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THE UNIVERSITY OF BRITISH COLUMBIA

UBC's Learning Technology Ecosystem:
Developing a Shared Vision, Blueprint & Roadmap

Highlights: June 2015

This report presents highlights from the findings and recommendations from an extensive dialogue with faculty, students and staff about the learning technology ecosystem, conducted during the fall of 2014. The process was informed by a spring 2014 community consultation and results from the ECAR Survey of Faculty & IT. Ongoing discussions are planned on both campuses.

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Executive Summary

Teaching and learning is increasingly enabled by and dependent upon technology. A Learning Technology Ecosystem project, sponsored jointly by the provosts of the Vancouver and Okanagan campuses of the University of British Columbia, was launched in September 2014. The project began with an assessment of the current state of learning technology at UBC, based on results of faculty and student surveys, discussions with faculty members and interviews with learning technology leaders at other academic institutions. A small Working Group developed a vision and principles for decision making, identified and prioritized functional and service gaps and created a high level roadmap for the evolution of the learning technology ecosystem at UBC.

Inputs to the project identified the need for more prominent academic leadership in the area of learning technologies, as well as significant shortcomings in the current governance structure. Proposed new governance structures introduce significant agility, defined processes for faculty member and student input, as well as clarity about how decisions are made, and how learning technology governance articulates with academic strategy and other governance structures at UBC.

The functional footprint from a single learning management system has decreased over time, with the addition of tools that provide additional capability or flexibility. The three year roadmap has confirmed this general direction, with a decision about the future of the current learning management system required by the end of 2016. The immediate focus for 2015 is to enhance tool integrations, implement better communication and collaboration tools and increase faculty and student engagement. We will inventory and measure all tools against the principles developed and introduce new governance structures.

UBC will need to continue to invest in learning technologies, to ensure that faculty at UBC have the resources they need for teaching, to meet student expectations, and to keep up with the pace of change in learning technology. We expect that much of the additional work identified in this paper will be accomplished through a reallocation of existing resources. However, several significant investment projects have been identified for the next three years, including the implementation of learning analytics, additional bandwidth (particularly at the Okanagan campus), expanded and updated classroom technologies and a digital repository for teaching content. A decision point at the end of 2016 on the continuation (or change) of the current LMS platform may have associated transition costs.

A note about the word ecosystem

The word “ecosystem” was deliberately used throughout this project, and its use was supported by the Working Group. A learning technology ecosystem represents faculty, staff and students interacting with their learning technology environment, composed of tools and services. There are dependencies in this ecosystem; between technologies, between technologies and services but also between users, technologies and services. The ecosystem is self-organizing, dynamic, constantly changing and evolving. Technologies are birthed, and they also are removed as new ones take their place.

I Background

Consultations in the spring of 2014 confirmed the results of the ECAR Study of Faculty and IT conducted in March 2014. Both indicated the need for a strategic vision for learning technology, more agility and responsiveness in governance, and a stronger academic voice in decision-making, while re-affirming the critical importance of learning technologies in support of instruction. In September 2014, a small Working Group was formed to develop a shared vision and principles for decision-making, a blueprint for the learning technology ecosystem, and a roadmap for achieving it.

1.1 Current State Assessment

The first step in this project was to gather data from a number of disparate sources. We analyzed all of the available information and made an assessment of the current state of learning technology at UBC,

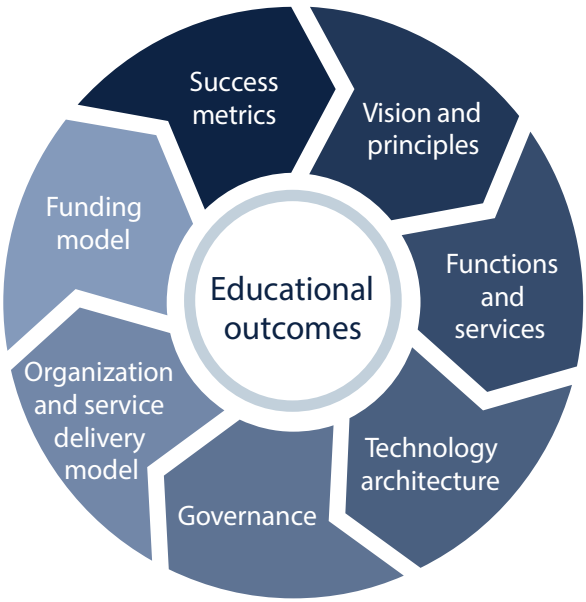


Figure 1. Process Framework

Educational outcomes. Positive student outcomes can be enhanced only if learning technology decisions are informed by pedagogy.

Vision and principles. Faculty need greater clarity about direction so all activities are aligned.

Functions and services. Significant gaps in ***Connect*** functionality exist, and closer alignment between support services and faculty needs is required.

Technology architecture. Both faculty and students demand increased bandwidth and system responsiveness.

Governance. We need greater agility in LT decision making, and clarity about how decisions are made.

Organization and service delivery model. The role of the LT Hub and Faculties in providing service, from development through instructional support, needs clarification.

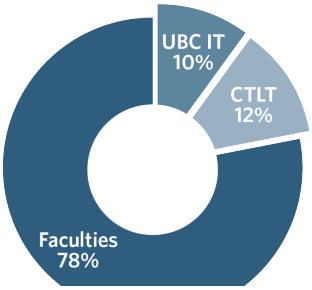
Funding model. A clearly defined framework for funding allocations will improve transparency and understanding.

Success metrics. There is a need to measure success against defined goals; current metrics focus on system performance and tool use.

later validated by the Working Group, using the process framework shown in Figure

1.2 Total Current Cost of Ownership

At UBC, some learning technology service and support activities are centralized and some are contextualized to the local disciplinary environment. Central costs were calculated based on budget information; Faculty costs were estimated based on publicly available information.



Total annual costs for learning tools were estimated at $9.8 million, $8 million of which is spent in Faculties. Costs are largely salaries, as opposed to licenses and infrastructure.

Figure 2. Distribution of current LT spend

II Vision and Principles

Feedback from faculty indicated a lack of clarity around the overall strategic aims and direction for LT. The Working Group developed a vision statement for the LT ecosystem, as well as principles for decision-making. Both were unanimously endorsed by the Steering Committee.

VISION

An ecosystem that empowers faculty and students to achieve their teaching and learning goals by providing robust, dynamic and pedagogically sound tools and services that are time-efficient to learn and use.

PRINCIPLES

Pedagogically sound	Derived from evidence-based teaching and learning practices
Robust	Reliable and scalable
Adaptable	Flexible to different learning contexts, agile and supportive of innovation
Intuitive	Simple and easy to learn and use, facilitating a coherent user experience
Cost effective	Supportable with reach and transferability across Faculties, disciplines and users
Collaboration-aligned	Enabling of interaction and relationship building

Figure 3. Vision and Principles

III Functions

Having developed a vision and principles, the Working Group then focused attention on functions supported by the LT ecosystem. While many teaching and learning functions can be supported through the use of technology, the available technology does not always meet intended pedagogical outcomes.

Working group members identified functional gaps in the LT ecosystem, along with their relative importance. A subsequent (informal) feasibility assessment was based on currently available functionality, the effort required to fill identified gaps, as well as costs (if any). Enhanced integrations,

communication and collaboration tools, cohort portals and learning outcomes assessment tools require immediate focus.

IV Services

Generally speaking, new technologies follow a predictable lifecycle. Each phase of the technology lifecycle is characterized by unique goals and service provision. Members of the Working Group identified both phase-specific and general support services requirements, determining those which required the most improvement and prioritizing them according to their relative importance.

The assessment of faculty and student engagement with LT tools and the impact of those tools on teaching and learning was considered the highest priority. Both faculty and students want greater involvement in all aspects of learning technology, and faculty want to learn from their peers.

VI Governance

Faculty highlighted an imperative for academic leadership and the need to clearly articulate how academic strategy influences decisions. Faculty input into LT governance was limited; the student voice was largely absent. The decision-making processes were seen as opaque and not agile, and it was not clear how LT governance articulated with IT governance, particularly for large investment decisions. The proposed new governance structure that emerged from the discussions in the Working Group sessions and Steering Committee meetings seeks to resolve these shortfalls.

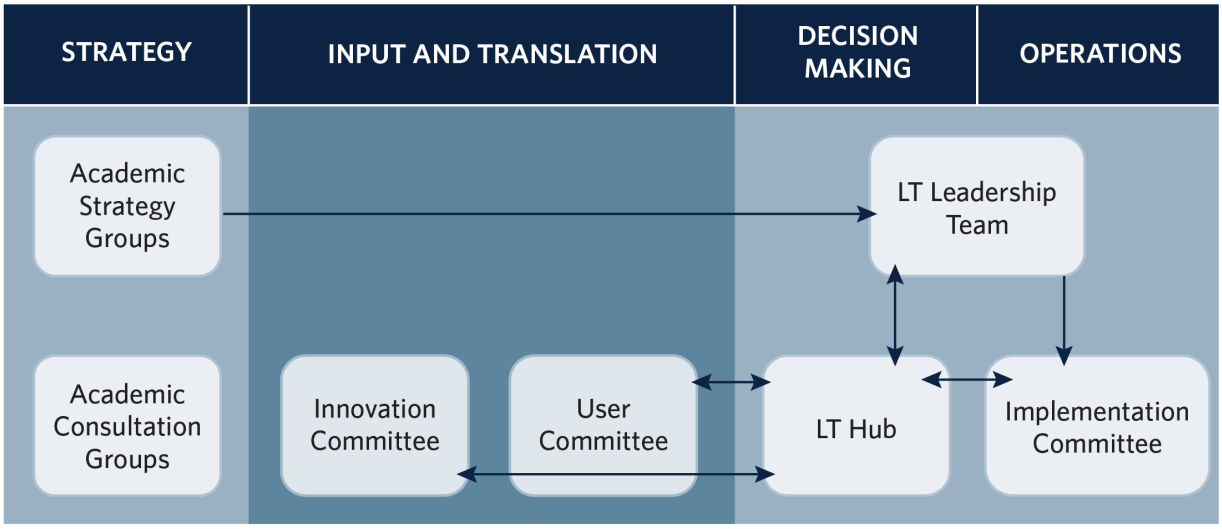


Figure 4. Proposed Governance Structure

6.1 Strategy

Priorities for learning technology are dependent on academic strategy. Academic strategy groups will prioritize the initiatives that require learning technology support and investment.

6.2 Input and Translation

The Innovation and User Committees will comprise of faculty, students and pedagogy experts. The Innovation Committee will focus on identifying, prioritizing and evaluating the next-generation tools that may form part of a future ecosystem; the User Committee on providing feedback and direction to improve and enhance the current set of tools in the LT ecosystem.

6.3 Decision Making and Operations

The Implementation Committee consists of senior learning technology personnel in each of the Faculties, CTL, as well as representatives of CTLT and UBC IT. Members of this committee gather input from faculty and students, as well as from the other LT Committees. Decisions about operational priorities and implementations of new systems and services are the Committee's remit.

The Learning Technology Hub has oversight of operational activities, working closely with faculty, staff and all LT committees and is chaired by the Academic Director of CTLT. The CIO and two senior staff from CTLT and UBC IT with oversight for learning technology operations are members of the Hub.

Overall accountability for learning technology rests with the LT Leadership Team, chaired by the Vice-Provost Academic Affairs, comprised of a small number of senior academic leaders and student representatives from both campuses, as well as the Academic Director of CTLT and CIO. The Committee will have the authority to approve spending within a specified annual budget envelope. For significant investments, this group makes recommendations to the Executive and to the Board.

VII Roadmap and Success Metrics

The roadmap for learning technology is, in part, contingent on how the LMS (currently ***Connect***) fits into the ecosystem. The number of available tools integrated with ***Connect*** has increased significantly over the last few years; these tools provide additional capability and/or flexibility. As a result, the functional footprint of the LMS is shrinking over time (though the footprint of the entire ecosystem is arguably increasing). Moving forward, we see no deviation from this general trend.

7.1 Roadmap

The roadmap for the next three years revolves around a platform decision point. Through the end of 2015 priority functions and services will be implemented, as will new governance structures. In 2016, efforts will shift to collecting data in support of a platform selection process. Shaping and strengthening the ecosystem will be the focus of 2017, along with realignment of central services (if needed).

The roadmap activities represent a deliberate combination of actions and planning activities. A significant number of actions will be undertaken with reallocation and realignment of existing resources, with a small number of cases for substantial investment are discussed in greater detail in Section VIII.

7.2 Success Metrics

Metrics for success allow evaluation of progress together with an assessment of effectiveness of particular functionality or services within the ecosystem.

CATEGORY	METRIC	MEASUREMENT APPROACH	GUIDING PRINCIPLES: Pedagogically sound	Robust	Adaptable	Intuitive	Cost effective	Collaboration aligned
Functionality for teaching and learning	Student outcomes	» Comparison of outcomes before and after use of LT (discipline-specific) » Student engagement (analytics)	Primary			Primary		Primary
	Faculty / student satisfaction	» Subjective faculty / student user assessment (survey)	Applicable		Applicable	Applicable	Primary	Primary
	Tool usage	» Tool reach / #users (LMS / LTES data) » Level of usage by user (LMS / LTES data)	Primary	Primary	Primary	Applicable	Applicable	Primary
Service and support	Faculty / student satisfaction with support services	» Subjective faculty / student user assessment (survey)		Primary		Applicable	Primary	
System performance	Uptime for Connect (LT Tools)	» System availability less scheduled down time (LMS / LTES data collation)		Primary			Primary	
	Page load	» Minimum, maximum and average page load times of 5 most frequently used functionalities (LMS / LTES data)		Primary			Primary	

Primary Applicable

Table 1. Success Metrics

VIII Resource Implications

In order to ensure that faculty at UBC have the resources they need for teaching, to meet student and employer expectations with respect to proficiency in the use of technology, and to keep up with the pace of change in learning technology, it is imperative for UBC to continue to make investments in this area. However, in the current budget climate, it is also important to consider whether the tools and services provided are the most cost effective, and what can be accomplished with a reallocation of current capacity. Items which are likely to require a substantive investment, and thus a formal business case, are identified below.

8.1 Learning analytics

The strategic collection, use, analysis and presentation of data about learners, context, and their interaction with content will allow us to optimize learning and the environment in which it occurs, and

to create predictive models so we can identify conditions for student success. UBC is significantly behind comparator institutions in this area.

8.2 Additional bandwidth

Increased multiple device ownership and ubiquitous use of online resources in formal and informal settings place significant demands on the IT infrastructure. Wireless networks, particularly at UBC's Okanagan campus, require substantial improvement in order to meet teaching needs.

8.3 Expanded and updated classroom technologies

The conversion of existing classroom technology from analogue to digital won't be complete until 2020 (when initial conversions will already be eight years out of date). Faculty in the Working Group said they wanted to be able to teach collaboratively with faculty at other UBC campuses, as well as at other institutions. Additional investment is required to make this possible.

8.4 Standalone digital repository

Faculty members need a place to store, curate and share (if desired) their teaching content, with their colleagues, with faculty in another discipline, or even another campus. This is particularly critical in the absence of a monolithic LMS (where much of the content is now stored). An enterprise repository would be more effective for analytics and more efficient for faculty.

Next Steps

This project confirmed a shift from a single (monolithic) LMS to an integrated LT ecosystem, with a clear decision point at the end of 2016 to confirm implications for the ***Connect*** license. Careful attention must be given to implications of the transition, to ensure that any additional costs are justified and managed.

Planning and actions identified for addressing priority gaps in functionality and services have been initiated. The transition to a new, more agile governance model has started. In the latter part of 2015, all current LT tools will be measured against the principles, and a lifecycle management process will be formalized. An evaluation of analytics will continue, with a clear investment case to be made for the next budget cycle.

The outputs represented in this document have been presented to a number of academic leadership committees at UBC (both Point Grey and Okanagan campuses), to some of the committees in the current governance structure, as well as to UBC community members. Additional consultations are planned on both campuses to ensure that no significant considerations have been omitted. Thus far, all groups have confirmed the general directions represented in this report.