



ECAR Study of Faculty & Technology, 2014

The University of British Columbia Benchmarking Summary Report

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Technology is a critical enabler of teaching, learning, and research. In March 2014, UBC participated in the Educause Center for Analysis and Research (ECAR) study of Faculty and IT, to explore use of technology as it relates to the faculty role.

Overall, 152 institutions participated in this survey, with over 17,000 responses received. 471 UBC (Vancouver campus) faculty responded to the survey, for a 15.4% response rate (estimated margin of error $\pm 4.2\%$). 439 faculty answered questions related to technology for teaching and learning; 240 elected questions related to research and scholarship. 296 completed the 10 minute survey, while 175 chose the 20 minute version.

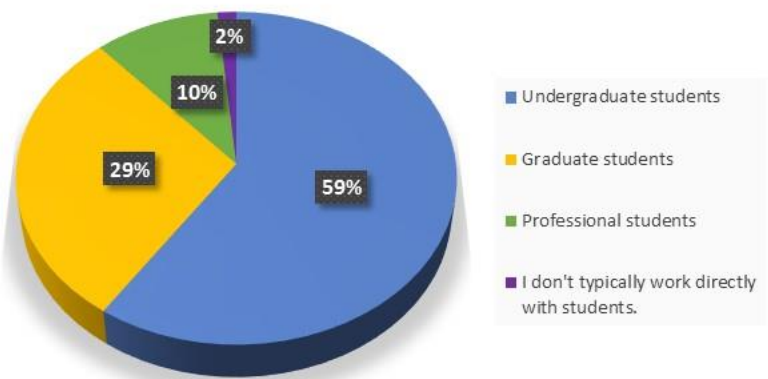
UBC results are benchmarked against peer institutions (Carnegie classification Public DR) and all institutions that participated in the survey (ALL).

DEMOGRAPHICS

CHARACTERISTICS

- ▶ 85% full-time
- ▶ 15 years of experience
- ▶ 67% tenured
- ▶ 20% tenure track
- ▶ 69% professorial rank
- ▶ 23% instructor rank
- ▶ 50:50 female:male

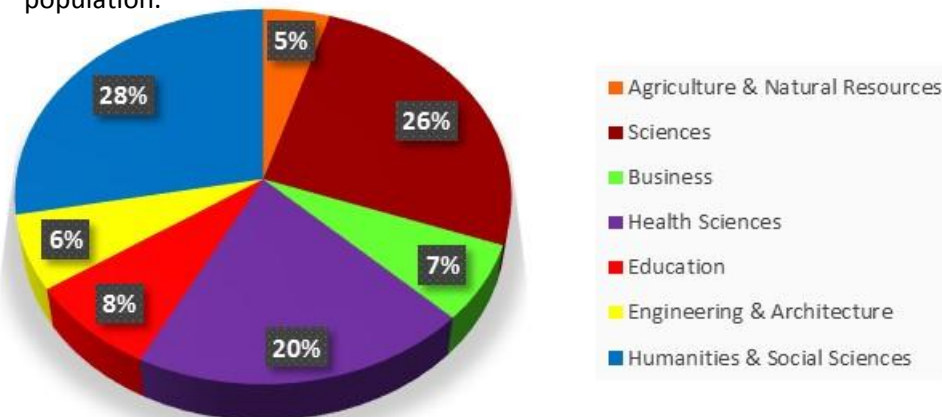
UBC faculty primarily work with:



UBC faculty participants are more likely to be full-time (85%) than all faculty who participated in this survey (71%), but similar to faculty at DR institutions (83%). More non-tenured faculty at other institutions (32%) than at UBC (13%) participated in this survey. All other demographic characteristics are remarkably similar.

DISCIPLINE AREA

UBC faculty survey participants span all discipline areas across campus, mapping closely to the campus distribution. These results give us confidence that the respondent sample is representative of the population.



TECHNOLOGY ADOPTION & USE

Consistent with peers, UBC faculty are always connected and use technology frequently. Sixty percent are generally pleased with classroom based technology, less so with technology for research (44%), and physical (34%) as well as online (31%) collaboration spaces.

PERCEPTIONS

Twenty three percent of faculty believe that UBC has a clear strategy for online learning, compared to 37% at all other institutions. Only 14% believe that UBC has an agile approach to IT infrastructure. Most (78%) agree that UBC takes sufficient measures to keep student data secure.

One third of UBC faculty believe that online learning helps students learn more effectively and will lead to pedagogical breakthroughs. Seventy-one percent believe it makes higher education more accessible.

Faculty were asked to identify one thing that UBC could do with technology to better facilitate or support their faculty role. Almost all faculty responded to this question, with roughly one quarter related directly to the operation, the functionality and/or the viability of **Connect**, UBC's learning management system. Other comments ranged widely from support to intellectual property. Some of these comments appear in the Table below.

Table 1. In their own words

On strategy	<i>Adopt a single, campus-wide 'umbrella' strategy that sets out the institutions long and short term vision, goals and objectives for embracing and deploying technology to support local and distance learning.</i>
On Connect	<i>Improve the ease of use of CONNECT...the ham-handed interface is like trying to eat dinner while wearing hockey goalie equipment</i>
On the learning ecosystem	<i>More agile and responsive technology that meets specific needs of faculty, rather than a one-size fits all approach.</i>
On support	<i>When things don't work we have to call a central number and wait on hold for 20 minutes only to be given a 'ticket' and then asked to wait some more... I do not have time to sit on hold, let alone wait for hours/days for a response.</i>
On information technology	<i>Remember that IT is to support the academic mission, it is not a mission in itself.</i>
On cloud-based storage	<i>The high performance computing situation at UBC is a disgrace for such a research-oriented university. Initiatives at the central level on things like drop-box, HPC, cloud computing are years behind what is happening in the world and with the embedded staff.</i>

TECHNOLOGY FOR TEACHING & LEARNING

UBC faculty are more likely than their peers to agree that students are prepared to use institution specific and basic technology. However, they are less certain about student ability to transfer that knowledge. As one faculty member said,

My guess is that students could be better at using technology as a tool to solve a specific problem. I think they have trouble imagining alternative ways of using technology e.g. most cell phones have cameras and video capabilities. Students use these to take pictures of board notes and sometimes to record parts of lectures but they often don't think of using their phones as tools to record observations as part of an experiment in the lab.

UBC faculty believe they would be more effective if they were better skilled at integrating the LMS, online collaboration tools, e-books, free web-based content, lecture recordings and games (or simulations). They are less sure about integrating e-portfolios, mobile devices and social media.

PROFESSIONAL DEVELOPMENT

Most faculty want to learn more about effective use of the LMS, other learning technologies such as video and classroom tools. Some faculty members indicated that they would like flexible, personalized support, preferably one-on-one. Many comments related to **Connect** specifically, with one faculty member suggesting that *Training is useless if the LMS is broken, which it is at my institution.*

Faculty want to be trained by professionals, who are able to identify the technologies which have been shown to be effective for student learning. One said it this way:

I would argue that it is two-fold: 1. What is possible? My pedagogical/technological imagination is limited, and I would be interested to know what is even possible to do or not do in the context of my course subjects. 2. What is the evidence? Is there evidence to support better learning outcomes by changing the way classes are taught through integrating technology. If so, what does it suggest are the best ways to use technology?

MOTIVATING FACTORS

Faculty were asked to rank the top three factors that would motivate them to integrate more or better technology into their teaching practices or curriculum. By far, the highest ranked item for all faculty who participated in the survey is:

1. Clear indication / evidence that students would benefit.

Other items are more closely clustered.

2. Release time to design / redesign my courses.
3. Direct assistance from IT staff.
4. Confidence that technology would work the way I planned.

Faculty at peer institutions selected 1, 2 and 4 as the top three motivating factors.

LEARNING ENVIRONMENTS

About half of UBC faculty are satisfied with the variety and reliability of in-classroom equipment. Sixty-one percent are satisfied with ease of use of podium systems; faculty are less satisfied with computers and software available in the classroom. Twenty-six percent are satisfied overall with classroom based technology, and this is consistent with faculty at other institutions.

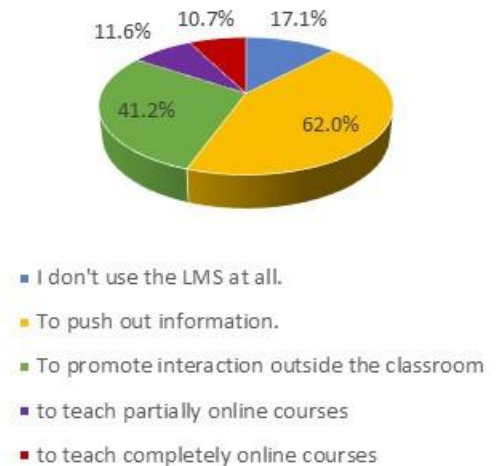
LEARNING MANAGEMENT SYSTEM (LMS)

As at other institutions, most faculty use the LMS to push out information and/or to promote interaction outside of the classroom. Forty-seven percent use it daily, compared to 56% at all institutions.

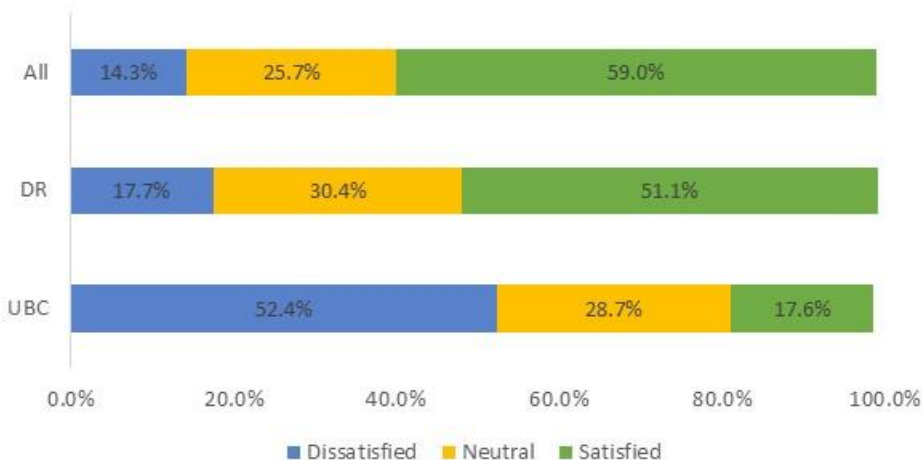
Most UBC faculty report that they use Blackboard (**Connect**). Other learning management systems reported in use at UBC are Moodle, Pearson e-College, Wiki, and a homegrown system.

Forty-four percent believe that the LMS is critical to their teaching, 52% believe it is a useful tool to enhance their teaching, and 48% believe it is useful to enhance student learning. Predictably, UBC faculty are unhappy with the operation and the functionality of UBC's LMS, due in part to its unreliability in the Fall of 2013. This is particularly striking when compared to peer institutions. About half of all participating institutions use Blackboard Learn and 38% of DR institutions do so as well. A recent (May 2014) ECAR paper on the future of the LMS indicated that Blackboard's Learn product holds 42% of current market share.

TYPICAL LMS USE

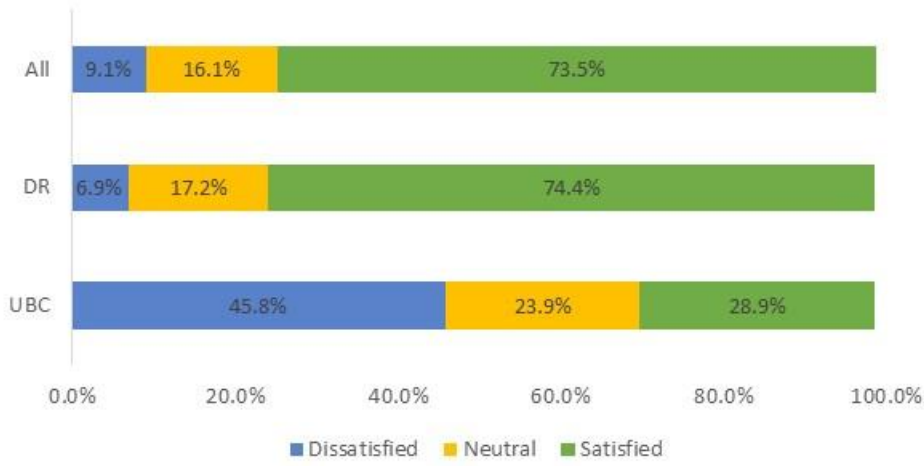


LMS: Overall Satisfaction

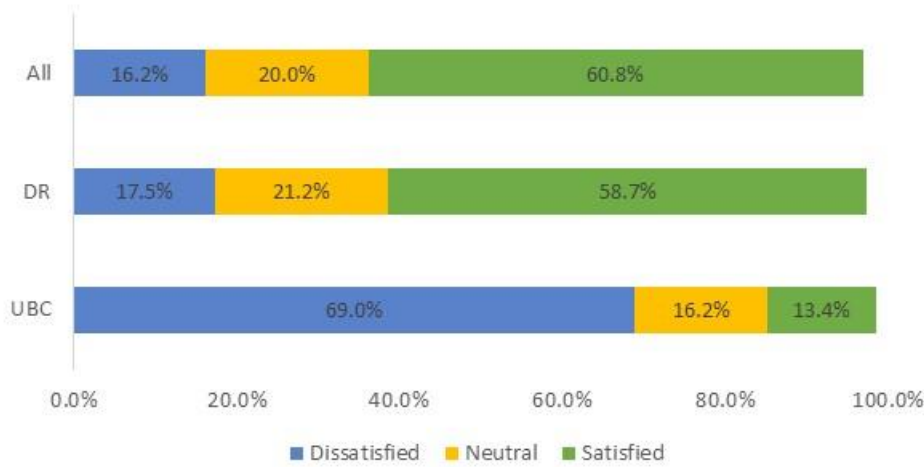


The results show that faculty discontent is most evident in the following three areas:

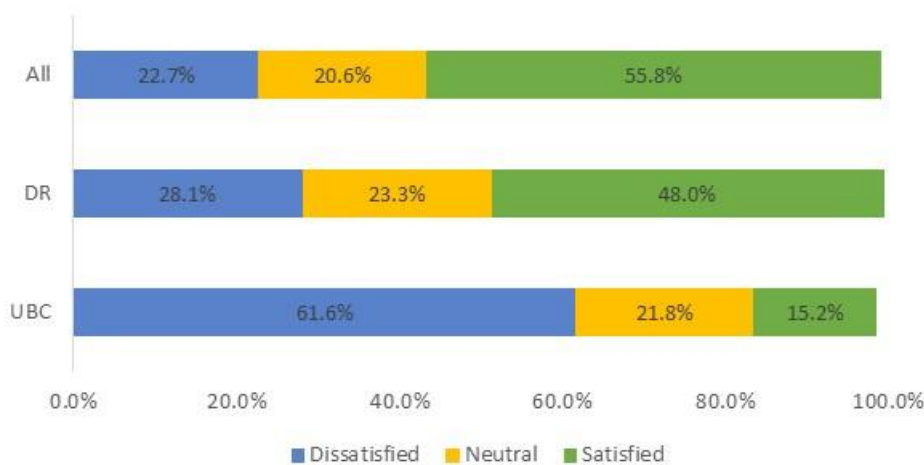
LMS: System Availability



LMS: System Response Time



LMS: Ease of Use



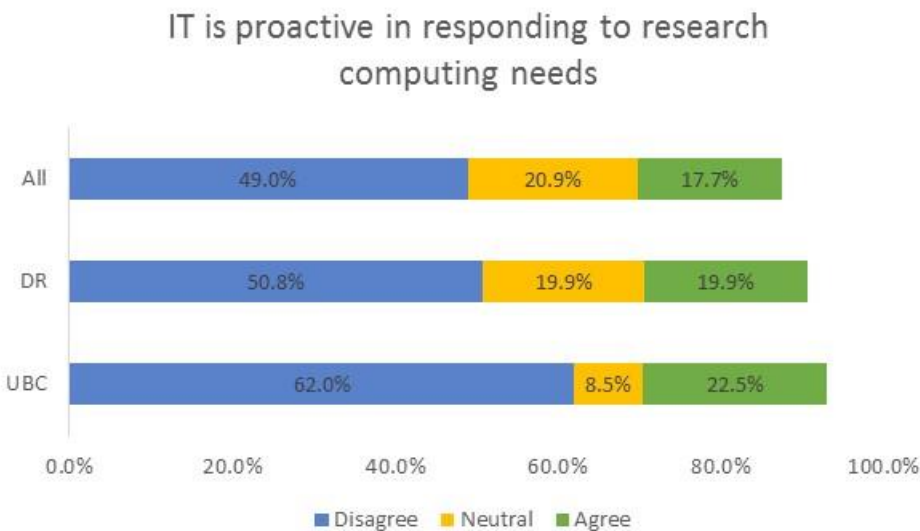
MOBILE DEVICES

More than half of UBC faculty neither discourage nor encourage students to use smartphones, iPads or laptops in class. Forty-six percent believe that the use of mobile devices in class can enhance learning, but 73% believe that in class use can also be distracting. Half of faculty say they would need additional training to incorporate mobile devices into their classes. With respect to the use of mobile devices, UBC results are similar to those at other institutions.

TECHNOLOGY FOR RESEARCH & SCHOLARSHIP

Thirty-six percent of faculty are generally satisfied with UBC research support, compared to 41% at DR Public institutions.

Roughly 30% of faculty conduct data intensive research. Of those 63% report being satisfied with network bandwidth provided and just under half believe there is adequate research data storage.



Thirty-four percent of UBC faculty are generally satisfied with research computing technologies, and this is consistent with other faculty respondents.

CONCLUSION

These survey results are a call to action. There is significant work to be done to ensure that faculty have access to the technology they need; technology that is reliable, easy to use, and well supported.

The fall of 2013 was particularly difficult due to the unreliability of the LMS, as also described in the IT@UBC Self-Study. The LMS is a critical component of the university technology environment, and must work. As suggested in a recent ECAR Research Bulletin on The Learning Management System Evolution:

For many years, the LMS has been an enduring, somewhat underappreciated, learning environment component, but its institutional profile has risen over time. Today, it's an important face for the institution as it evolves into a primary access point for students' course material and interactions. The LMS is poised to play a more visible role in institutional affairs as administrative and academic leaders increasingly factor its integral educational role and real-time student data into emerging educational models, student success initiatives, and institutional objectives. Additionally, as expectations increase for a seamless and rich learning experience that is both platform and device agnostic, the future LMS must be agile, integrated and interoperable. (p. 5)

There is significant work to be done.