2018 UCI eTech Survey Report

The Spring 2018 eTech Survey ran from May 15, 2018 to June 15, 2018. The survey was released to all 27,000 UCI undergraduates. A total of 2,746 responses were received, a response rate of approximately 10% of the undergraduate population.

1. Devices

Thinking of the devices you own, which of the following do you use on campus.

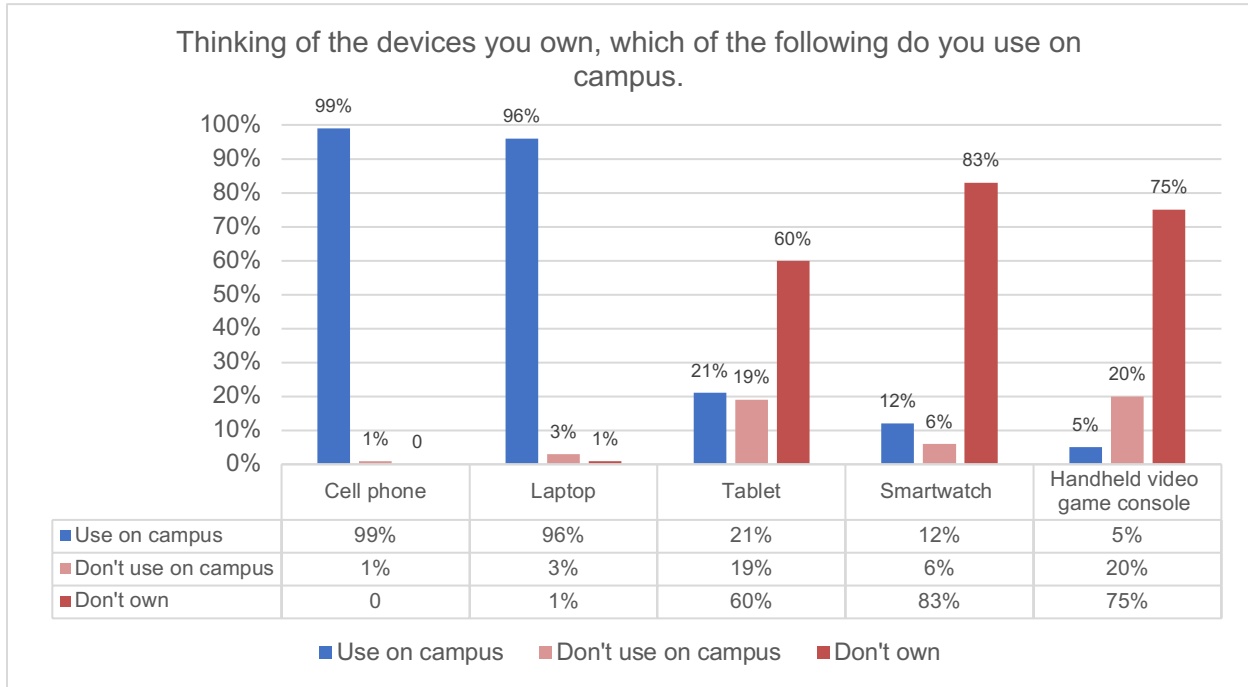|	Cell phone	Laptop	Tablet	Smartwatch	Handheld video game console
Use on campus	99%	96%	21%	12%	5%
Don't use on campus	1%	3%	19%	6%	20%
Don't own	0	1%	60%	83%	75%

Figure 1

Out of the 2,746 students surveyed, 2,707 students reported using a cell phone on campus. The above chart (**Figure 1**) demonstrates the percentage breakdowns of commonly devices used on campus.

Impact:

Cell phone and laptop usage has become nearly ubiquitous. The data suggests the device to student ratio is at least approximately 2:1. This has several implications. First, it may signal an opportunity to shift computer labs and study spaces to be more BYOD-friendly. Second, there are network capacity considerations in current and future spaces. Network density and available bandwidth must be able accommodate the increase in devices per student. Third, the need for adequate power outlets (both AC and USB) to charge devices where feasible. Lastly, communications and web presence must make mobile friendly design a priority for University sites, LMS, and other student services.
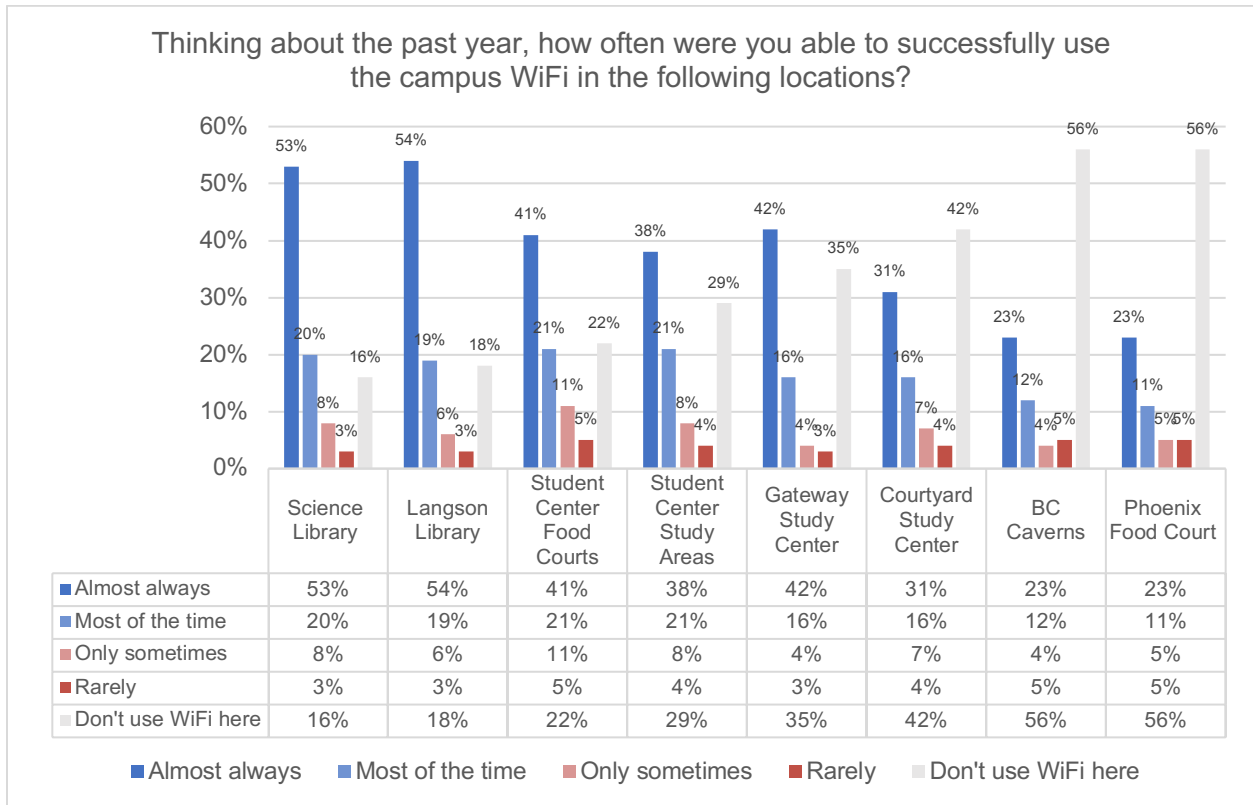
2. WiFi

Thinking about the past year, how often were you able to successfully use the campus WiFi in the following locations?

	Science Library	Langson Library	Student Center Food Courts	Student Center Study Areas	Gateway Study Center	Courtyard Study Center	BC Caverns	Phoenix Food Court
Almost always	53%	54%	41%	38%	42%	31%	23%	23%
Most of the time	20%	19%	21%	21%	16%	16%	12%	11%
Only sometimes	8%	6%	11%	8%	4%	7%	4%	5%
Rarely	3%	3%	5%	4%	3%	4%	5%	5%
Don't use WiFi here	16%	18%	22%	29%	35%	42%	56%	56%

Figure 2

WiFi Trouble Spots

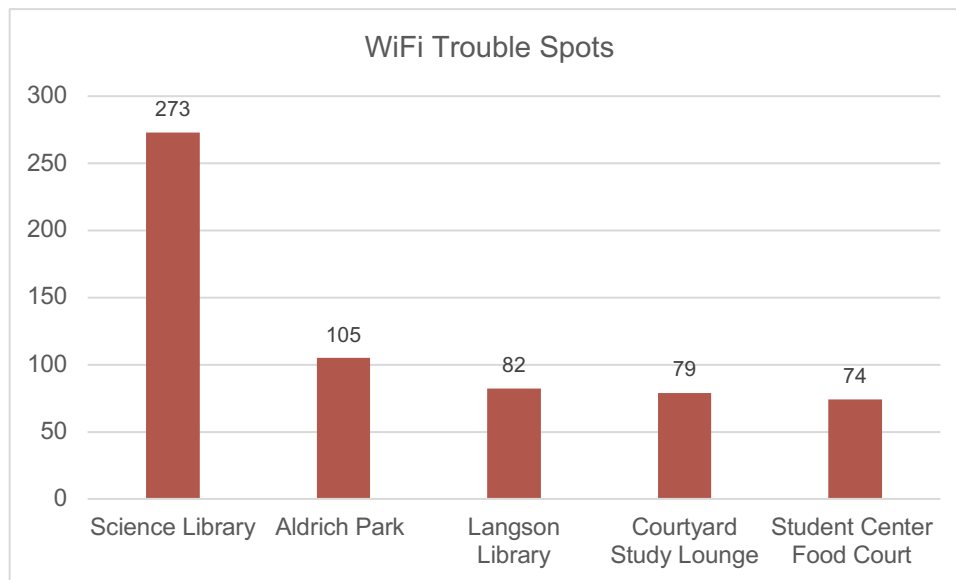| Science Library	Aldrich Park	Langson Library	Courtyard Study Lounge	Student Center Food Court
273	105	82	79	74

Figure 3

The survey demonstrated that of the locations surveyed students are using the campus WiFi most in locations such as the Science Library, Langson Library, and the Student Center

Food Courts (**Figure 2**). For 6 of the 7 locations, only responses reported connectivity only sometimes or rarely between 7% and 11% of the time. In addition, 1,309 students provided additional feedback in free form response when asked where they have experienced trouble connecting to the campus WiFi network. The above graph (**Figure 3**) represents the number of responses across the most commonly identified problem locations. The most cited buildings with WiFi issues include the Science Library (273 mentions), Aldrich Park (105 mentions), and Langson Library (82 mentions).

Impact:

   Although the Science Library is reported to have the highest success rate in terms of WiFi accessibility, it is also the leading reported problem area according to the students' free response by over 300% in comparison to the nearest eTech funding eligible location in the Langson Library. This indicates that priority for eTech WiFi funding should in part focus on the Science Library.

Similarly, other popular locations mentioned in the free response including Langson Library, Courtyard Study Lounge, and Student Center Food Court should be surveyed for improved connectivity. As a first step toward addressing these areas, targeted follow up is needed between OIT Network Engineering and the UCI Libraries to more specifically understand and remedy trouble areas.

   Students in the free response also mentioned Aldrich Park frequently, even though the option was not included in the survey. Unfortunately, covering Aldrich Park may be unfeasible due to campus topography and would be an inappropriate use of eTech funds.
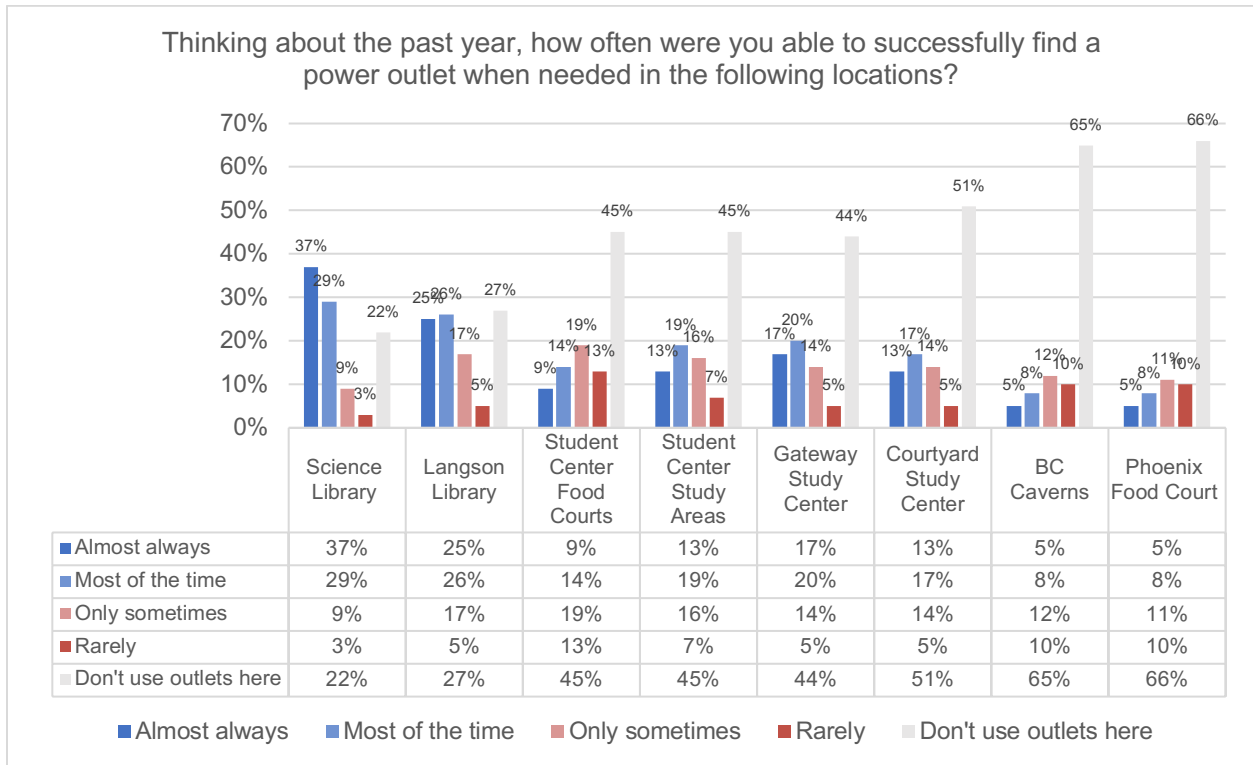
3. Power Outlets

Thinking about the past year, how often were you able to successfully find a power outlet when needed in the following locations?

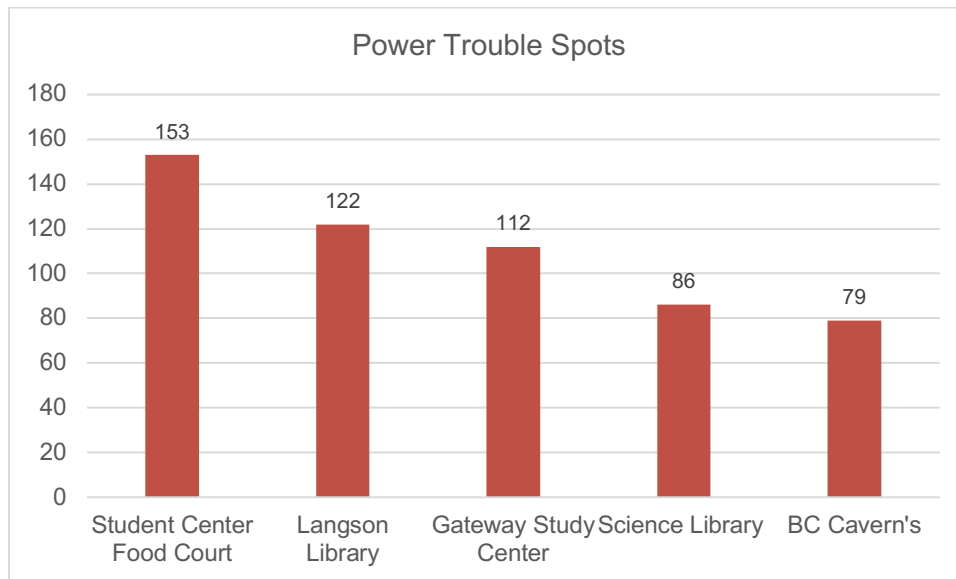|	Science Library	Langson Library	Student Center Food Courts	Student Center Study Areas	Gateway Study Center	Courtyard Study Center	BC Caverns	Phoenix Food Court
Almost always	37%	25%	9%	13%	17%	13%	5%	5%
Most of the time	29%	26%	14%	19%	20%	17%	8%	8%
Only sometimes	9%	17%	19%	16%	14%	14%	12%	11%
Rarely	3%	5%	13%	7%	5%	5%	10%	10%
Don't use outlets here	22%	27%	45%	45%	44%	51%	65%	66%

Figure 4

Power Trouble Spots

Figure 5

Students were asked how often they were successful in finding power outlets when needed in the following locations. The Libraries performed relatively well compared to other surveyed locations. However, students reported difficulty finding power when needed between 20% and 30% of the time in all surveyed spaces other than Science Library (**Figure 4**). It also

worth noting that the data for areas with lower percentage scores may be skewed by lower overall usage compared to more popular spaces.

Out of the 2,746 students who responded, roughly 896 students provided additional feedback when asked where they have experienced trouble accessing power outlets. Their responses are represented in the above chart (**Figure 5**). The most cited locations include the Student Center Food Court (153 mentions), Langson Library (122 mentions), and Gateway Study Center (112 mentions).

Impact:

From analyzing **Figure 4**, many students report at least moderate success in finding available power in both libraries. Other common areas surveyed such as eating areas showed higher difficulty in finding available power when needed. In addition, these locations also showed less overall power use. It is unclear what factors are driving lower power use in the common areas. It is worth following up with students to determine why power use is so low in these areas whether it is rooted in lack of availability of outlets or lack of interest.

The free response demonstrated that the areas with power accessibility issues are locations outside of the classroom, such as Langson Library and Gateway Study Center. This is important to note for future use of eTech funds since students seem to want more outlets in food/cafeteria areas as well as library/study spaces. However, this require further research and prioritization to make impactful improvements to campus power. OIT will partner with Facilities Management to order communicate areas of desired power and restore power to spaces with broken outlets.

4. Technology in the Classroom

To what extent do you agree or disagree with the following statements about technology in the classroom?

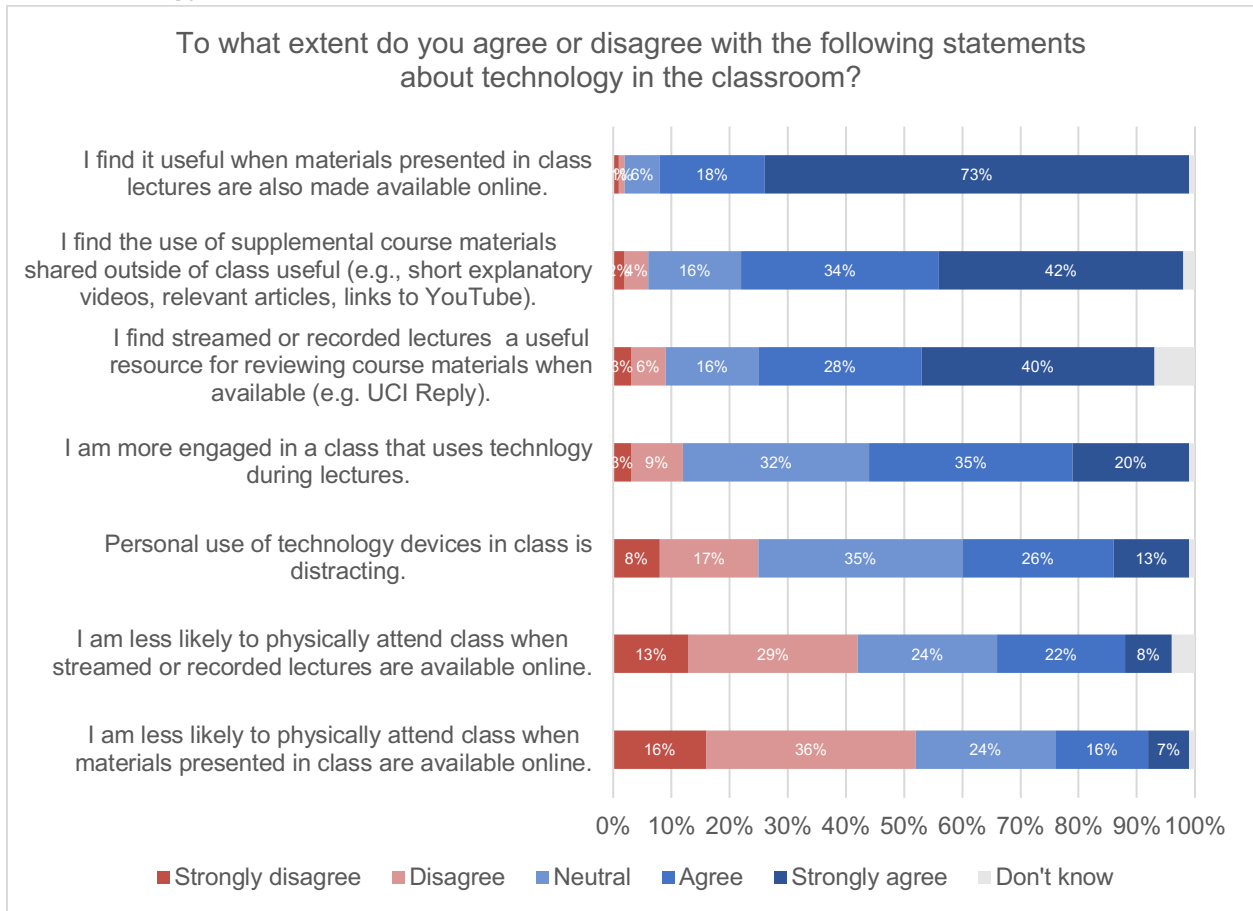| Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Don't know
I find it useful when materials presented in class lectures are also made available online.		6%	18%	73%		
I find the use of supplemental course materials shared outside of class useful (e.g., short explanatory videos, relevant articles, links to YouTube).	4%	16%	34%	42%		
I find streamed or recorded lectures a useful resource for reviewing course materials when available (e.g. UCI Reply).	6%	16%	28%	40%		
I am more engaged in a class that uses technlogy during lectures.	9%	32%	35%	20%		
Personal use of technology devices in class is distracting.	8%	17%	35%	26%	13%	
I am less likely to physically attend class when streamed or recorded lectures are available online.	13%	29%	24%	22%	8%	
I am less likely to physically attend class when materials presented in class are available online.	16%	36%	24%	16%	7%	

Figure 6

Students were asked to agree or disagree with a series of statements about the usefulness of various instructional technologies (**Figure 6**).

Impact:

The data demonstrates that students view the use of technology as a tool to enhance learning in the classroom favorably. This includes direct online materials such as lecture notes, supplemental online resources, and streamed/recorded lectures. The data also shows that making lecture materials available online or streaming/recording a lecture will affect the likelihood of a students' attendance by 23% and 30% respectively. A difference of only 7% in attendance likelihood between the two direct course online resource types is surprising since making lecture materials available online is a common practice, but lecture streaming and capture is met with hesitation.

Which resources/tools do you wish your professors used less, more, or the same amount?
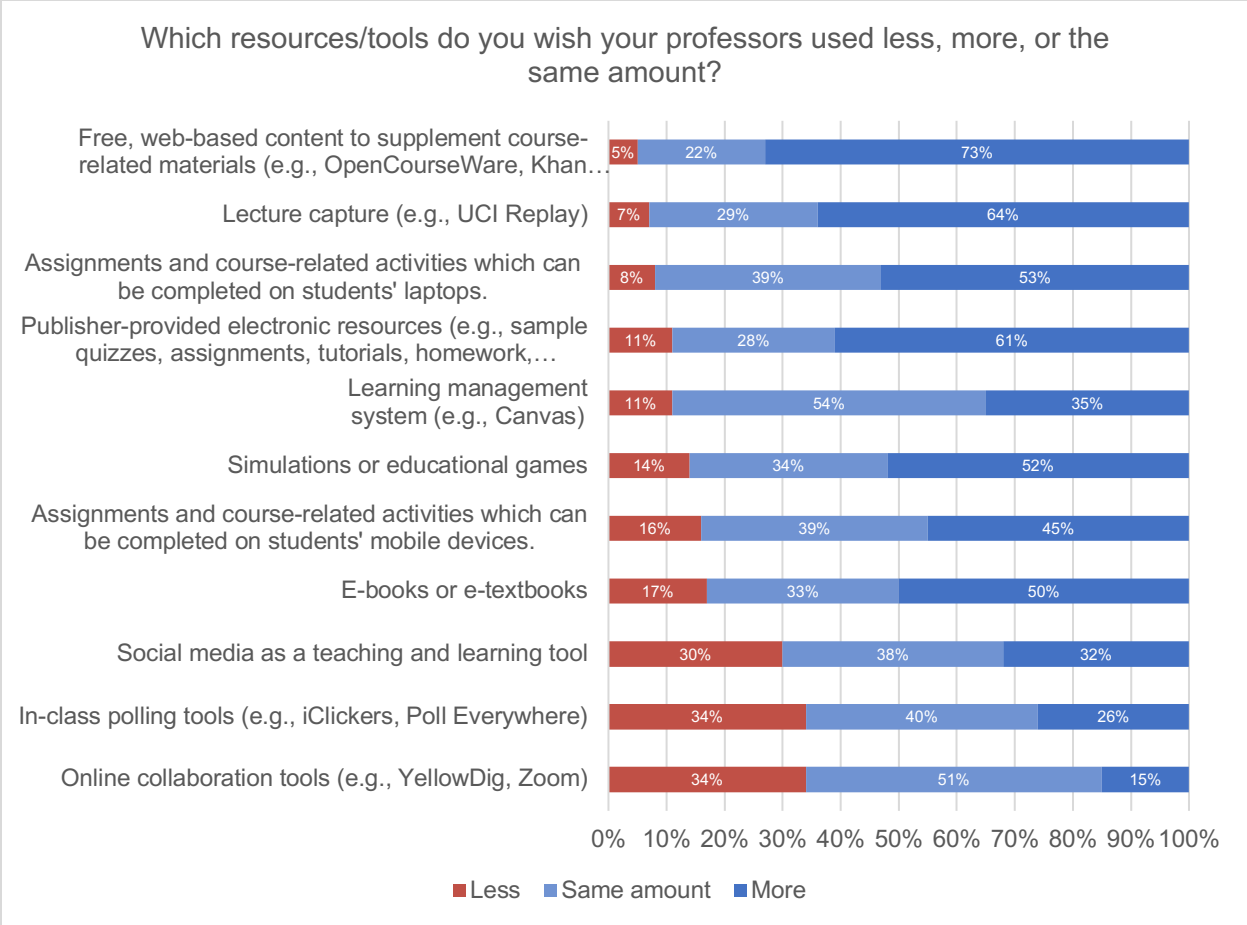
	Free, web-based content to supplement course-related materials (e.g., OpenCourse Ware, Khan Academy, YouTube, Chegg)	Lecture capture (e.g., UCI Replay)	Assignments and course-related activities which can be completed on students' laptops.	Publisher-provided electronic resources (e.g., sample quizzes, assignments, tutorials, homework, practice problems)	Learning management system (e.g., Canvas)	Simulations or educational games	Assignments and course-related activities which can be completed on students' mobile devices.	E-books or e-textbooks	Social media as a teaching and learning tool	In-class polling tools (e.g., iClickers, Poll Everywhere)	Online collaboration tools (e.g., YellowDig, Zoom)
Less	5%	7%	8%	11%	11%	14%	16%	17%	30%	34%	34%
Same amount	22%	29%	39%	28%	54%	34%	39%	33%	38%	40%	51%
More	73%	64%	53%	61%	35%	52%	45%	50%	32%	26%	15%

Figure 7

Students were asked which resources/tool they wished their processors used less, more, or the same amount of (**Figure 7**).

Impact:

Students would like an more connected and interactive learning opportunities in their course work. This is highlighted by a desire for more supplemental course materials (73%), lecture capture (64%) and simulation or educational games (52%). This correlates with the students' free response when asked "What is one thing you would like your professors to do with technology to enhance your academic success?" The top requests are mentioned in the text box below. The most prominent request was for professors to provide recorded online

lectures. Additional requests include more interactivity within the classroom and low-stake assessments. Specifically, students seem to want more in-class engagement and practice and for lectures to be recorded and posted online.

- Record / podcast lectures for review (200+)
- Clickers to test recall (99)
- Interactive/collaborative activities in class and online (93)
- More practice and low-stakes quizzes (90)
- Kahoot! Interactive Learning Game Platform (54)

This data bodes favorably for active learning pedagogical strategies that leverage technology useful among students. With the creation of the Anteater Learning Pavilion (ALP), data collection from the next eTech survey will be vital to see if students' success is related to technology incorporation in the classroom. If so, then the ALP will be key in guiding the design of future instructional spaces. OIT will partner with campus faculty to discuss the students' desire for increase technology use, such as providing recorded lectures online.

In support of this pedagogical evolution on campus, OIT will continue to work closely with the Division of Teaching Excellence and Innovation to ensure that professors are well-trained and comfortable with integrating technology and instruction in the classroom. Additionally, OIT's eTech mini grants program will continue to allow faculty to experiment with innovative technology based instructional tools.
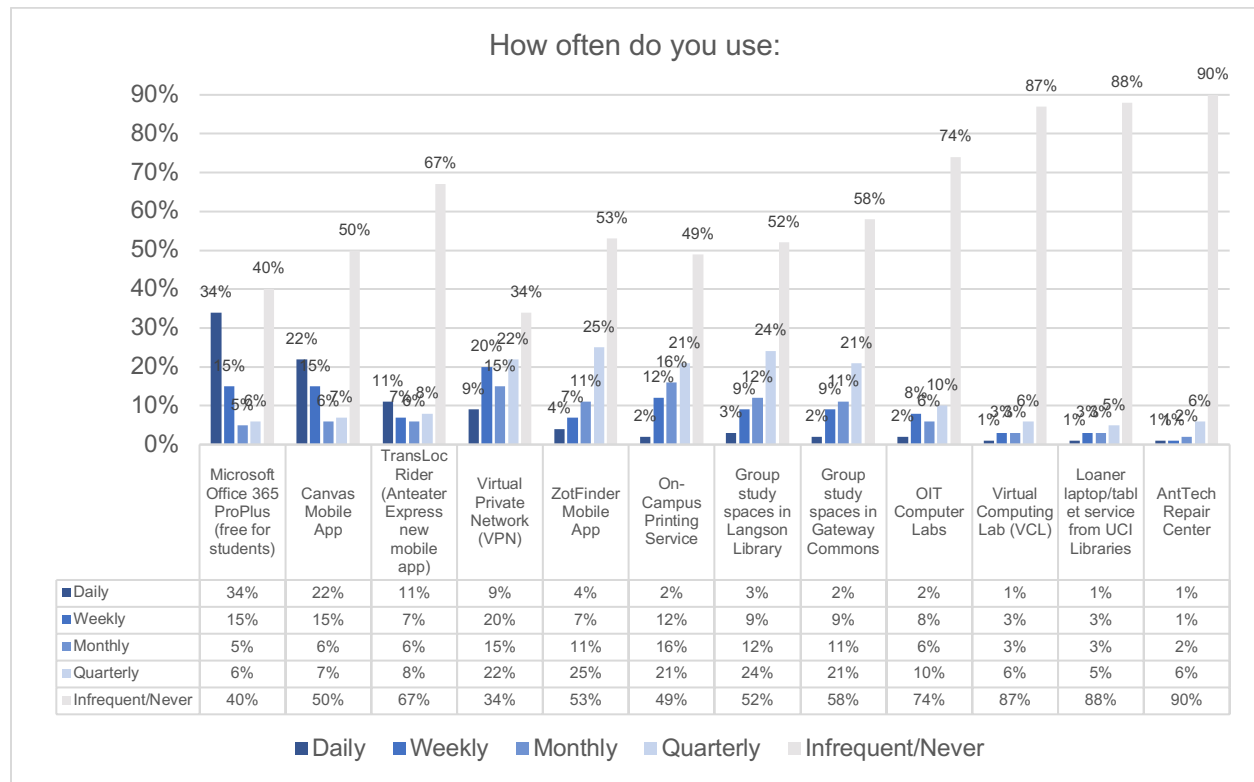
5. OIT Services and Resources

How often do you use:

	Microsoft Office 365 ProPlus (free for students)	Canvas Mobile App	TransLoc Rider (Anteater Express new mobile app)	Virtual Private Network (VPN)	ZotFinder Mobile App	On-Campus Printing Service	Group study spaces in Langson Library	Group study spaces in Gateway Commons	OIT Computer Labs	Virtual Computing Lab (VCL)	Loaner laptop/tablet service from UCI Libraries	AntTech Repair Center
■ Daily	34%	22%	11%	9%	4%	2%	3%	2%	2%	1%	1%	1%
■ Weekly	15%	15%	7%	20%	7%	12%	9%	9%	8%	3%	3%	1%
■ Monthly	5%	6%	6%	15%	11%	16%	12%	11%	6%	3%	3%	2%
□ Quarterly	6%	7%	8%	22%	25%	21%	24%	21%	10%	6%	5%	6%
■ Infrequent/Never	40%	50%	67%	34%	53%	49%	52%	58%	74%	87%	88%	90%

■ Daily ■ Weekly ■ Monthly □ Quarterly ■ Infrequent/Never

Figure 8

Students were asked how often they used various technology resources (**Figure 8**).

Impact:

Further research must be conducted to better understand the infrequent use of OIT provided services. According to **Figure 8**, approximately 40-60% of students infrequently/never use OIT-provided services, such as the Microsoft Office 365 ProPlus for Students, on-campus printing, and study group spaces. Similarly, other technology services are also infrequently/never used by the students, such as the Canvas Mobile app (along with the other various apps) and the AntTech Repair Center.

To increase awareness of these various technology services, OIT will work on revamping its current Help Center website to include information on external technology services. Currently, the Help Center covers Microsoft Office 365 ProPlus for students, Virtual Private Network, and other OIT-provided resources. It may be beneficial to include non-OIT technology/external services in the Help Center for increase awareness.
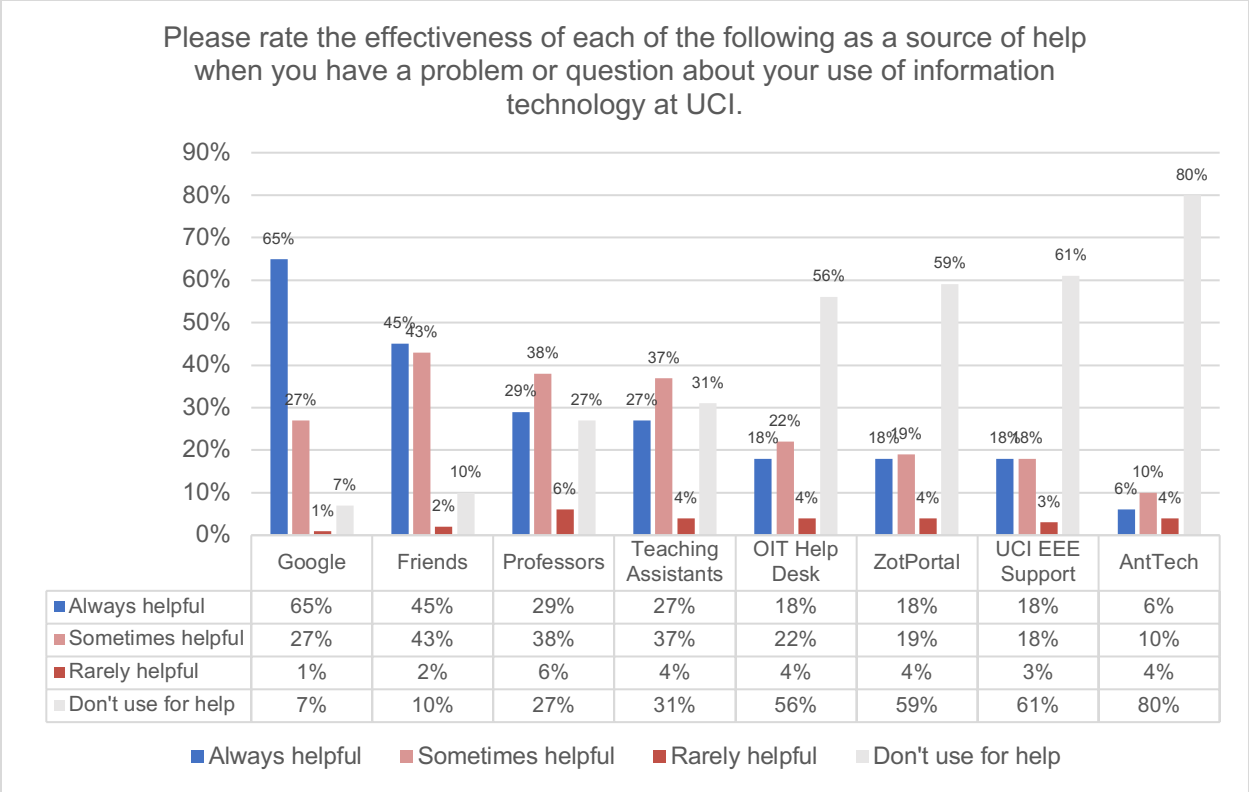
Please rate the effectiveness of each of the following as a source of help when you have a problem or question about your use of information technology at UCI.

	Google	Friends	Professors	Teaching Assistants	OIT Help Desk	ZotPortal	UCI EEE Support	AntTech
Always helpful	65%	45%	29%	27%	18%	18%	18%	6%
Sometimes helpful	27%	43%	38%	37%	22%	19%	18%	10%
Rarely helpful	1%	2%	6%	4%	4%	4%	3%	4%
Don't use for help	7%	10%	27%	31%	56%	59%	61%	80%

Figure 9

Students were asked to rate the effectiveness of various resources as a source of help when faced with problems or questions about the use of information technology at UCI (**Figure 8**).

Impact:

For information technology assistance, students indicated that the OIT resources, such as the Help Desk, ZotPortal, and EEE Support, are used by approximately 40% of surveyed students according to **Figure 8**. Further research is needed to determine if these results are from a lack of service awareness or perceived lack of service quality in campus resources, causing students to seek other means to resolve technology issues.

AntTech, although not directly an OIT service, was included in the survey since the OIT Help Desk redirects students to AntTech for physical servicing of their computers (i.e. virus removal, reformatting drives, etc.). However, after Barnes and Nobles took over management of the UCI Bookstore, AntTech now only services Macintosh computers. If AntTech is able to service Windows machine as well, perhaps more students would look to AntTech as a source of help.

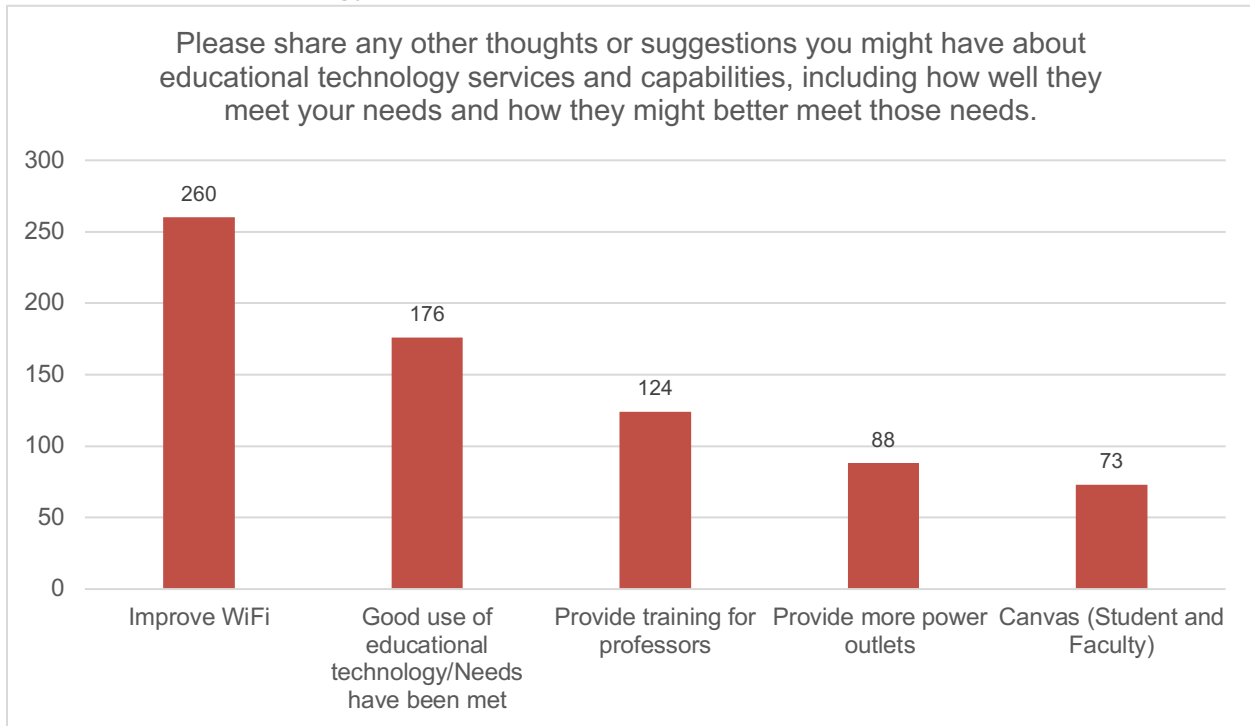## 6. Educational technology services and capabilities

Please share any other thoughts or suggestions you might have about educational technology services and capabilities, including how well they meet your needs and how they might better meet those needs.

Category	Value
Improve WiFi	260
Good use of educational technology/Needs have been met	176
Provide training for professors	124
Provide more power outlets	88
Canvas (Student and Faculty)	73

Figure 10

In the final open-ended question, students were invited to share any other thoughts or suggestions about educational technology services and capabilities. Around 900 free responses were received. The above figure represents the most mentioned comment topics (**Figure 10**).

Impact:

260 students wanted to improve WiFi on campus. The responses ranged from needing WiFi in outdoor areas to improving the WiFi within classrooms/study spaces. In terms of improvement, students have asked for "better" and "faster" connection. There were also some mention of network connectivity drops.

Students also felt strongly about the need for professors to be trained on how to use educational technology. Roughly 124 students mentioned more training for professors. The majority of those responses specified Canvas training. Students also mentioned that they would like their professors to provide recorded lectures and online materials, which would involve professors being trained on how to incorporate other materials to effectively teach their course.

To improve educational technology services and capabilities, OIT will continue to promote existing services and add new opportunities to train students and faculty on how to use Canvas and other tools. With the continual collaboration with the Division of Teaching Excellence and Innovation, professors will become well-trained and comfortable with implementing educational technology, which will result in students being more comfortable with using educational technology.