout the day. The Roadmap Task Force felt it important to specifically etch out time for summit attendees to collectively recall the important points of the day. This time of the summit reinforced the key takeaways attendees wanted the Roadmap Task Force to take with them as they move forward constructing the Roadmap.

3.4 FINALIZATION

The Learn@UW Executive Committee will work in collaboration with the CSRG to develop a capacity to respond to the directioning identified through the Roadmap process, including financial and budgetary implications. Moreover, the Learn@UW Executive Committee will develop their strategic plan over the next 3-5 years, including identifying vision, goals, and tasks surrounding the direction highlighted in the following. Once these have been identified, an implementation plan will be put into place. Additionally, the *Roadmap Report* will be shared with various stakeholders across UWS in order to gather feedback.

4 VALUES: WE ARE UNIVERSITY OF WISCONSIN SYSTEM

We, as UWS, are overwhelmingly committed to **ensuring that our students' needs are met**. Given the importance of quality education for our students, UWS is dedicated to identifying the needs, interests, and wants of our student population. Learn@UW Executive Committee has conducted research to better understand students' needs through surveys and direct pilots. Furthermore, Learn@UW Executive Committee has funded several emerging technology initiatives to help identify students' desires and needs. Since the depletion of funding for some of these initiatives, many campuses struggle to continue these efforts independently.

In association with this commitment is recognizing that UWS is comprised of a diverse student population from first-generation students to adult learners and, as such, rigorous identification of the unique educational needs for all types of students is central to ensuring quality education. Thus, UWS campuses make it their goal that we pinpoint what kind of student needs are and are not being met depending upon the type of student.

UWS is committed to working toward establishing strategies geared toward addressing these needs while removing barriers to learning by focusing on ease of use of technologies and in obtaining support around the use of those technologies for their learning. By concentrating on the needs and wants of our students, we also dedicate ourselves to the overarching goal of student retention. We recognize that

students are likely to stay in UWS if they feel they are receiving a quality education in an environment that cares about their well-being and the successes of their future endeavors.

UWS believes in **supporting all faculty effectively**. UWS recognizes that providing quality assistance to instructors has far-reaching implications, particularly in regards to meeting our students' needs and creating an institutional environment that values quality teaching and learning with technology. Faculty support must happen before, during, and after the semester and must address the needs specific to different modes of teaching. For example, providing quality education in a blended or online format is a challenge for many instructors given limited amount of time and resources.

Many UWS campuses continue the process of faculty improving services that can provide online instructors with timely assistance before the semester begins. These services include course development workshops, technological support, and peer collaboration. As these services develop to ensure our faculty are supported, there is a desire for faculty to be active players in taking ownership over opportunities provided by technology-enhanced pedagogies.

UWS is committed to ensuring that faculty experience a sense of flexibility in their teaching and learning practices. UWS campuses are diverse entities within a larger institution and thus similar as well as unique needs exist. Thus, UWS is committed to identifying these needs and offering a space for flexibility of pedagogical practices, particularly in regards to the implementation of technology.   As a System, we find it important to value faculty and their efforts in teaching and learning, specifically regarding the innovation in their pedagogical practice around technology.

Providing quality support to faculty and students and identifying strategies to help address educational needs cannot be accomplished without also giving attention to structural concerns. We want to further identify ways in which the UWS can be improved as well as the structural issues that continue to be impasses hindering the institution's success.

Along with opportunities for effective decision-making, there is a **desire to share** throughout UWS and beyond success promoting recognition of campuses and UWS. Many campuses are committing themselves to finding innovative ways of achieving pedagogical goals for a diverse population yet information about such initiatives in not widely shared System wide nor to the larger public. As a result, national recognition of the UWS's as a frontrunner in teaching and learning initiatives is a missed opportunity. Without understanding what other campuses are doing in regards to learning technologies, resources, and instruments and without focusing resources on publicly showcasing such projects to a larger public, UWS's role in providing quality education and research driven teaching practices (including increasing student retention and success) will be in jeopardy.

Faculty and staff report a desire to understand what other campuses are doing in regards to research development, teaching and learning practices. By concentrating on creating a plan in which different campuses can efficiently and effectively share ideas, faculty support will be enhanced. Learning how to maximize resources and minimize pitfalls is one way in which System wide faculty support can occur. In continuing to identify ways in which faculty support services can be improved, UWS illustrates the importance placed on understanding the diverse challenges faced by our faculty and identifying support strategies to assist the faculty with these concerns.

Informed and engaged decision making is a structural opportunity and an area of great importance throughout UWS. Members of UWS want a transparent process about decision making. Specifically, decisions to fund, acquire, pilot, and support learning technologies. Campuses want to know their voices are being heard around technology needs, especially campuses engrained in strategic plans of advanced technology-enhanced academic programming. Moreover, faculty want to be a part of the dialogue when decisions around the acquisition of academic technologies to meet campus-level teaching and learning requirements, and campuses are looking for great opportunities to engage their faculty and administrators in System-level decisions.

With the new opportunity created by "big data" to make more effective decisions, together, as a System, we look to understand how to utilize and analyze this data in order to benefit and produce implementable outcomes, as oppose to collecting data "for data's sake." The outcomes need to be considered in light of the unique values of the many campuses in UWS. Furthermore, research conducted using this data needs to not only focus on teaching and learning, but specifically on teaching and learning *with* technology.

Some challenges facing the UWS are unique to the institution while others are shared by many universities. **Monetary resources**, for instance, is a continued shared concern for the majority of institutions. Most campuses across UWS appreciate fiscal conservativeness in meeting the needs of their students and yet feel an inability to be as successful as desired at times.

As less governmental money is allocated to state institutions, the ability to fund faculty development services, student support services, and research initiatives is difficult. For instance, students report online and blended education as an increasing draw for UWS yet the funding for technology initiatives dedicated to online and blended education development is severely limited. Without identifying avenues of potential support for exploration of online and blended education in the UW context, UWS's potential as a leader in such endeavors will be greatly diminished.

UWS recognizes this as an ongoing challenge that many of the stakeholders are working to remedy. As the Learn@UW Executive Committee moves forward with the strategic directioning, a goal needs to be established to prioritize funding needs as (1) what is most urgent, (2) what will become urgent, and (3) what is important but non-urgent to meet UWS and campus goals.

UWS must recognize ways in which campuses can share information regarding their own successes and challenges while meeting the needs of the students of the System, so that individual UWS campuses can learn from one another and we as a System can maximize our resources in fiscally challenging times. Collaboration in general is not necessarily the answer. There needs to exist a structure that balances pedagogical and technological opportunities of the System while taking into account individuals campuses needs in the context of System wide desired results. Therefore, a focus on strategic collaboration and thoughtful communication while respecting individual characteristics is critical. With a clear direction for desired outcomes within an established structure, we can facilitate opportunity and growth moving beyond the constraints of processes of tradition.

Furthermore, strategic efforts should be established and supported throughout the system to collectively engage all in research on teaching and learning with technology. Pursing endeavors in the classroom to better retain and improve student outcomes through technology-facilitated instruction can efficiently utilize financial resources while excelling the UWS's national position as a leader. These

efforts in teaching and learning with technology can attract new and entrepreneurial opportunities. Therefore, UWS wants to focus attention on identifying ways in which these structural challenges can be addressed as well as the consequences of allowing them to go unaddressed.

Figure 4 Campus Leaders

5   OUR ROADMAP, A STRATEGIC DIRECTION

An academic technology roadmap is needed to guide the Learn@UW Executive Committee in making key decisions in planning and budget exercise, specifically:

- Prioritize financial support for system wide instructional applications
- Build capacity and responsiveness for future needs
- Develop an understanding of the learning ecosystem within the system

The Roadmap project is initiated by the Learn@UW Executive Committee has a goal to develop an academic technology roadmap to guide UWS during the next three years in UWS budget planning activities, as well as the direction of future learning technology initiatives. On the individual campus level, the Roadmap will also provide guidance for campus planning efforts.

In the following section, the goals is to define the strategic direction of the Learn@UW Executive Committee. The Learn@UW Executive Committee in conjunction with the CSRG will look to identify more specific goals and tasks as well as harness resource to support the direction as determined by data gathered through document analysis, interviews, external scans, and stakeholder engagement though the Summit.

5.1   CONTINUE A SYSTEM WIDE LMS

Overall, learning technologies are valued, most significantly by faculty. In particular, having a System wide LMS is valued and is seen as being efficient. As seen in the external environmental scan report, CCCS has managed the LMS serving all 13 colleges and decided that all of its colleges should be using the same LMS to improve students' and instructors' experiences and to increase efficiency within the system and designated CCCOnline to host the LMS for the entire system. Furthermore, constituents look for infrastructure, including the LMS, which is efficient, reliable, robust, and resilient, as campuses look to increase access to the LMS and other learning technologies through wireless data networks.

Furthermore, campuses are looking to leverage web, social media, and mobile technologies to provide effective and consistent content delivery. The social mobile phenomenon is not isolated to any one campus or UWS, it is an international trend and should be considered in the continued maintenance and acquisition of academic technologies.

Beyond the technology infrastructure, hardware and software, at UWS there is a perceived absence of necessarily financial and

Figure 5 Roadmap and Directioning
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human resources at the System and campus level to fulfill the learning technology promise. A recent survey of UWS faculty illustrated one of the main concerns from instructors using technology within the classroom was the lack of available support. Additional resources are needed to support learning technology and development centers, pilot and test technologies needed, and engage champions to promote pedagogical effective practices and technological training.

In order to continue to reap from the value of a System wide LMS, faculty need to be more proactively engaged beyond professional development through learning technology and development centers. Faculty have a limited amount of time and need to be engaged in infrastructure decision-making processes, pilot initiatives and research, and dissemination of practices through incentives. Each individual institution had different priorities and these priorities shaped the budgeting, which leaves many of these centers without resources to effectively support and engage faculty.

There is a need for a dialogue around the richness and impact of a System wide LMS on campuses. Beyond the value and efficiency of this, evaluation on the impact on individual campuses, schools, colleges, and programs should be pursued. Even though the student and faculty survey show high satisfaction with the LMS and user statistics show growing use of the LMS, notably, there is not an ongoing discussion taking place on the enrichment of System wide infrastructure and its ability to enrich teaching and learning. An evaluation plan including key criteria for success considering multiple audiences, including students, faculty, staff, and administration, should be developed and implemented in order to gauge the success of all system-level infrastructure technologies to better understand the impact on teaching and learning. As suggested by the recommendations from the Faculty Survey Task Force, implementing a faculty survey, sponsored and coordinated by the Learn@UW Executive Committee, every two or three years to monitor the changing needs of instructors and the effectiveness of supporting the learning technology needs of instructors and students.

Finally, many stakeholders expressed the desire for research based approaches to technology identification, selection, implementation, diffusion, and evaluation. More systematic and rigorous

approaches can be employed to understanding needs, the characteristics of media and how they meet these needs, both in teaching and learning, and in support of teaching and learning. Importantly, research can lead to an identification of effective instructional and technological practices having the greatest impact on desired outcomes (e.g., retention, learning). Dissemination of research findings and instructional practices can result in consistent and quality use throughout System. Not to be forgotten, ongoing evaluation, especially in determining whether to continue support or retire, could be supported.

New advances in data analysis tools will provide an opportunity and demand throughout UWS to provide infrastructure to document and improve student success at a campus and system-level, in particular in online courses. Efforts need to be undertaken to not only identify the hardware and software, but also the human resources and practices as well as data policies to ensure such efforts are beneficial.

5.2   CONSTRUCT FACULTY SUPPORT STRUCTURES

Majority of faculty support is provided at the individual campus level. This is a campus preference as it allows campuses to cater support according to the unique requirements and needs of campus programs, faculty expectations, and student population. Collaboration through the LTDC allows for sharing of a wider pool of expertise among support personnel on the campuses and delivery of better services, but many faculty feel they need more flexibility in their approach to teaching with technology and staff feel that they are challenged in engaging faculty in new System innovation projects due to their many obligations. Additional system-level faculty support planning, recommendations, and resources may assist in providing this flexibility to faculty while providing staff additional guidance in supporting teaching and learning with technology. Planning is a critical part of success and it is suggested here that better planning is needed.

Traditionally, the UWSA Office of Learning Technology Development provides faculty development opportunities through organized events such as LTDC Virtual Showcase, Digital Storytelling Workshop,

ePortfolio Showcase, Second Life Conference and other events. Other professional development opportunities to technology conferences are offered to faculty members such as D2L Fusion, NMC Conference, GLS and Distance Education Annual Conference, and others. The Curricular Redesign Grant Program (1999-2012) was a great vehicle to encourage and support faculty to investigate pedagogy and emerging technology.

Figure 6 Faculty Showcase

Although these opportunities have been successful, members of the UWS community have alluded to a discontinuity in availability and knowledge among the faculty and staff.

Though these conferences and events are invaluable to those who attend, publicity and visibility of these offerings has been less than adequate. In fact, it has been suggested by the Faculty Survey Task

Force, and reinforced here, that an improvement in the awareness of technologies and support for such technologies is needed in the coming years.

Furthermore, the funding for many of these opportunities has decreased in a time when campus resources are also diminishing leaving faculty and faculty support staff with less support in a time where these opportunities have the upmost importance in advancing the System. UWS is at a time where online learning is argued to be a value of the System and professional development is to help insure effective instruction is the to be the goal for faculty development centers, yet funding had been cut many times at the System and campus level.

Other Systems, such as SUNY, are making significant investments in shared faculty resources at the system-level in developing their learning ecosystem to advance teaching and learning with technology initiatives while UWS has cut Learn@UW resources beyond technology licensing and support allocating larger funding to business and operation services. SUNY Resources is one example of a movement for open sharing of resources. With the Open Education Resources (OER) movement internationally, UWS needs to examine systems, technology and social, to support storage, sharing, remixing, and use of teaching and instructional resources throughout UWS to advance programming in blended and online, while improving the student experience across UWS.

5.3   UNDERSTAND STUDENT NEEDS

Each individual institution served an individual audience and was concerned most with serving this audience. Thus, the planning process, stakeholders, and assessment strategies were very diverse. It is suggested that a more homogenous process across campuses would better serve the UWS. Although there are several efforts in place, a System wide effort to better develop a systematic process and guidelines to understand the needs of students across the System and at individual campuses may increase the opportunity to fulfil the learning technology promise. Notably, there was little discussion of System wide support for students or engagement in the decision-making process, however there were few students engaged in this process.

At the system-level, academic technology exploratory efforts are based on the emerging trends and expressed needs of faculty. Students are involved in pilot projects and their feedback is collected as part of the evaluation of the technology before adoption. Recent technologies include e-Portfolio in D2L, Blackboard Web Conferencing System, Canvas LMS, and Kaltura Media Management System. Furthermore, as part of the LMS Exploratory Effort, a system wide student technology needs and satisfactory survey was conducted in Spring 2014 (See Appendix A).
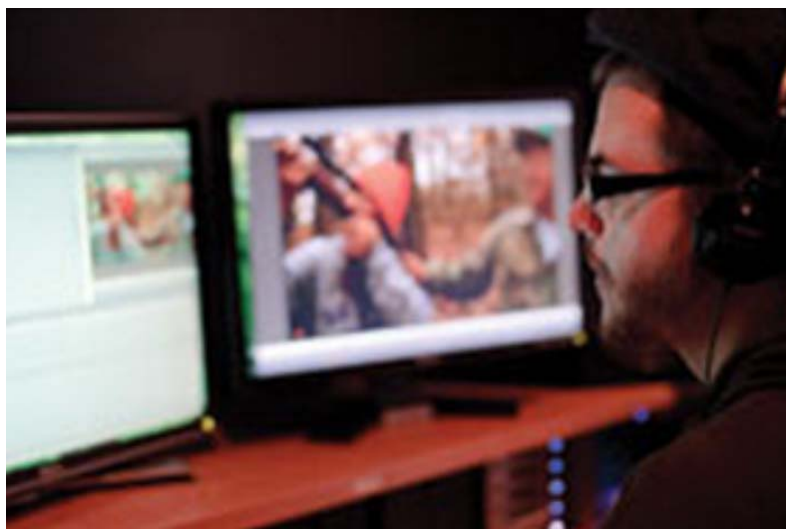
Figure 7 Students and Media, Image attribution: Uwm.edu

Many campuses conduct their own technology related survey on a regular basis to monitor student needs and plan for support accordingly, and some campuses participate in the Educause ECAR annual student technology survey. The reports allow for a good comparison of the national trend with UW campuses collectively and individually, which provides a current understanding of students' instructional and non-instructional needs. However, there is little system-level effort to interpret these reports in the contexts of UWS priorities. Further support for the current work along with a new plan for a concerted effort to gauge the current and future academic technology needs for student learning for the entire System is necessary. Student needs should be, in part, driving planning and investments in the UWS learning ecosystem. This information would not only be pertinent to the System but would also drive decisions at the campus level.

5.4   DEVELOP A UW SYSTEM COMMUNITY

The UWSA Office of Learning Technology has been providing the leadership and resources to foster the collaborative efforts among campuses to advance teaching and learning through the use of technology for many years, yet additional resources are needed to build collaborative opportunities for campuses to work together tackling key issues in learning technologies, such as accessibility, and exploring new and innovative pedagogical practices.

The Learning Technology Development Council (LTDC) was formed in 1999. This entity consists of learning technology representatives appointed by the provost of each campus. However, very few faculty or instructors are included as members the UWS LTDC limiting the diversity of the group and diffusion of knowledge among faculty. Further can be done to recruit faculty to become active participants in LTDC happenings.

The UWS Curricular Grant & Emerging Technology grants (see Appendix A) had been an effective vehicle for collaborations among UW campuses. These grant opportunities promote the awareness and interest in faculty and instructional staff in emerging technology, provide support resources to experiment with technology, and opportunities to share best practices. Some UWS institutions gained national visibility through these initiatives, yet there was little notability in UWS press to better promote these efforts. Furthermore, these grant efforts are all but non-existent at this point diminishing campus collaborations on such initiatives.

The LTDC continues to strive for excellence by leveraging expertise among the campuses through regular communication via email lists, at monthly meetings, and collaborative technologies, yet it is clear that more innovative strategic communication resources and designated staff or efforts are need to support such an important aspect of our digital futures. Some expressed a lack of awareness of LTDC opportunities, while others desired greater recommendations for sharing of resources as well as tips or strategies for communication with all audience members and stakeholders.

The LTDC currently participates actively in UWS sponsored events such as the Presidential Summits, OPID conference, D2L Ignite User Forum. However, there was notable concerns revealed at the Summit regarding the OPID and LTDC divide as historical or arbitrary at this time. Since all teaching and learning is touched by technology in this decade and indefinitely in the future, a bridge and blend of the two divisions should be strategically explored.

A further investment in the UWS Office of Learning Technology including greater incentives for campus level staff and faculty, additional resources for communication and System relations around learning technologies, and revitalized grant opportunities for emerging technology and curricular redesign should be explored. Without these key components, efforts are devalued and not having the greatest impact possible to guide our future efforts.

Moving beyond UWS and LTDC, there is an opportunity for UW campuses to come together and serve the population of Wisconsin as a whole through an array of blended and online programming. Many students want an easy efficient way to move through their degree progress without delays in waiting to take classes or having their own obligations slow their progress. By further examining a system-wide online course delivery systems, such as the Virtual Education Delivery System at CCCOnline, students can complete their programs by taking mediated courses at an array of UW campuses (e.g,, SUNY Degree). Furthermore, UWS could explore shared and articulated credentials with other Systems (e.g., GeorgiaOnMyLine) and beyond state borders (e.g. Great Plains Idea).

5.5   IDENTIFY GUIDELINES AND PRACTICES

Many expressed the need for UWS to provide guidelines and practices to inform their campus policies and services. Specific areas in which campuses identified a need for guidance is in data planning, intellectual property, accessibility of learning technologies, LMS, and engaging faculty.

As we move into the age of learning analytics and big data, campuses are looking for strategic guidance in data planning. Specifically, some questions posed included where is teaching and learning data being stored, how can it be accessed and by who, what considerations should be made regarding data integrity and ethics, what data is available, how can data be used to drive programming decisions affected by learning technologies (i.e., online learning, advising), and so forth. System efforts to identify practices and processed while sharing them with campuses as potential recommendations would be most helpful.

With increase in opportunities for programs in online learning, campuses are looking to make decisions and policies regarding intellectual property and copyright, while looking to ensure access, including accessibility, for all their students. Many campuses do not have the expertise on campus regarding these issues in relationship to digital learning. Campuses are looking to the UWS to harness System and national expertise to better inform learning technology practices.

Although Learn@UW Executive Committee has undertaken efforts in surveying instructors and students to better understand their current behavior and use of technologies as well as gauge their future needs, many look for additional translation of these findings into campus recommendations, including considerations in strategic planning and implementation of effective practices in learning and academic technologies.

6   CONCLUSION

Overall, it is clear that each campus is committed to leveraging learning technology to ensure student success. In reviewing the findings of the Roadmap Task Force in an effort to develop a Roadmap vision, it is evident that there is concern across the System not only about technology, but also for social

processes beyond the technology to assist campuses in ensuring quality of teaching and learning in implementing/diffusing technology. As seen in the California State example leading to the Academic Technology Assessment Framework (ATAF), technology is not just about the technology itself, but about an array of needs that need to be identified and addressed, including the educational practice, support structures, and assessment.

Currently, much of the budget goes to support the System wide technology infrastructure and direct support for this infrastructure, but there is diminished opportunity and fewer resources to develop processes and practices surrounding the technologies to ensure they are being appropriately leveraged. It is clear that faculty and staff appreciate the efficiency and consistency offered by a single LMS, yet the UWS has not had the occasion to fully take advantage of the shared knowledge and expertise surrounding the LMS and new and emerging forms of teaching with technology. Although many UW campuses identify with the unique value that they bring to the System based on their students, there is great prospect for the maximizing the value of resources based on the similarities in students and faculty across UWS.

To ensure success in navigating the roadmapping process it is very evident that the most important first step is to engage key stakeholders, such as members of University of Wisconsin System Administration (UWSA), campus Provosts, and the Common Systems Review Group (CSRG) to name a few. It is important also to gather feedback from campus stakeholders in order to bring forward the voices of faculty and students. Once key stakeholders are engaged and objectives determined, then a feasibility study that delves deeper into the building of the Roadmap should be undertaken.

One key aspect of the Roadmap is that it not specify technologies, services, and tools, rather the roadmap should be a plan that is flexible and poised to react to environmental changes and provide guidance in determining the needs to be met. The Roadmap should contribute to the framework for prioritizing strategic directions to pursue. Finally, a realistic timeline would need to be developed for implementation of the roadmap.

A learning technology "master plan" to guide UWS and campus decision making does not currently exist. In order to better guide future decisions, it must be a priority to base development considerations on evidence that espouses the value of UWS and that champions academic technology for teaching and learning to ultimately support the achievement of student learning outcomes.

7   APPENDIX A: RESOURCES

Common Systems Roadmap |
http://www.uwsa.edu/olit/cio/ITplans/commonsystemsroadmapfeb2013.pdf

Environmental Scan by Mindwires |
https://www.dropbox.com/s/q2blqncf0wnh4tg/Final%20Environmental%20Scan.pdf

LMS Exploratory results |
http://www.uwsa.edu/olit/luwexec/projects/LMS%20Task%20Force%20Report%202012%20FINAL.pdf

LTDC Events |
http://www.wisconsin.edu/olit/ltdc/events/

UWS Curricular Grant & Emerging Technology Grants |
http://www.uwsa.edu/olit/ltdc/grants/

8   APPENDIX B: TASK FORCE MEMBERS AND RESEARCHERS

Tanya Joosten (Chair):

Tanya Joosten is the Director of eLearning Research and Development at the University of Wisconsin-Milwaukee (UWM) where she works to guide strategic eLearning efforts at the campus, state, and national levels, to develop innovative programming for the UWM campus, and to lead a team of researchers to advance the field of blended and online learning.

Tanya has been recognized by the Sloan-Consortium as a fellow for her work in blended and online learning. She is a teacher of tech-enhanced, blended, and online courses in the field of communication for over 15 years, including online courses in human communication and technology and organizational communication at UWM, published author in communication technology in teaching and learning, including her recent book, *Social Media for Educators*, a social scientist researching technology-mediated pedagogy and its impact on student outcomes, and a well-known speaker and consultant.

As a practitioner, Tanya Joosten led efforts in faculty development for online and blended teaching, including the development of UWM's online faculty development program, supervised administration of the campus LMS, including faculty training and support, and led campus efforts for certification, recognition, and engagement initiatives for blended and online teaching. She has worked together with the Provost's office and school and colleges to develop over 40 blended and online degree programs at UWM over the last decade.

Tanya Joosten's efforts have been highlighted in many national news and media outlets, including the Chronicle of Higher Education and have led to her involvement in campus-wide, national, and international planning for the future of education, including the NMC Horizon Project Higher Ed Advisory Board.

Rovy Branon:

Rovy Branon is the associate dean for online learning and the executive director of the Academic Advanced Distributed Learning Co-Lab at the University of Wisconsin-Extension in Madison. He is also an adjunct faculty member in the Instructional Systems Technology department at Indiana University Bloomington. Prior to his appointment with UW, he led an instructional design team at Eli Lilly and Company in Indianapolis. He has more than twenty years of instructional media and learning technology development experience in corporate, higher education, and not-for-profit settings. Rovy holds a Ph.D. from Indiana University with a major in Instructional Systems Technology and a minor in Human-computer Interaction. He is a regular speaker at many training and education conferences covering a range of topics including: learning technology, training organization effectiveness, and instructional design trends.

Bob Hoar:

Robert (Bob) Hoar is a professor of Mathematics and is the Director of the Institute for Innovation in Undergraduate Research and Learning at the University of Wisconsin – La Crosse. Dr. Hoar earned his Ph.D. and M.S. in Mathematics at Montana State University, and two B.S. degrees, in Mathematics and in Computer Science, from the Montana College of Mineral Science and Technology. In 2003-04, he served as Chair of the Mathematics and Computer Science Division of the Council on Undergraduate Research (CUR), after serving for several years as a Councilor in the division.

Dr. Hoar has led several projects that have developed web-based computational tools and related educational materials. In one project, he created an interface between the web and a powerful mathematics software package. He also developed a set of computational tools utilizing this interface. These tools have since been used in many courses from remedial to advanced levels.

In another project, Dr. Hoar supervised the development, by his students, of a web-based "expert" system. For this UWS-funded project, the students developed an adaptive system to aid remedial mathematics students. This expert system tailors feedback and problem sequencing to the performance of the individual.

Dr. Hoar served as Principal Investigator on an NSF funded multi-campus proof-of-concept project in the University of Wisconsin System entitled Applying Advanced Distributed Teaching and Learning to Pre-Calculus Mathematics. The project has evolved to involve faculty led student teams from around the UW-System. The teams are creating Flash and podcast enhanced Learning Objects that present materials for students who are studying math and science in preparation for the Praxis exam (a state licensure content exam for prospective teachers).

Renee Pfieffer-Lucket:

Renee leads the central IT team serving the instructional technology and training needs of the University of Wisconsin-Whitewater campus. She currently manages the Learning Technology Center (LTC) and iCIT Training and Technology Advancement, and also consult campus on lab and classroom modernization projects.

Prior to joining the campus's central IT group, Renee was a full-time Lecturer in the College of Business and Economics, and taught face-to-face, hybrid, and online/blended course formats from 2003 until 2010. She has presented extensively at national and international conferences on the topics of electronic commerce, marketing, instructional technologies, and teaching best practices. Recognized in 2009 as the recipient of the UW-Whitewater Academic Staff Excellence award for Instructional Staff for her contributions to students and to the community, Renee is also the recipient of a 2012 EDUCAUSE Jane N. Ryland Fellowship.

Renee is the past Chair of the UWS Learning Technology Development Council (LTDC) Executive Committee, currently serves on the LEARN@UW Executive Committee, and is an active member of the Roadmap Task Force and the LMS Continuous Release Task Force. Prior to her career in higher education, she enjoyed more than 15 years of business experience working for public and private companies including Heidrick & Struggles, Arthur Andersen, and Arrow Companies. She earned her BA from Ripon College and an MBA from UW-Whitewater.

Lorna Wong:

Lorna is the Director of Learning Technology Development at University of Wisconsin System Administration. She oversees the e-learning systems at UW campuses, including the management of Desire2Learn, the common LMS used by all 26 UW campuses. She directs and manages collaborative efforts in learning technology initiatives through pilot projects, grants and awards. She the liaison of all learning technology support units of the UW campuses through the UWS entity called Learning Technology Development Council. She guides and recommends common e-learning technology decisions and direction for UWS through direct interaction with vendors and upper administration.

Researcher Assistants

Rachel Cusatis:

Rachel is a research assistant at the University of Wisconsin-Milwaukee for eLearning Research and Development where she engages in collaborative research on the implementation of technological tools in online and blended courses. She is a doctoral student in Sociology and holds a research assistantship with the Center for Applied Behavioral Health Research (CABHR) where she works on the management and analysis of epidemiological, intervention, and clinical data. Prior to her research assistant positions, Rachel enjoyed three years of experience as a teaching assistant for the sociology department's graduate statistics courses in addition to the undergraduate research methodology and introductory courses. She was privileged to teach in both face-to-face and online formats. Twice, Rachel received the UW-Milwaukee Graduate Chancellor's Award. She earned her BA from UW-Madison and her MA from UW-Milwaukee.

Lindsey Harness:

Lindsey Harness is a research assistant at the University of Wisconsin-Milwaukee for eLearning Research and Development where she conducts qualitative research on technology innovation initiatives and online teaching and learning. She is a doctoral candidate in Communication and her research interests focus on critically analyzing the rhetorical interdependence between technology (especially social media) and identity construction, particularly for marginalized populations during times of social crises. Previously, she was a full-time Learning Technology Consultant at UWM's Learning Technology Center where she assists faculty and staff in developing sound pedagogical practices for using learning technologies in educational contexts. This position contributes to her understanding regarding the influence of technology on personal, professional, and civic engagement. She has taught communication courses at Missouri State University, Carroll College, and University of Wisconsin-Milwaukee and has several publications regarding different aspects of technology.

Consultants

See Mindwires.com