

Charles Sturt University
2016 Student Learning Technology
Survey Report
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***Prepared by the Division of Student Learning
(Adaptive Learning and Teaching Services,
Learning Technology Unit)***

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1. Executive Summary

This survey represents the third tranche of the Division of Student Learning's *Learning Technology Survey* exploring access, usage and experiences around learning technology among CSU students. The survey opened on Friday 6 May 2016 and closed on Monday June 13 2016. 1,236 students completed the survey, with the "typical" respondent profile being a female, undergraduate, Distance Education student under the age of 30 and of Australian cultural background. This profile corresponds well with the "typical" CSU student.

The increase in the proportion of early adopters of technology to 43% (up from 39% in 2014) may suggest that students with a proclivity for technology are over-represented in the survey sample. Where results differed significantly or interestingly between early and mid-to-late adopters of technology cross tabulations have been provided. In general, early adopters do show a more favourable attitude to CSU's learning technologies.

This drift toward a stronger technological proclivity among survey participants may contribute, in part, to students' self-reported behaviour which shows that over the past six years (2010 – 2016) there has been a substantial shift toward students spending more time performing computer-based study with 50% of students spending more than 20 hours per week on a computer device for study (up from 39% in 2014 and 15% in 2010). Another contributing factor here may be that our learning technologies are simply getting better, from a student perspective.

The online survey explored student attitudes, needs and perceptions of learning technologies across seven categories:

1. general experiences of interact2;
2. delivering learning content;
3. information searching;
4. communication and collaboration;
5. feedback and assessment;
6. reflection; and
7. workplace learning.

It was found that students are typically supportive of a) technology as a means for enhancing their learning experience and b) CSU's use of learning technologies. In particular, a high-level of support for CSU's new Learning Management System, Interact2, was reported.

Key findings informing these conclusions are:

- students' attitudes toward Interact2:
 - 91% of students agree their overall experience of the use of Interact2 has been positive; and
 - 91% of students are confident using Interact2;
- attitudes toward technologies for content delivery:
 - 86% of students say their Interact2 subject sites provide easy access to the learning content needed for studies; and

- 81% of students are positive that it was easy to find information that is important to them in the (online) Subject Outlines;
- attitudes toward technologies for information searching:
 - the CSU Library search (PRIMO) is the most-used information search tool by students for studies, exceeding the use of general internet search engines and Google Scholar; and
- attitudes toward technologies for communication and collaboration:
 - 74% of students agree the use of technology makes communication with their lecturers more effective; and
- attitudes toward technologies for feedback and assessment:
 - 92% of students say EASTS is easy to use; and
 - 77% of students agree that the use of tests/quizzes in their subjects enhances their learning.

There even appears to be demand among students for CSU to extend the use of learning technologies. In future developments relating to learning technologies and their implementation, communication and support at CSU, it should be considered that:

- we need to **start thinking mobile first**:
 - 84% of students are already accessing CSU services via mobile device with many students integrating study purposes into their everyday use of these devices;
 - students are using a range of mobile apps to support their study;
 - students are requesting mobile apps give access to all the features of in-browser educational technologies and are wanting apps that work on their device's operating system; and
 - an increasing proportion of students are utilising a 3G or 4G mobile connection (an increase from 7% in 2014 to 15% in 2016).
- we need to embrace **richer and more flexible online learning experiences**: students value online experiences such as adaptive lessons, simulations and eExams:
 - 65% of students surveyed believed that adaptive learning tools would enhance their learning experience. Among students who have experienced adaptive learning tools, 96% agree that such tools enhance the learning experience;
 - 60% of students surveyed agreed that simulations would enhance their learning experience. Among students who have experienced simulations, 93% agree that such technologies enhance the learning experience;
 - 36% of students surveyed agreed that eExams would enhance their learning experience. Among those who have experienced eExams, 88% agree that such technologies enhance the learning experience; and
 - in this context, many students have had no experience of a number of tools within Interact2, such as reflection tools (particularly Blogs and Journals) and communication and collaboration tools (particularly, Wikis and Groups);
- there is scope to **better use technology to improve the student learning experience on work placement**. While a majority of students are positive about technologies that support their work placements, there is less positivity compared with other domains of technology usage. Improvements may be possible across the areas of communication with peers and University staff, effective management of placements, and supporting learning;

- overall students are **cautious about the use of social media for learning and teaching**:
 - 49% of students overall are uncertain or against it. However, for the group of students who have experienced the use of social media in learning and teaching 81% were in favour of its use;
 - students aged up to 21 are most supportive of such use of social media (63%); and
 - for all students aged over 25 years, more respondents were uncertain about/against social media in learning and teaching than supportive.

2. Background and Methodology

In 2010, CSU's Division of Student Learning launched a Learning Technology Survey to explore access, usage and experiences around learning technology among staff and students. In 2014, a slightly scaled down version of this survey was repeated with students only. In 2016, a modified version of the 2014 survey was conducted and the current report reflects the findings of this survey. It is DSL's intention to conduct this survey every two years to monitor trends in students' behaviours and attitudes regarding technology in education.

Comparisons of 2010, 2014 and 2016 data will be provided where relevant – this commentary is highlighted in orange.

The **survey objective** was to establish a baseline for and monitor student access, use, skills and expectations with regards to educational technology at CSU.

2a. Research Design

The survey utilised an online questionnaire which consisted of 9 main elements:

1. Respondent Profile
2. Technology Use and Access
3. General Experiences of Interact2
4. Technologies for Delivering Learning Content
5. Technologies for Information Searching
6. Technologies for Communication and Collaboration
7. Technologies for Feedback and Assessment
8. Technologies for Reflection
9. Technologies for Workplace Learning

A copy of the introductory script provided to students can be found in Appendix A.

The survey opened on Friday 6 May 2016 and closed on Monday June 13 2016. In that time, 1,236 students completed the survey.

An incentive for participation was offered, which involved all students who completed the survey (and who filled out a separate contact form) being placed in the draw to win one of two iPods.

Ethics approval for this survey was obtained from the CSU Human Research Ethics Committee.

2b. Respondent Profile

A total of 1,236 students completed the survey. Figures 2.1 to 2.9 show the profile of students across a range of dimensions. Based on these figures, the current survey sample differs from the CSU student population profile in an over-representation of Science students.

Overall, the typical (or “most likely”) respondent profile is a student who is:

- female;
- enrolled in an under-graduate course;
- studying by distance;
- under the age of 30 years; and
- a domestic student of Australian cultural background.

This profile corresponds well with the “typical” CSU student.

Attitudes Toward New Technology

- Generally, there is a favourable attitude toward new technology among students, with approximately 43% being categorised as early adopters (i.e. indicating that they enjoy being among the first to embrace new technologies), while only 7% might be categorised as late adopters (i.e. being among the last to embrace new technologies and/or being sceptical of such technologies) [see Figure 2.10].

These results represent a shift towards more favourable attitudes to new technology among students from 2010 where 32% of students could be categorised as early adopters, to 39% in 2014 and 43% in 2016.

In the cross-tabulations provided in the main body of the report, students have been broken up into 2 groups based on their attitude towards new technology: early adopters as defined above, and mid-late adopters (all other responses).

- Post-graduate coursework students may be more likely than other students to identify as early adopters, with 51% doing so compared to 45% of Post-graduate Research or Higher Degree students and 41% of Undergraduates [see Figure 2.11].
- Mixed Mode students may be more likely to be early adopters than Distance and On-Campus students with around 48% of Mixed Mode students being in this category compared to 44% of distance students and 41% of On-Campus students [see Figure 2.12].
- Students aged between 22 and 50 years are the most likely to be early adopters, with 22-25 and 41-50 year olds being the age brackets most favourable to new technologies (48% of students in both age ranges). Students aged over 60 years had the lowest percentage of adopters, albeit at 37%, and with only 16% of students over 60 years being late adopters [see Figure 2.13].
- Male students are more likely to be early adopters than females with 59% of male students being in this category compared with 36% of females [see Figure 2.14].

- Indigenous students may be more likely to be early adopters of technology than non-indigenous students with 48% of Indigenous students being in this category compared to 41% of non-indigenous students. However, the small number of Indigenous students in the sample (4%) relative to non-indigenous students makes direct comparison problematic [see Figure 2.15].
- International students are more likely to be early adopters, with 55% identifying as early adopters of new technologies compared to 41% of Domestic students [see Figure 2.16].

Figure 2.1 – Respondent Profile by Age Group

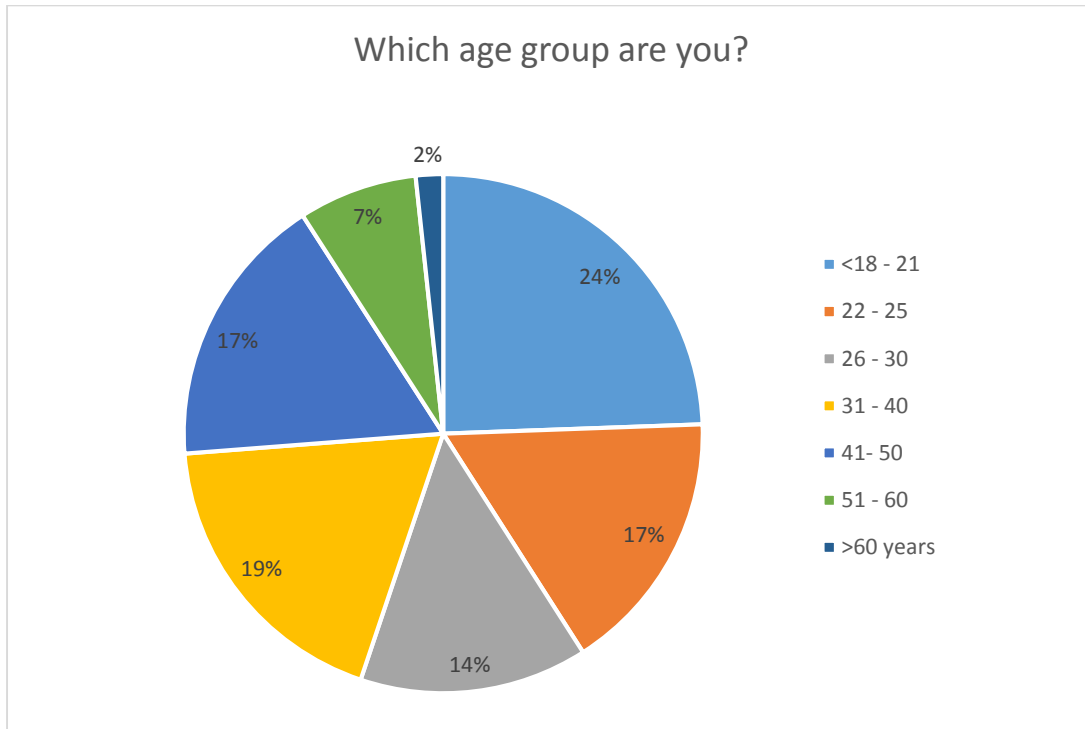


Figure 2.2 – Respondent Profile by Gender

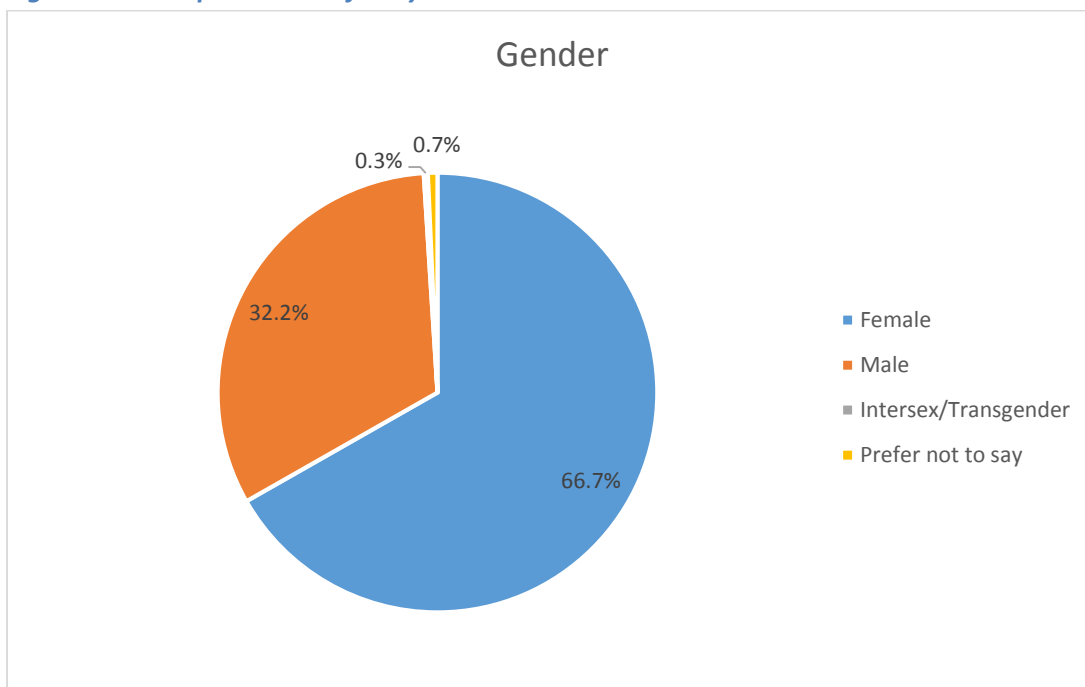


Figure 2.3 – Respondent Profile by Domesticity

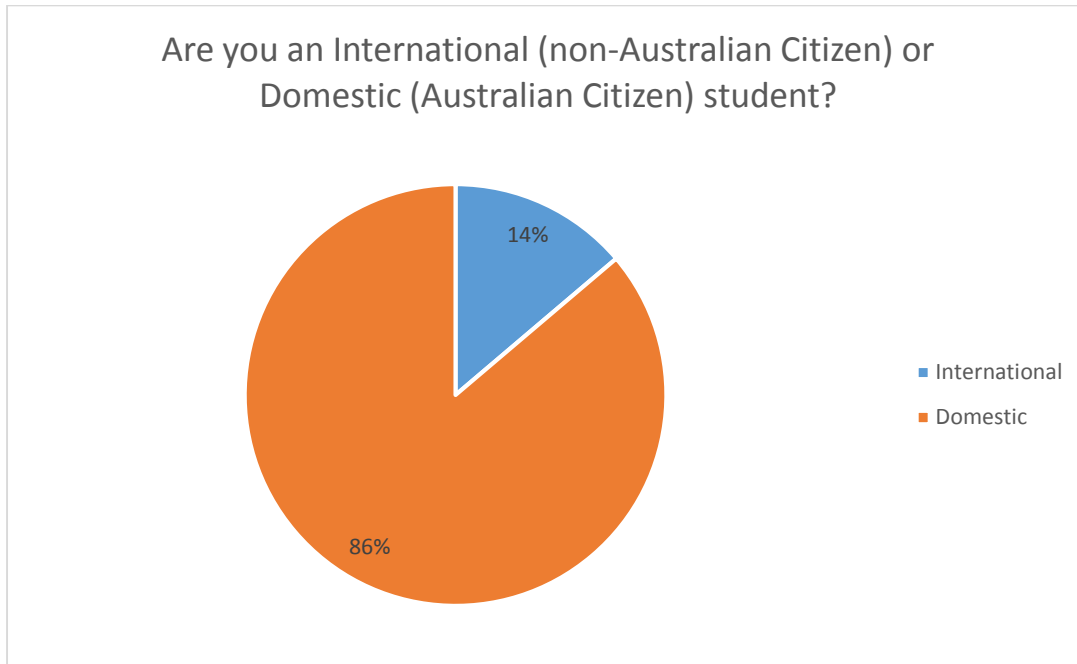


Figure 2.4 – Respondent Profile by Cultural Background

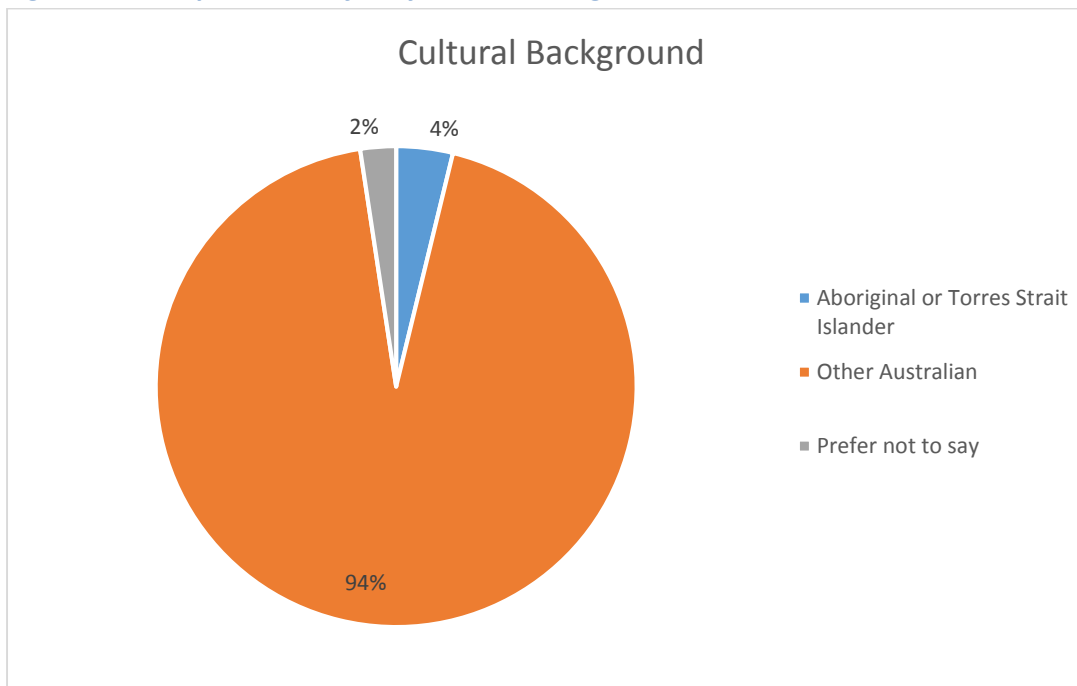


Figure 2.5 – Respondent Profile by Level of Study

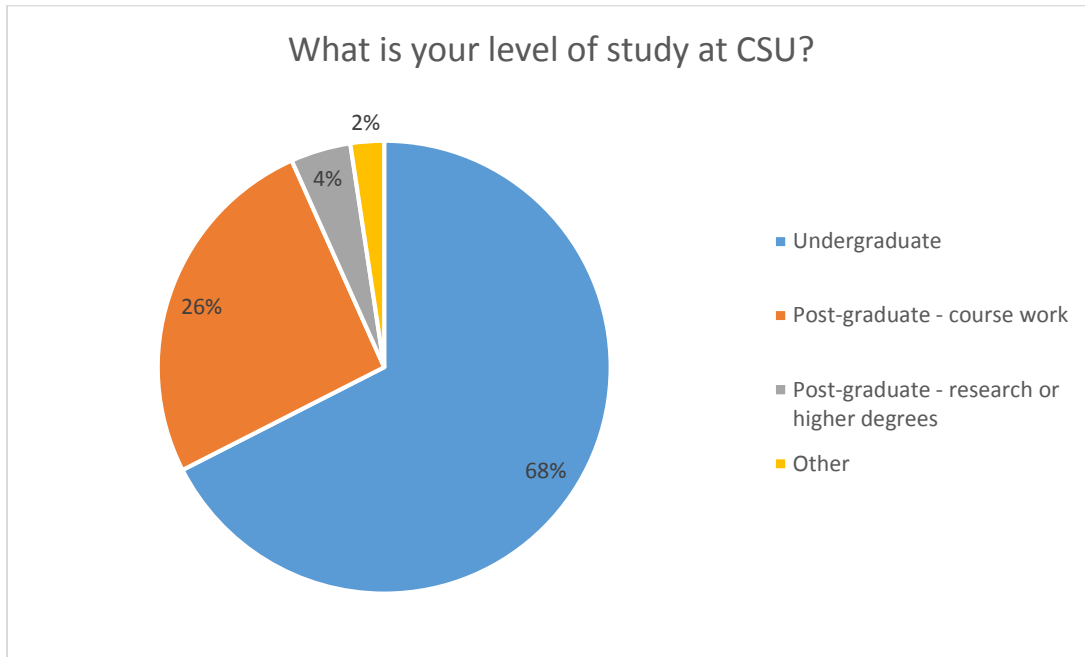


Figure 2.6 – Respondent Profile by Load

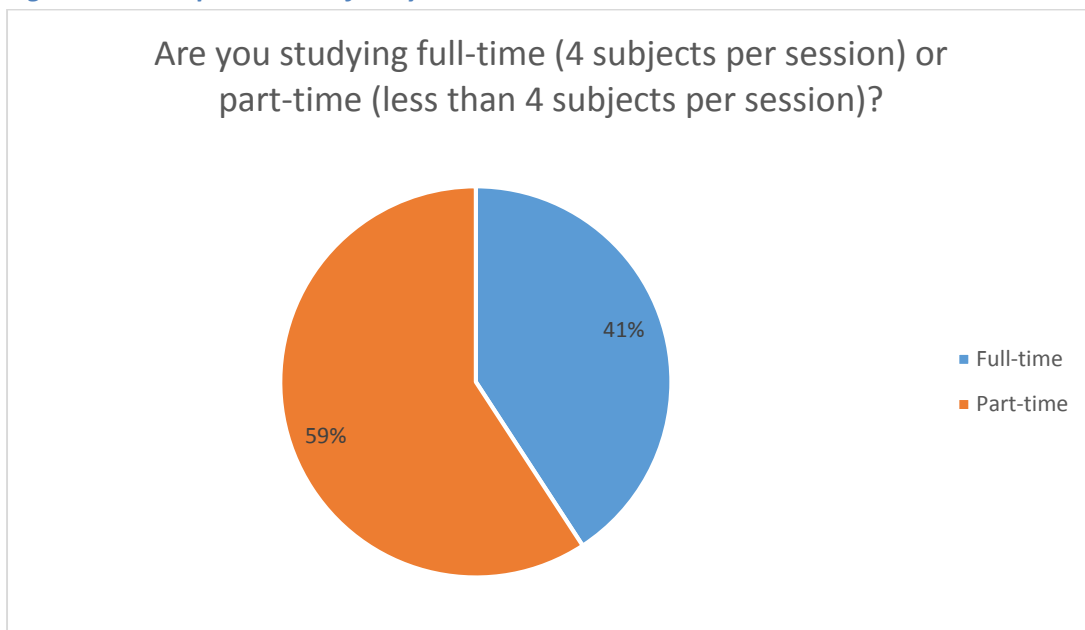


Figure 2.7 – Respondent Profile by Faculty

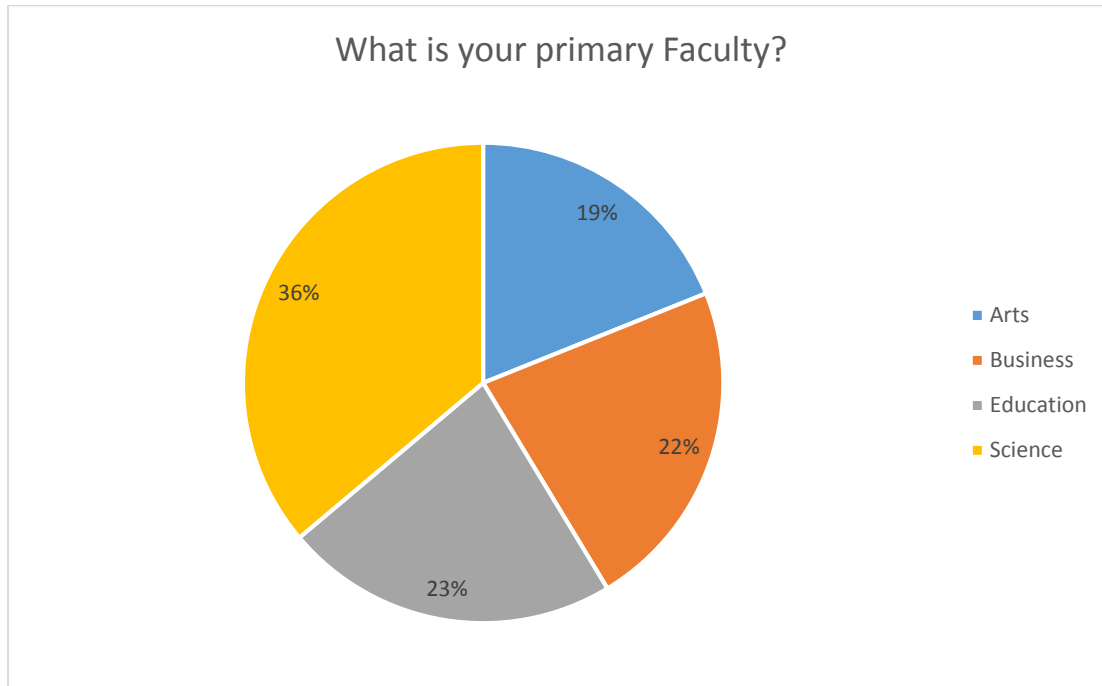


Figure 2.8 – Respondent Profile by Mode

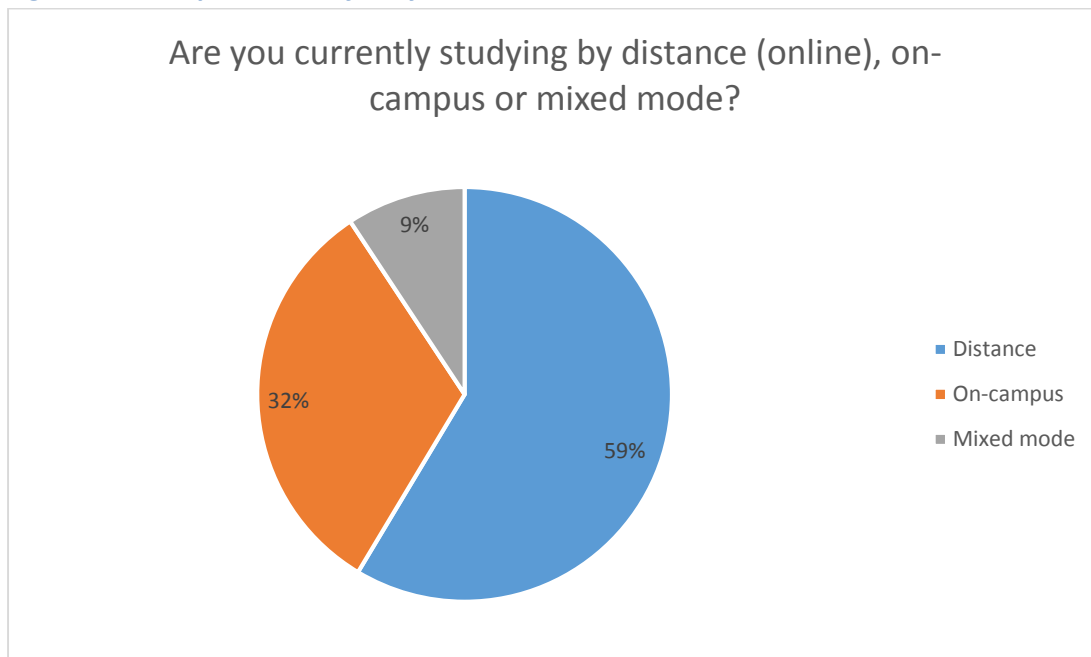


Figure 2.9 – Respondent Profile by Campus (On-Campus and Mixed Mode Students Only)

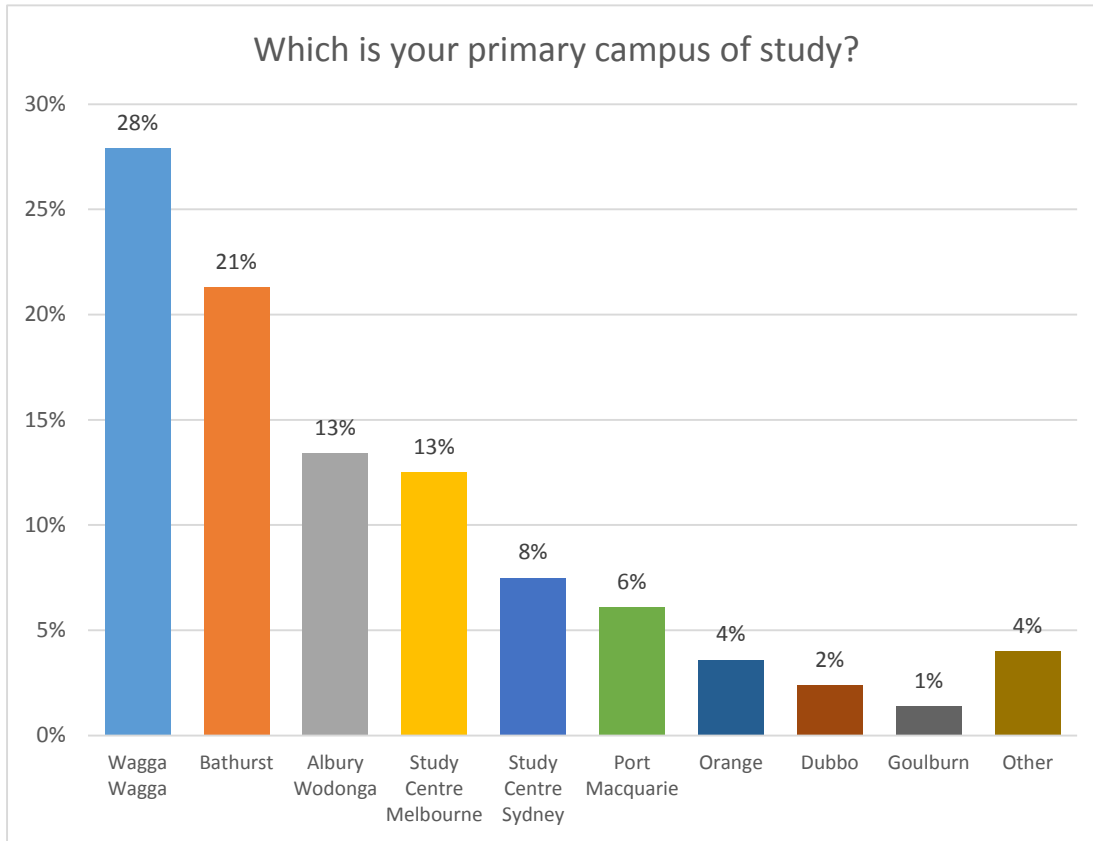


Figure 2.10 – Attitudes Toward New Technologies

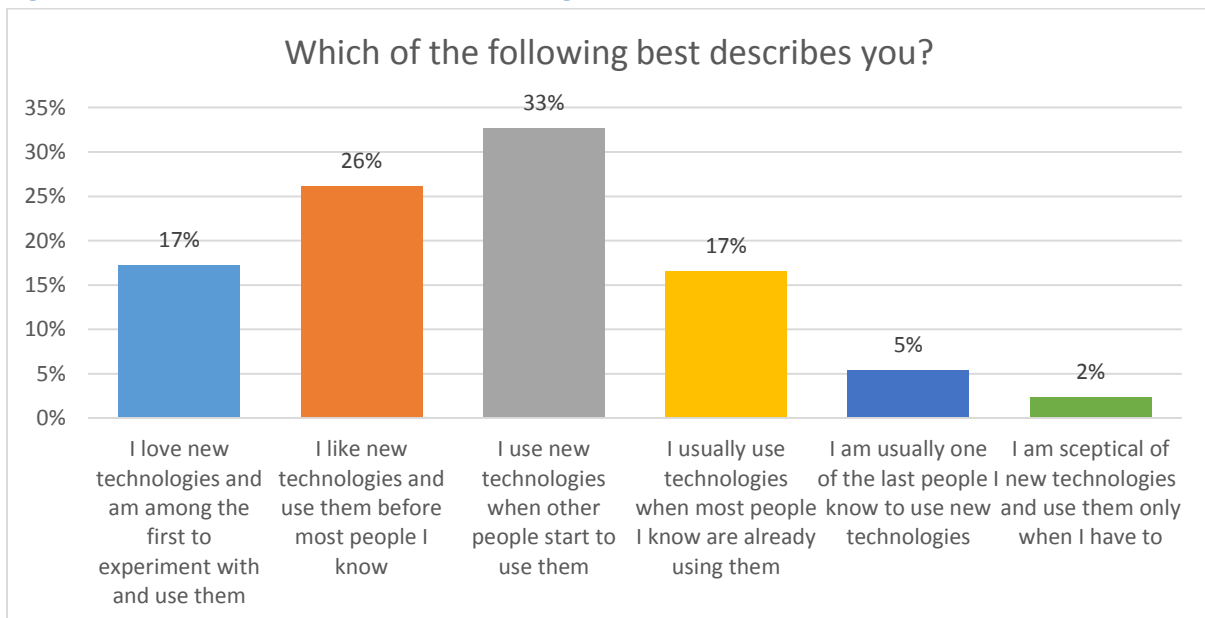


Figure 2.11 – Attitudes Toward New Technologies by Level of Study

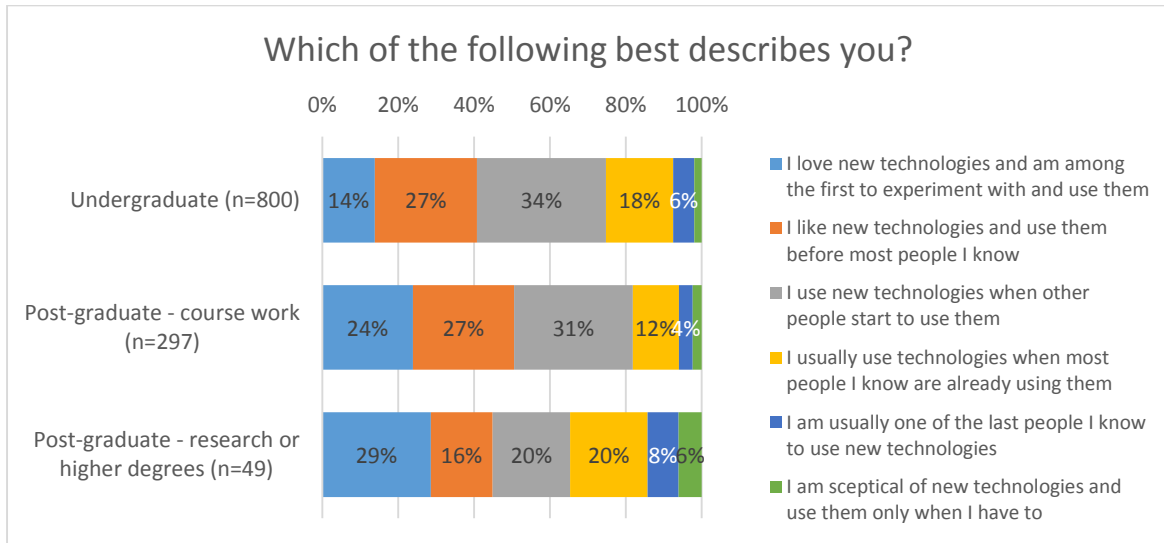


Figure 2.12 – Attitudes Toward New Technologies by Mode

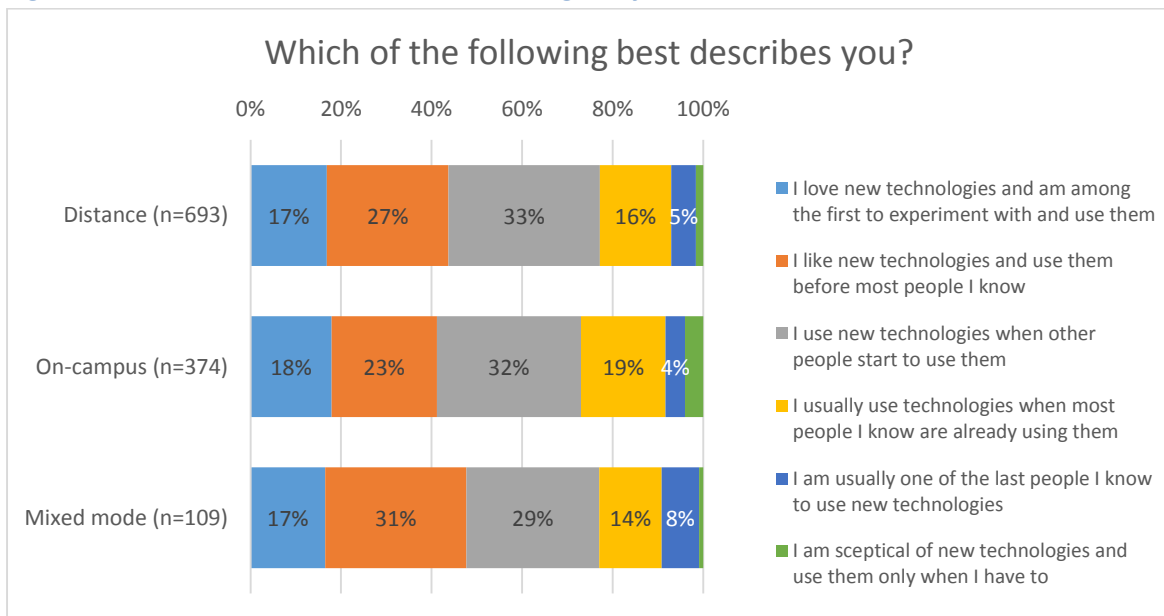


Figure 2.13 – Attitudes Toward New Technologies by Age

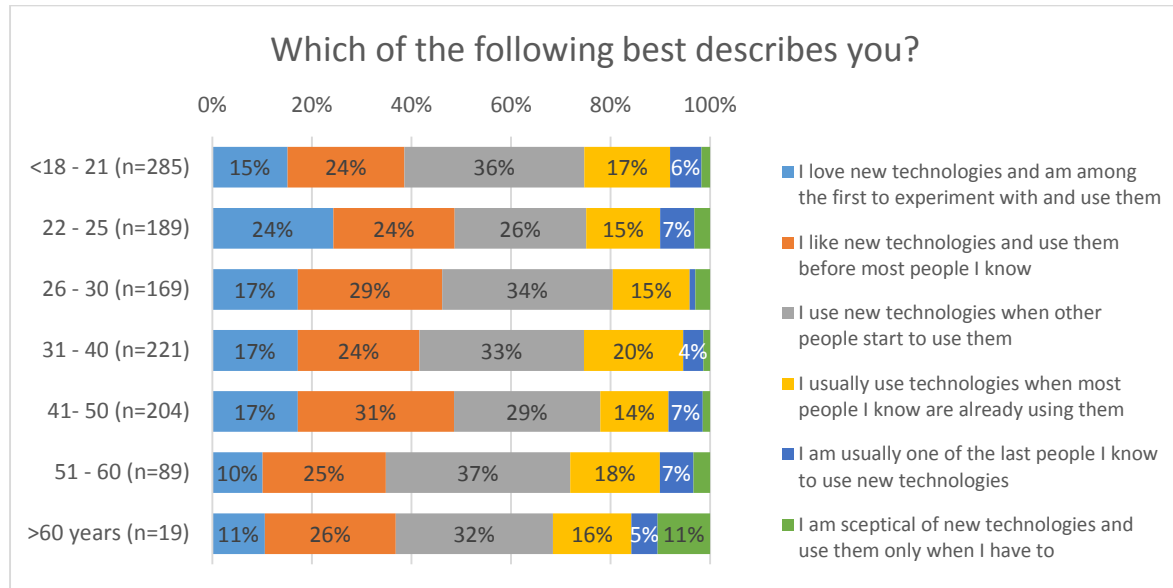


Figure 2.14 – Attitudes Toward New Technologies by Gender

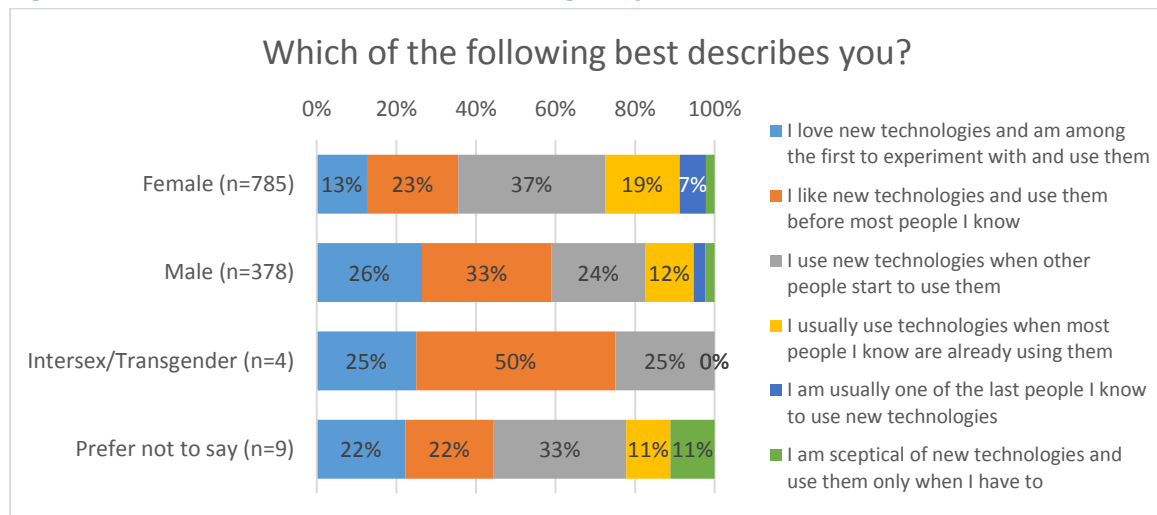


Figure 2.15 – Attitudes Toward New Technologies by Cultural Background

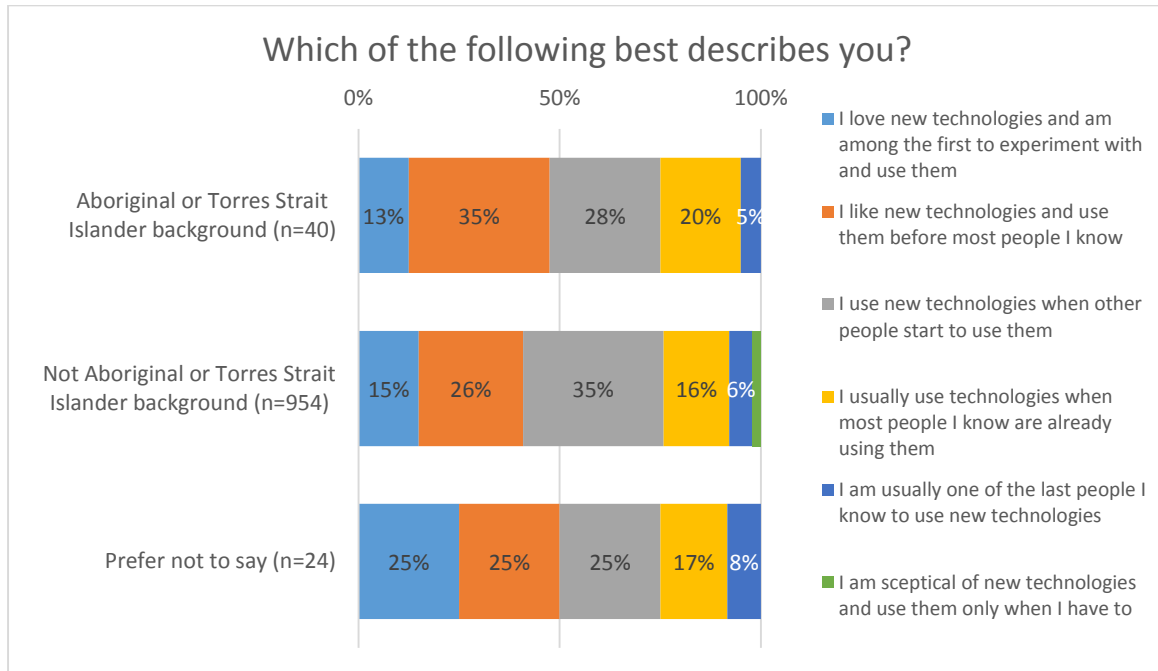
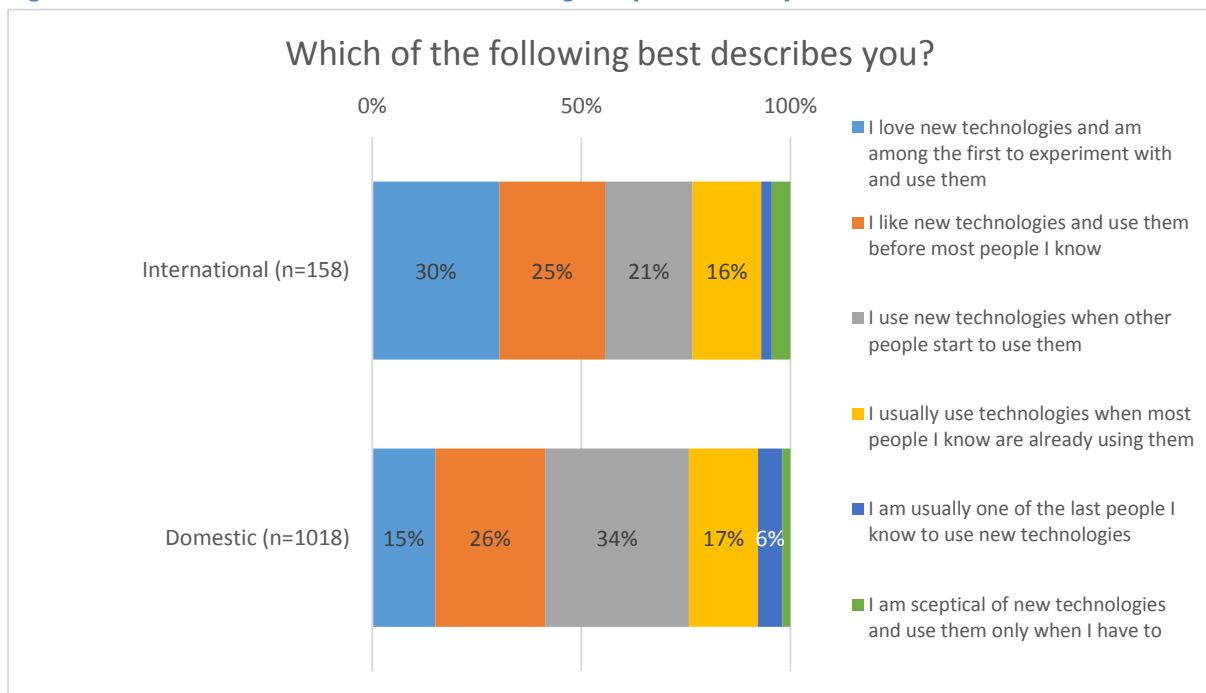


Figure 2.16 – Attitudes Toward New Technologies by Domesticity



3. Key Research Findings

Please note: throughout this report a range of cross-tabulations are provided to explore differences in responses by factors like gender, faculty, level of study, mode of study, attitude toward technology and so forth. For brevity, only those explorations that yielded meaningful or interesting differences have been

3a. Technology Use and Access

This section explores from where and how (e.g. what devices are used) students are accessing CSU educational technologies and online services. Key findings are as follows.

CSU WiFi Network (CSU Connect)

- On-Campus and mixed mode students were surveyed on CSU Connect. Of these students, 77% of respondents rated the accessibility of CSU Connect as very good or good, 68% rated its speed as very good or good, and 56% rated its reliability as very good or good [see Figure 3a.1].

Time Spent on Computer-Based Study

- The modal category for time spent each week on computer-based study was 11-20 hours, as reported by 32% of students. However, there was variation around this with 18% of students spending less than 11 hours per week on computer-based study and 50% of students spending more than 20 hours per week [see Figure 3a.2].

This continues the shift toward students spending more time performing computer-based study across the 2010, 2014 and now 2016 survey results. In 2010, it was found that only 15% of students spent more than 20 hours per week on computer-based study. This grew to 39% in 2014, and 50% in 2016. In 2010, the modal category for time spent on computer-based study each week was 6-10 hours, compared with 11-20 hours in 2014 and 2016.

- More Undergraduate students spend more than 20 hours per week on computer-based study compared (53%) to Post-graduate Coursework (45%) and Post-graduate Research or Higher Degrees (40%) students [see Figure 3a.3].
- On-Campus and Mixed Mode students are more likely to spend in excess of 20 hours per week on computer-based study (59% and 67% respectively) compared with Distance students (43%) [see Figure 3a.4]. While this may seem counter-intuitive it is likely related to differing study loads between Distance and On-Campus/Mixed Mode students, with 90% of Distance students being enrolled part-time.
- Students categorised as early adopters of technology are more likely to spend over 31 hours on a computer for study purposes (33% of respondents) than those who are mid or late adopters of technology (22%), while those who are mid or late adopters of technology are more likely to spend 20 hours or less on a computer (55%) for study purposes than early adopters (44%) [see Figure 3a.5].

Time Spent on Devices for Study Purposes

- Students are using a number of devices for their study, as indicated by:
 - 39% of students use two device types for study purposes [where a device type is desktop computer, laptop computer, tablet or smart phone], 32% of students use three device types for study and 16% use all four device types for study [see Figure 3a.6];
 - smart phone and laptop usage features prominently with the most-commonly used device combination being a laptop and smart phone (21% of all respondents), while for those who use 3 devices the most commonly used combinations across respondents are laptop, tablet and smart phone, and desktop, laptop and smart phone [see Figure 3a.7]; and
 - overall, 89% of students reported using a laptop computer for study purposes, 66% reported using a smart phone, and 44% of students use a tablet or desktop computer for study purposes [see Figure 3a.8].
- The laptop is the mainstay device with students spending a high proportion of their time on a laptop doing study. 77% of students who use a laptop to study spend half or more of their time using a laptop for study purposes, showing the laptop is their study workhouse [see Figure 3a.9].
- Other devices show a lower proportion of time spent on the device doing study: 31% of students spend half or more of their time using their desktop for study, for tablets this is 13% of students and for smart phones 9% [see Figure 3a.9].
- While smart phones have a lower proportion of time allocated to study compared to other devices, we do not know the quantum of time spent on those devices (e.g. twice as much actual time may be spent on smart phones than laptops). Thus a lower *proportion* of study time may equate to a similar amount of *actual* study time between smart phones and other devices. It is reasonable to expect students are spending longer overall on mobile devices than other devices. For future research we may need to ask the question what proportion of time students spend studying per device to understand what proportion of study time each device accounts for.
- Post-graduate – Higher Degree or Research students are more likely to use a larger proportion of time on their smart phone for study – 23% said they spend 50% or more of their time on a smartphone for study purposes, compared to 7% of Undergraduate students and 13% of Post-graduate – Coursework students [see Figure 3a.10].
- A higher proportion of On-Campus (86% of students) students spend 50% or more of their time using a laptop for study purposes compared to Distance students (71%), with Mixed Mode students in between at 78% [see Figure 3a.11].

Location of Online Study

The vast majority of students (81%) – whether Distance or On-Campus – are usually in their place of residence when studying online [see Figure 3a.12]. **This continues the results of the 2014 and 2010 surveys.**

Off Campus Internet Access

- Overall, off campus internet access among students continues to be predominantly wireless broadband (38%) or ADSL (27%) [see Figure 3a.13]. Caution should be taken when considering this result as students were asked for their *primary* means of internet access – which may be interpreted as the connection used most often. Thus, it would not necessarily be correct to assume that those students using wireless broadband do not have other means of internet access, rather that wireless broadband is simply the internet connection they use most commonly.

While wireless broadband and ADSL are still the primary means of internet access in 2016, the proportion of students using ADSL as a primary means of access is in decline. ADSL was used by 64% of students in 2010, 35% in 2014, and now 27% in 2016. This decreasing share appears to have occurred due to corresponding growth in 3G or 4G mobile connection (7% in 2014 to 15% in 2016) and the National Broadband Network (2% in 2014 to 9% in 2016).

- Post-graduate – Higher Degree and Research students are more likely to use a 3G/4G mobile connection as their primary means of internet access (24%) than Undergraduate (15%) and Post-graduate Coursework (10%) students [see Figure 3a.14].
- On-Campus and Mixed Mode students are more likely to use a 3G/4G mobile connection as their primary means of internet access (25% and 23%) than Distance students (7%), and Distance students are twice as likely to use the National Broadband Network (12%) as On-Campus/Mixed Mode students (6% each) [see Figure 3a.15].
- Students under 26 are more likely to use a 3G/4G mobile connection as their primary means of internet access (21%) than those over 25 (10%), and those aged over 25 are more likely to use ADSL (34%) than those 25 and under (15%) [see Figure 3a.16].
- Indigenous students are slightly more likely to use a 3G or 4G mobile connection as their primary means of internet access (18%) than non-Indigenous students (13%), with non-Indigenous students more likely to use the National Broadband Network (11% vs 3%). However, the small number of Indigenous students in the sample (4%) relative to non-indigenous students makes direct comparison problematic [see Figure 3a.17].
- Domestic students are more likely to use ADSL as their primary means of internet access (29%) than International students (13%). International students more likely to use a 3G/4G mobile connection as their primary internet access (23%) compared with Domestic students (13%) and International students are also more likely to use Wireless Broadband (49%) than Domestic students (36%) [see Figure 3a.18].

Mobile Access of CSU Services

- Just over 16% of students report that they do not access any CSU services by mobile device. Of the 84% of students who are accessing services by mobile, almost all (95%) are accessing their Interact2 subject site, 70% are accessing Subject Outlines, and many are accessing multiple other services [see Figure 3a.19].

Here we see that the use of such devices has become a critical means of accessing CSU services/resources for most of our students. In 2010, it was found that only 40% of students had access to an internet-enabled mobile phone. In 2014 33% of students reported they do not access any CSU services by a mobile device which compares to only 16% of students in 2016.

- 19% of students considered mid to late adopters of technology report that they do not access any CSU services by mobile device compared to 12% of students who are early adopters of technology. Students who are early adopters of technology are particularly more likely to access the CSU Library, Subject Outlines and Subject Evaluations than mid to late adopters [see Figure 3a.20].

CSU Services students would like to access via mobile

- While some students did provide new services they would like to access via mobile, the majority of students expressed a desire to have Blackboard Mobile and Online Meeting apps that work with the technology they have; lack of support for Apple products was mentioned frequently. Also mentioned was the inability to use the full features of Interact2 through the mobile app (such as accessing resources) or trouble retrieving recorded videos from Online Meeting. A large number of students also wanted CSU Replay to work well with their devices [see Figure 3a.21].
- Apps for CSU services students suggested as useful included the Library's services, all CSU services and websites being made mobile-friendly, EASTS (particularly being able to access feedback on marked assessments), Student Administration, a Social App to allow students to communicate and organise events, a Timetable app, Turnitin, and improving CSU2 [see Figure 3a.21].

Mobile Apps used to help with studies

- The Blackboard Mobile app is by far the most common mobile app used by students to help with their studies. This is followed by Adobe Connect, CSU2, Evernote, Adobe Reader, Prezi, Microsoft Word and Dropbox and OneNote. Other apps used by students for their studies include Refme, iBooks, EndNote, Google Drive, Youtube, OneDrive, Gmail, Google Keep, Bluefire Reader, Facebook, dictionary.com, Bookshelf and Notes, Notability and Pages [see Figure 3a.22].
- 88 students out of the 587 who responded to the open-ended question on mobile apps used to help with studies indicated they use no mobile apps for study.

Figure 3a.1 – CSU Connect

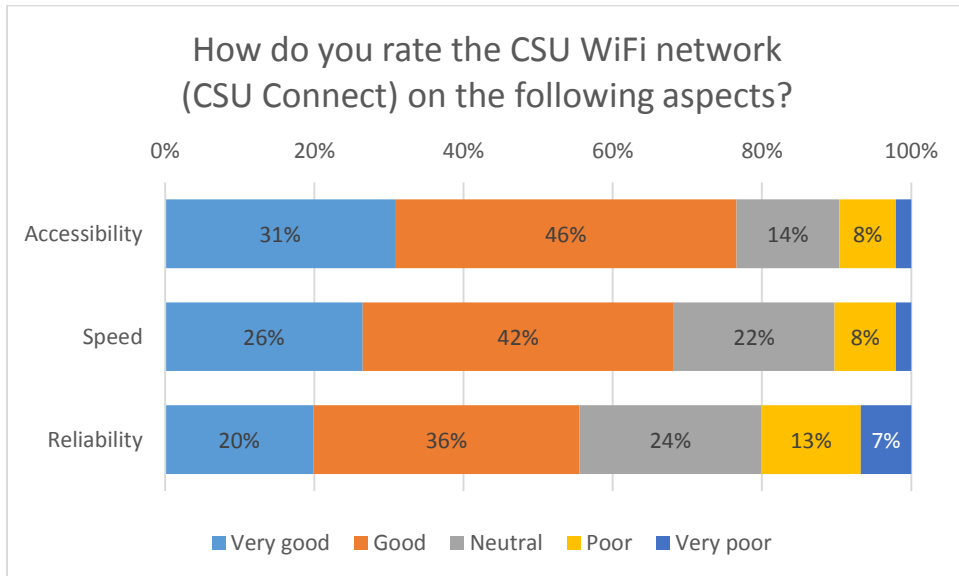


Figure 3a.2 – Time Spent on Computer-based Study per Week

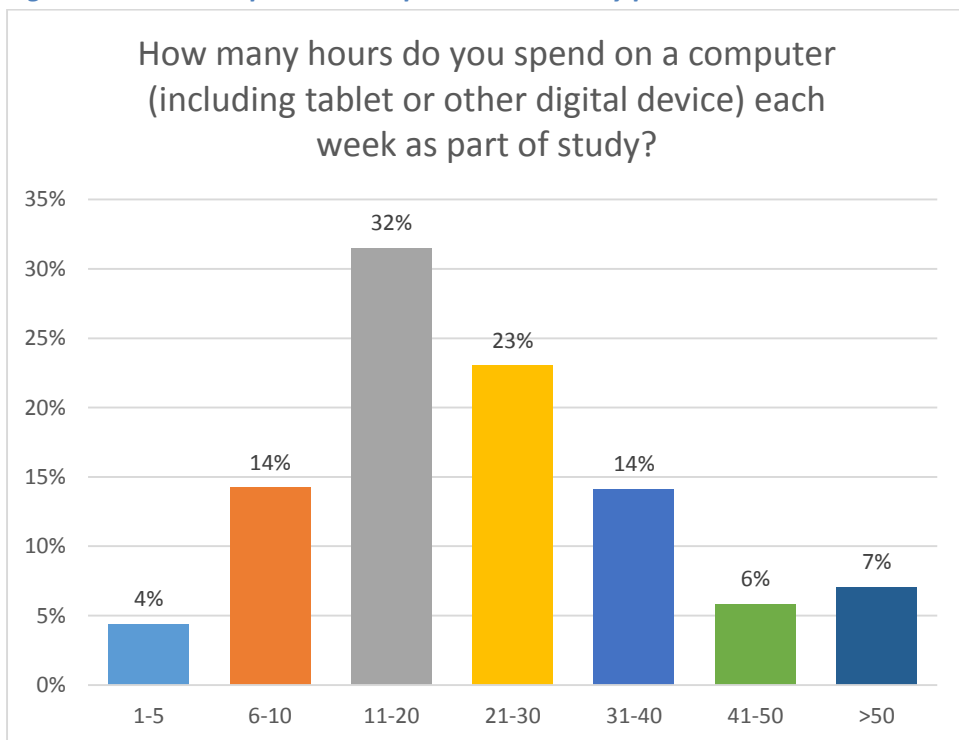


Figure 3a.3 – Time Spent on Computer-based Study per Week by Level of Study

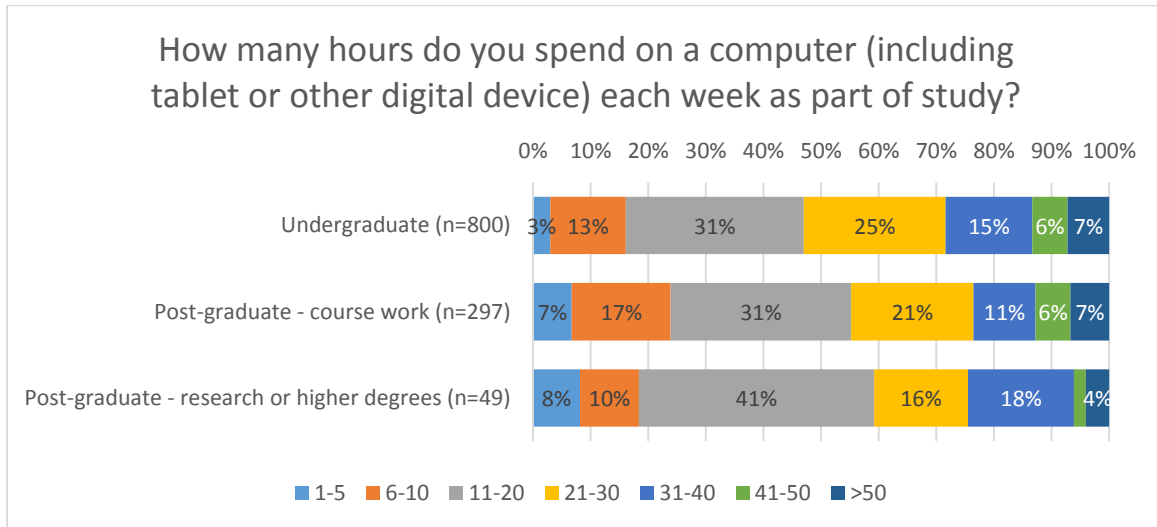


Figure 3a.4 – Time Spent on Computer-based Study per Week by Mode

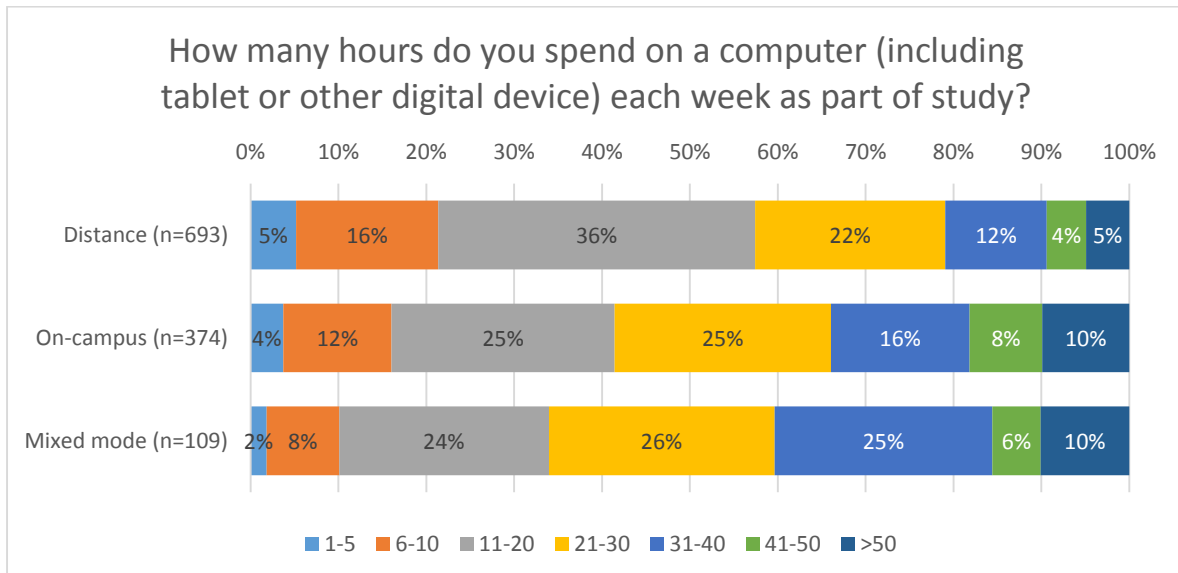


Figure 3a.5 – Time Spent on Computer-based Study per Week by Attitude Toward Technology

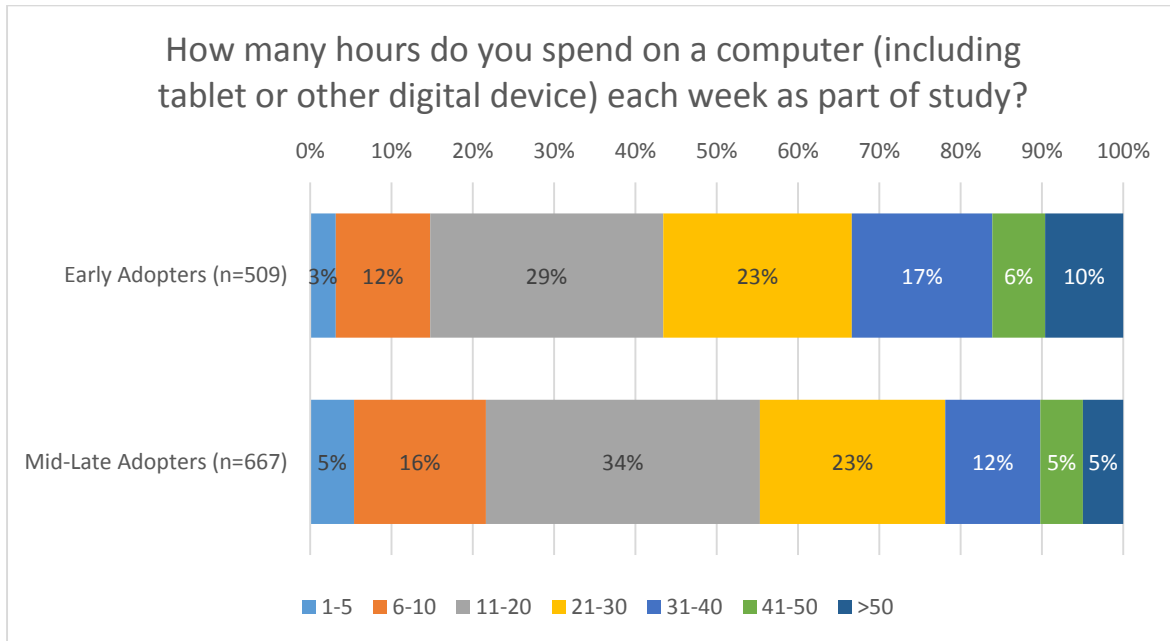


Figure 3a.6 – Number of Device Types used by Students

Where Device Type is one of Desktop Computer, Laptop Computer, Tablet or Smart Phone.

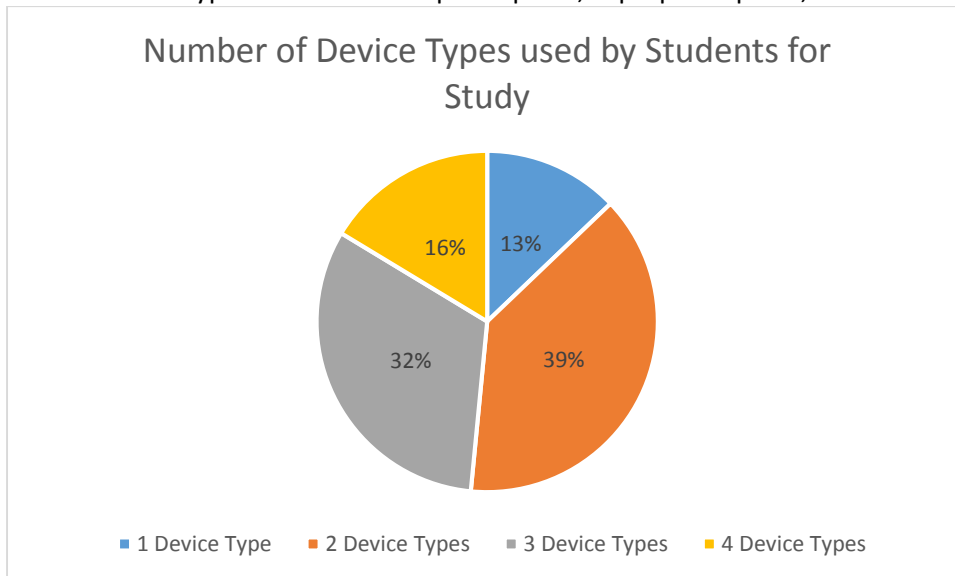


Figure 3a.7 – Device Types used by Students for study

Device Types Used	# of Students	% of Students
Laptop, Smartphone	254	21%
Desktop, Laptop, Tablet, Smartphone	202	16%
Laptop, Tablet, Smartphone	179	14%
Desktop, Laptop, Smartphone	140	11%
Laptop	121	10%
Laptop, Tablet	94	8%
Desktop, Laptop	72	6%
Desktop, Laptop, Tablet	47	4%
Desktop	37	3%
Desktop, Tablet, Smartphone	31	3%
Desktop, Smartphone	29	2%
Desktop, Tablet	23	2%
Tablet, Smartphone	6	< 1%
Tablet	1	< 1%

Figure 3a.8 – Device Types used by Students for study

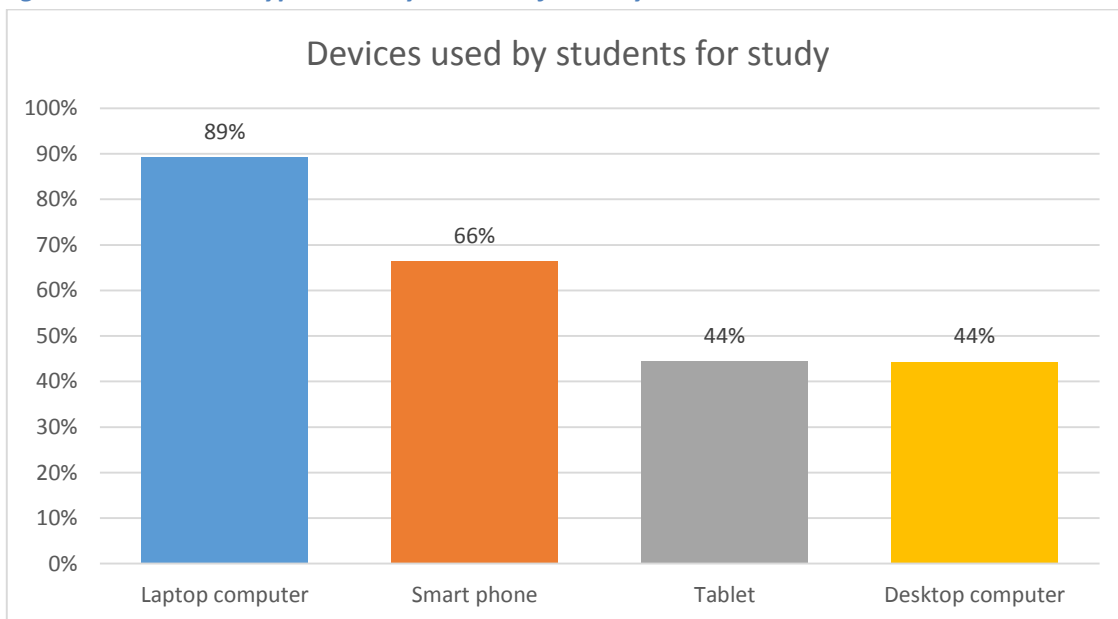


Figure 3a.9 – Time on devices used for study purposes – Not Applicable removed

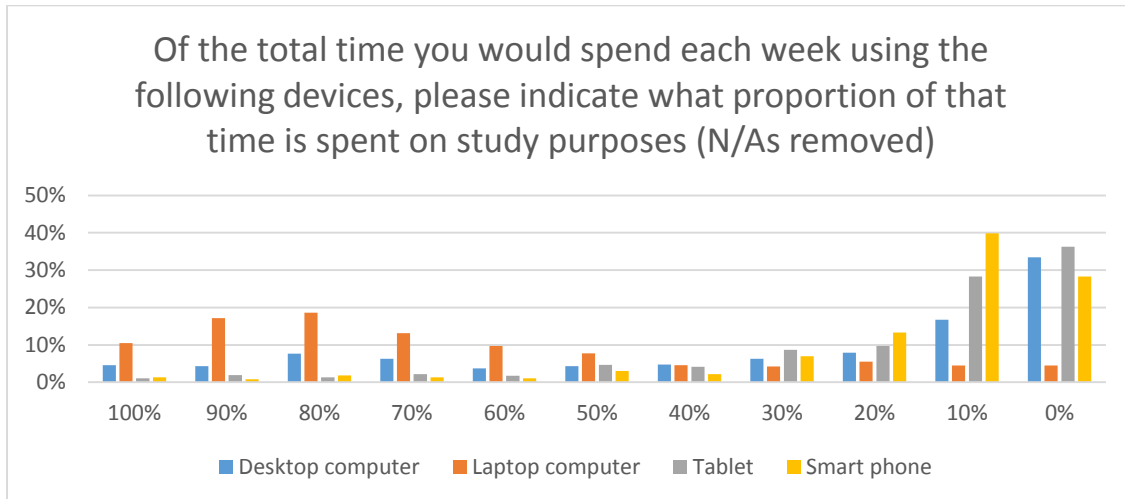


Figure 3a.10 – Time on devices used for study purposes by Level of Study – Not Applicable removed

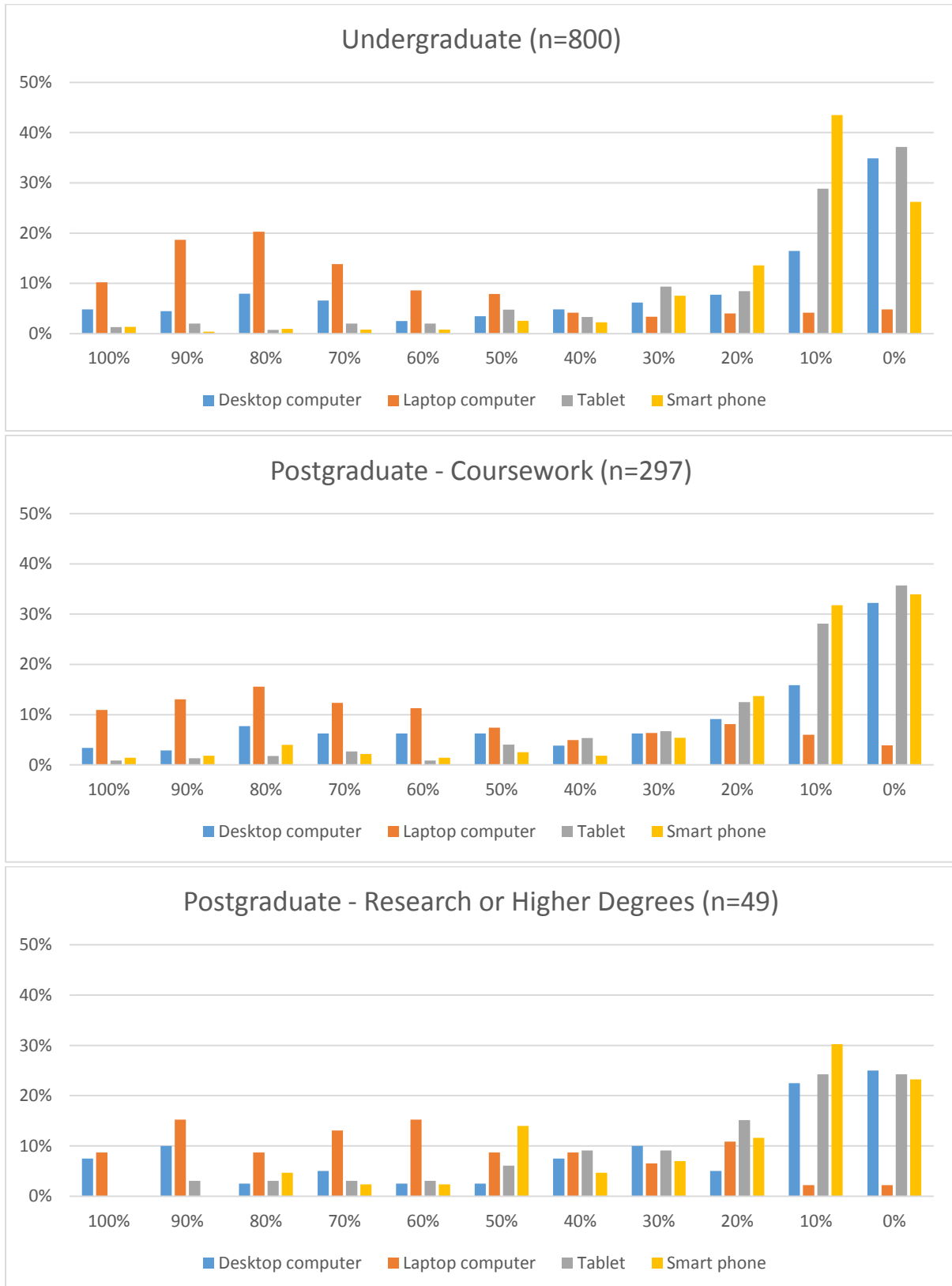


Figure 3a.11 – Time on devices used for study purposes by Mode – Not Applicable removed

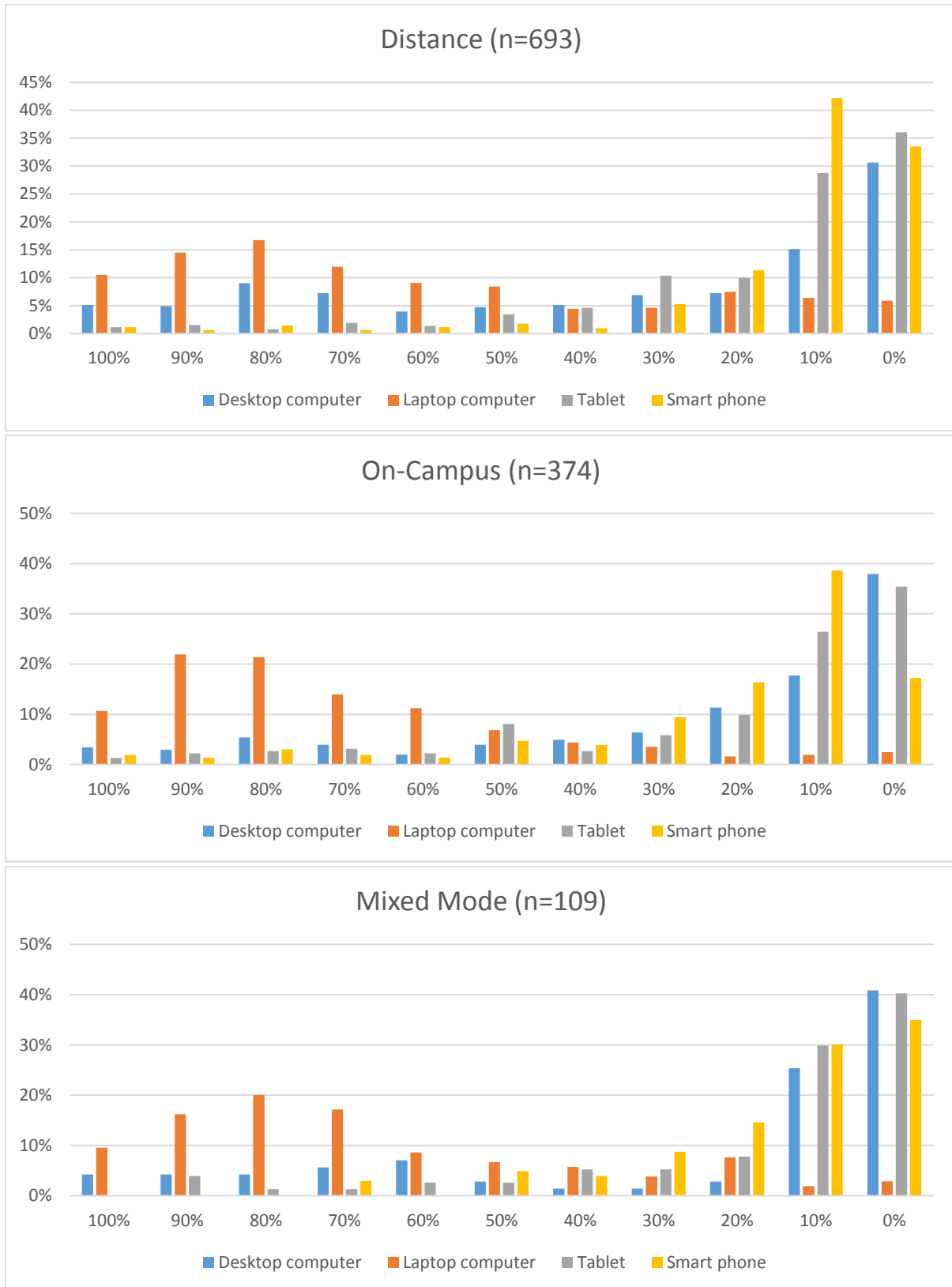


Figure 3a.12 – Location of Study

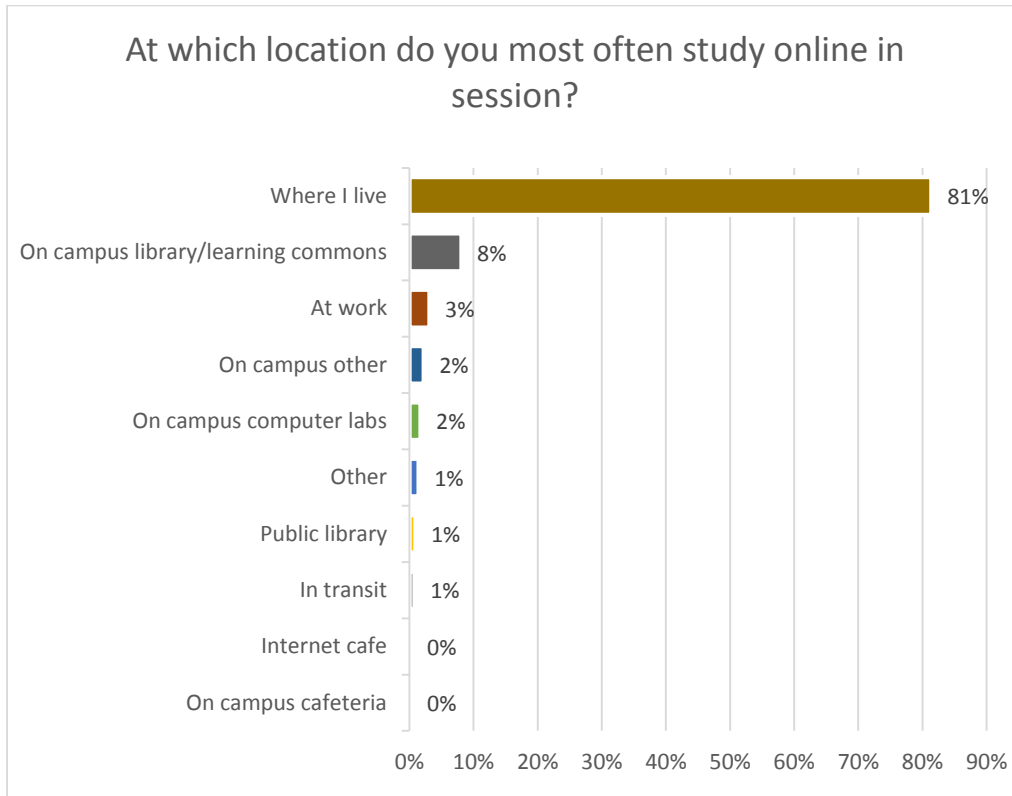


Figure 3a.13 – Primary Off-Campus Internet Access

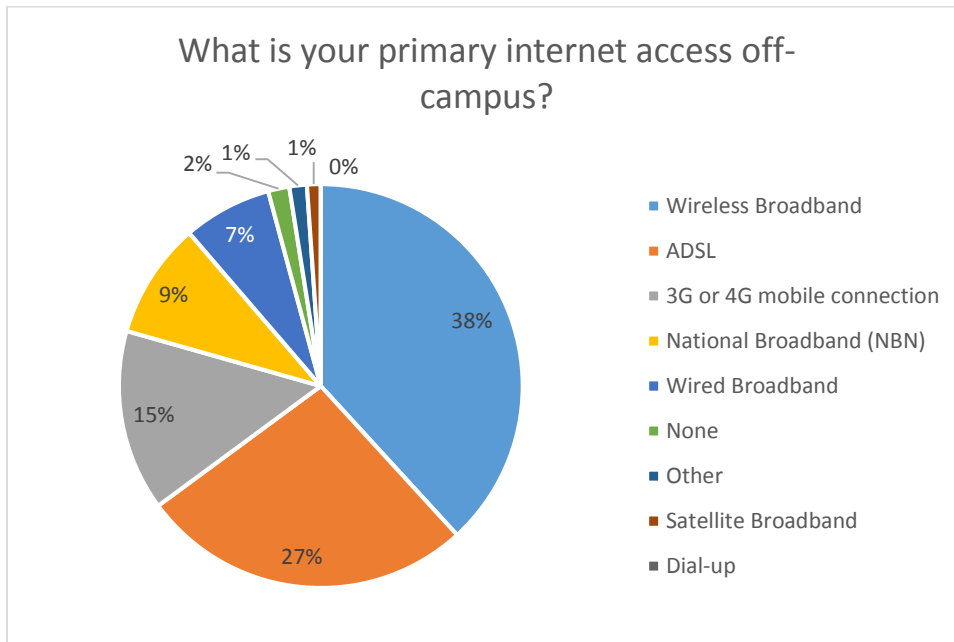


Figure 3a.14 – Primary Off-Campus Internet Access by Level of Study

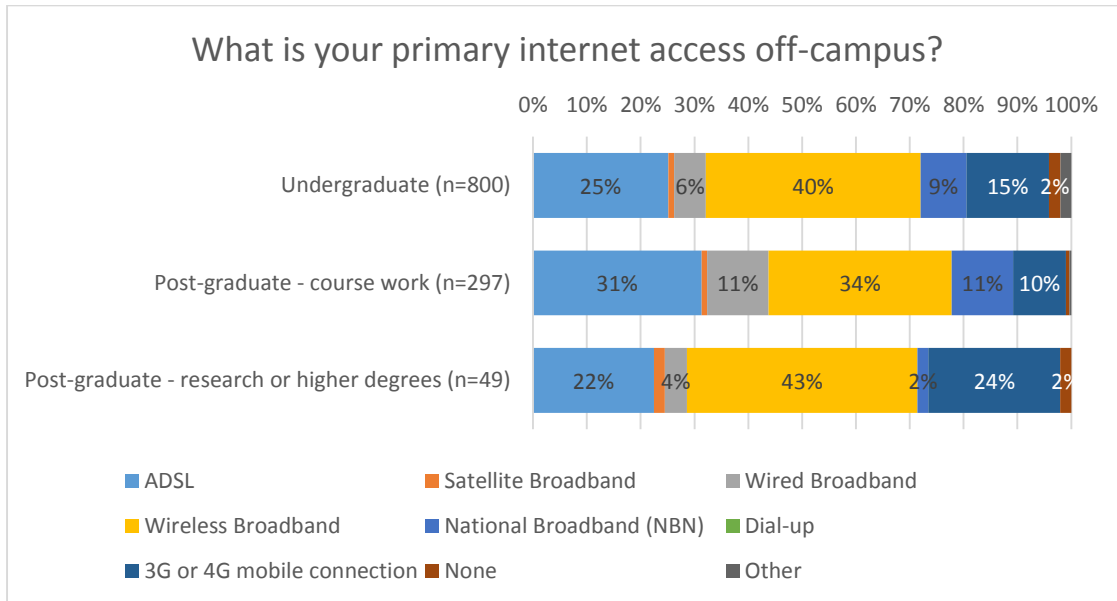


Figure 3a.15 – Primary Off-Campus Internet Access by Mode

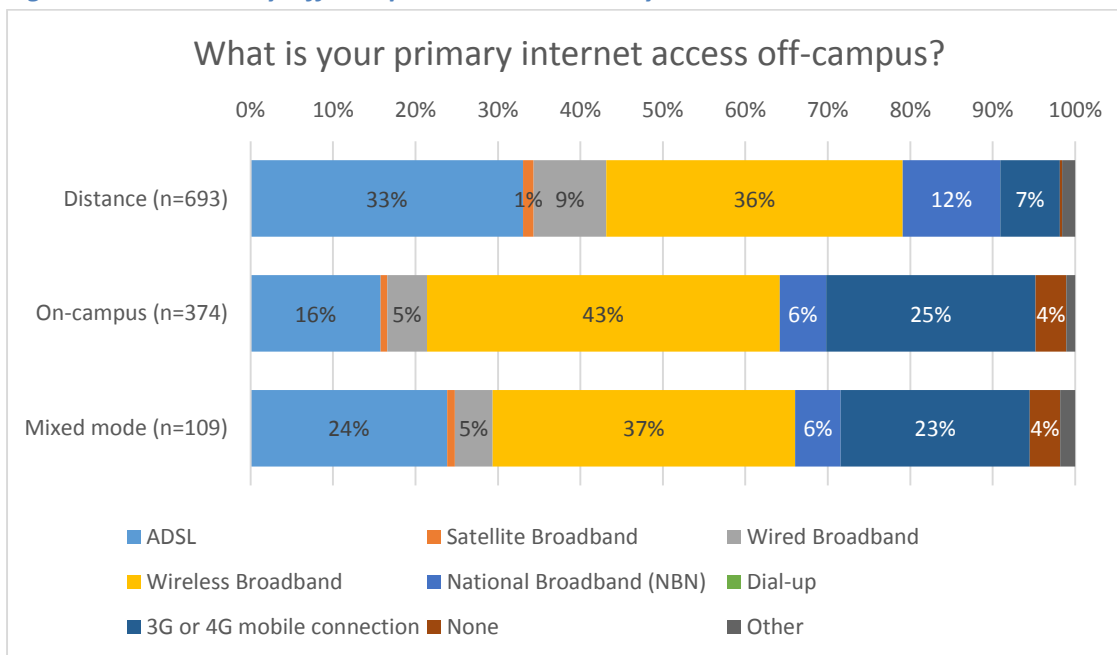


Figure 3a.16 – Primary Off-Campus Internet Access by Age

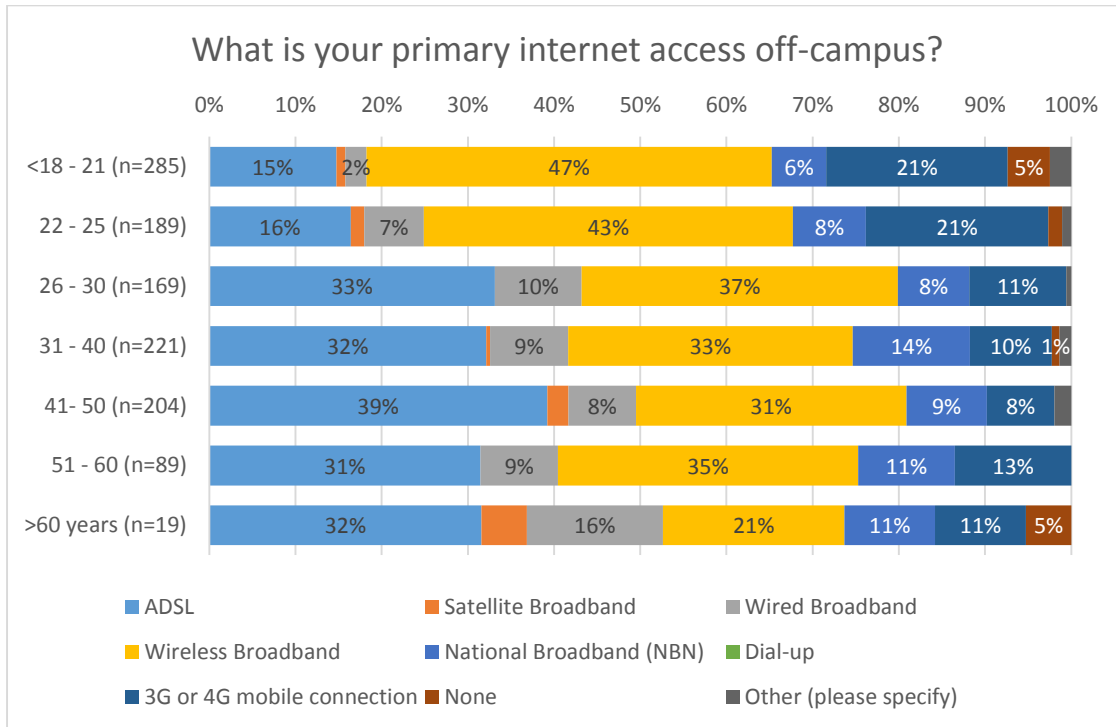


Figure 3a.17 – Primary Off-Campus Internet Access by Cultural Background

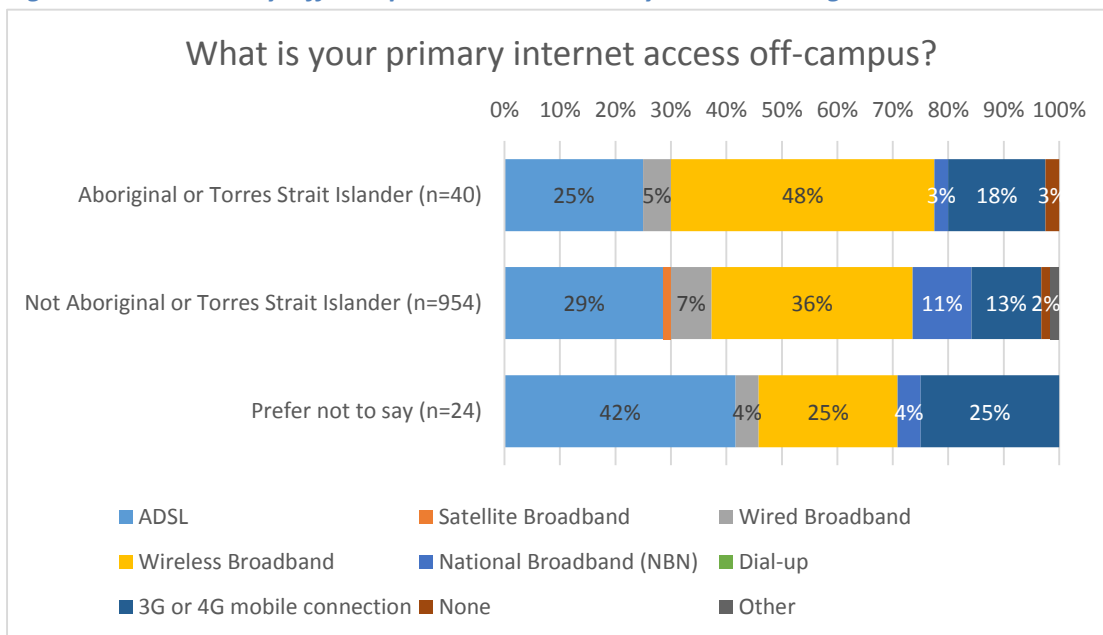


Figure 3a.18 – Primary Off-Campus Internet Access by Domesticity

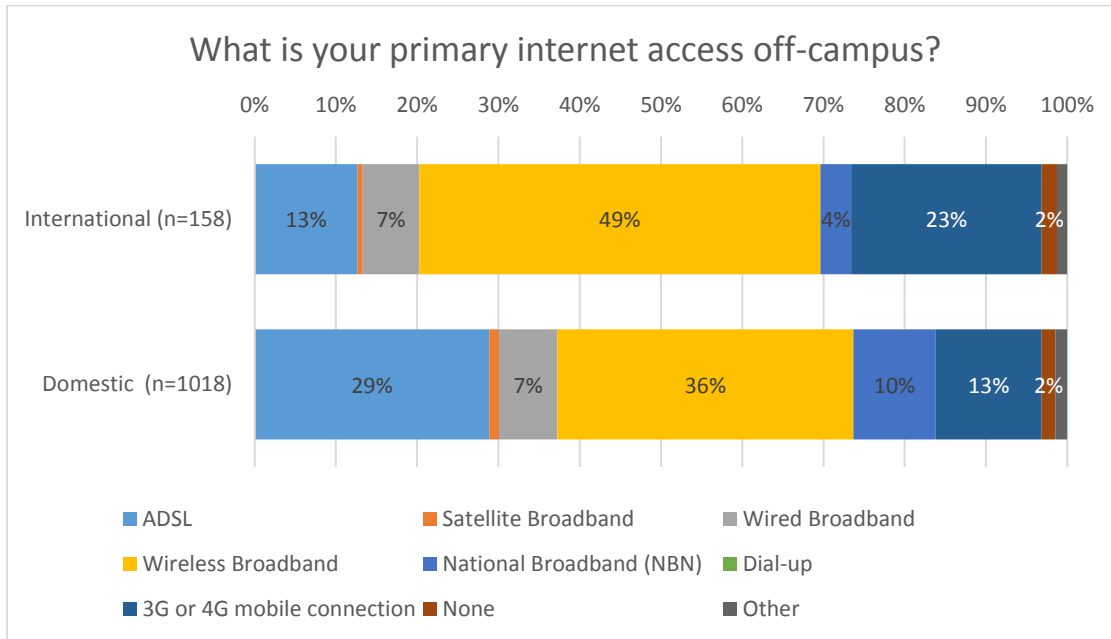


Figure 3a.19 – Mobile Access of CSU Services

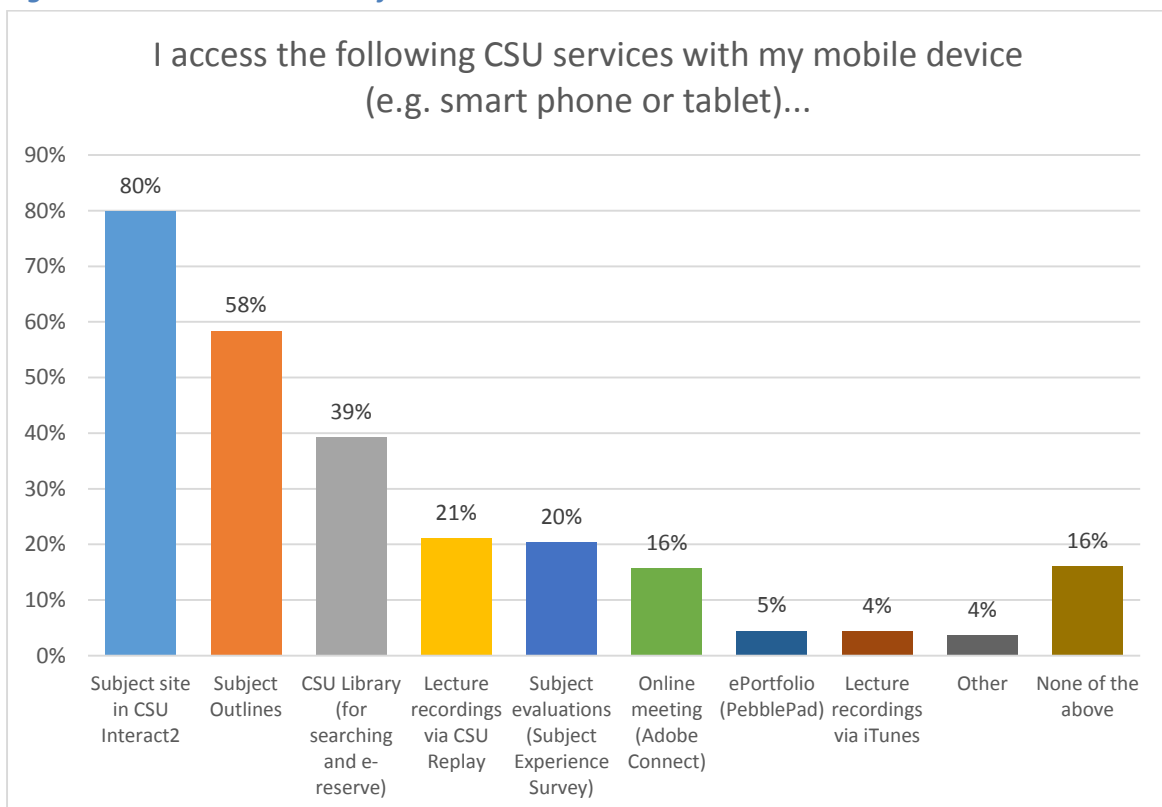


Figure 3a.20 – Mobile Access of CSU Services by Attitude Toward Technology

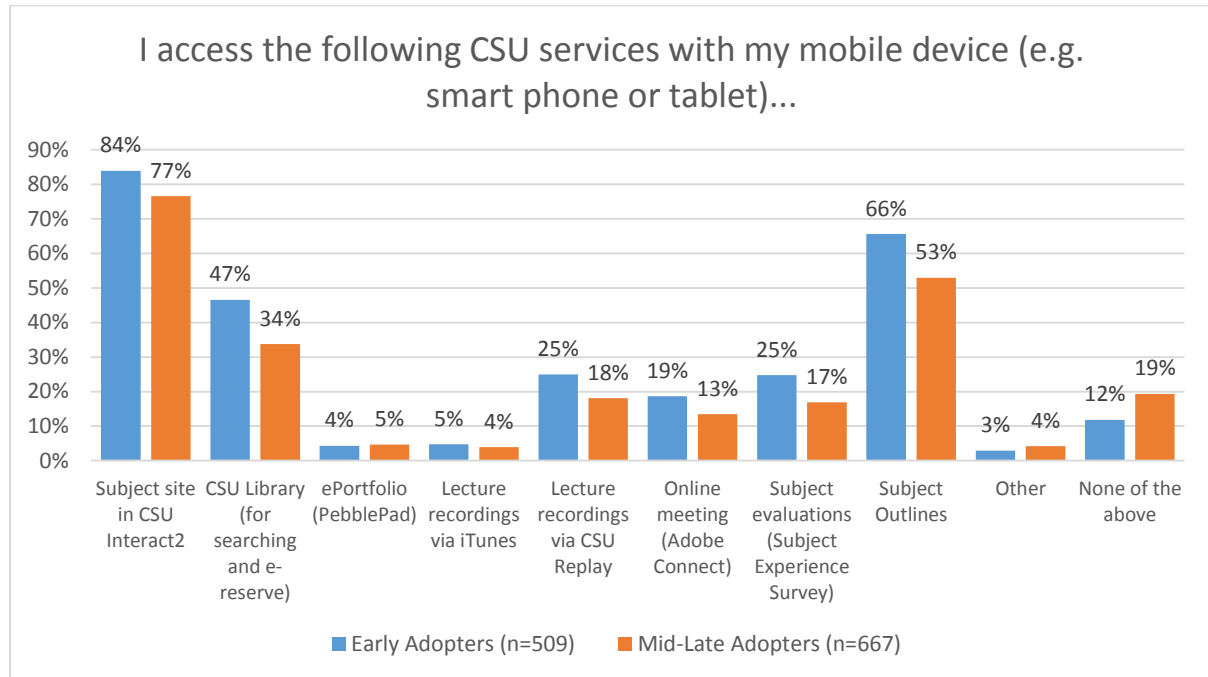


Figure 3a.21– CSU Services you would like to access by mobile app

372 students responded to this question.



Figure 3a.22 – Mobile apps that you use to help with your studies

587 students responded to this question.



3b. General Experiences of Interact2

This section explores students' experiences in the use of and support for Interact2. Key findings are as follows.

Experiences of Interact2

- Interact2 is a positively-viewed learning environment at CSU [see Figure 3b.1]:
 - 94% of students agreed that their overall experience of the availability of Interact2 was positive, with 23% agreeing “very strongly”;
 - 90% of students agreed their overall experiences of the functionality (19% “very strongly”) of Interact2 was positive; and
 - 90% of students agreed their overall experiences of use (20% “very strongly”) of Interact2 was positive.

Compared to the Interact system present in 2014, this is an increase from 85% of students agreeing their overall experience of Interact was positive for the three areas of functionality, availability and use.

- Attitudes to Interact2 are more strongly favourable among Undergraduate students, followed by Post-graduate Coursework students then Post-graduate - Research students [see Figures 3b.2 to 3b.4].
- Attitudes to Interact2 are more strongly favourable among On Campus students, followed by and Distance students then Mixed Mode students [see Figures 3b.5 to 3b.7].

Use of and Support for Interact2

- Students view the use of and support for Interact2 positively [see Figure 3b.8]:
 - 90% of students agreed that they feel confident using Interact2, with 29% agreeing “very strongly”;
 - 75% of students agreed that Interact2 subject sites support interaction with fellow students;
 - 71% agreed that there were adequate opportunities for training and/or support in using Interact2;
 - 66% of students agreed they were satisfied with the access to Interact2 via mobile devices; and
 - 87% of students had contacted Student Central for help with Interact2 queries and of those 87%, 67% agreed Student Central could help them with Interact2 queries.
- Post-graduate – Higher Degree or Research students were more likely to feel less confident using Interact2 (82% of students) than Undergraduate and Post-graduate Coursework students (both 91%) [see Figure 3b.9].
- Distance students are more likely to agree that Interact2 subject sites support interaction with fellow students (78% of students) compared to On-Campus (72%) and Mixed Mode (66%) students [see Figure 3b.10].

- Early adopters of technology are more likely to “very strongly agree” or “strongly agree” they feel confident using Interact2 (60% of respondents) compared to mid to late adopters of technology (48%) [see Figure 3b.11].

Figure 3b.1 – Overall Experiences of Interact2

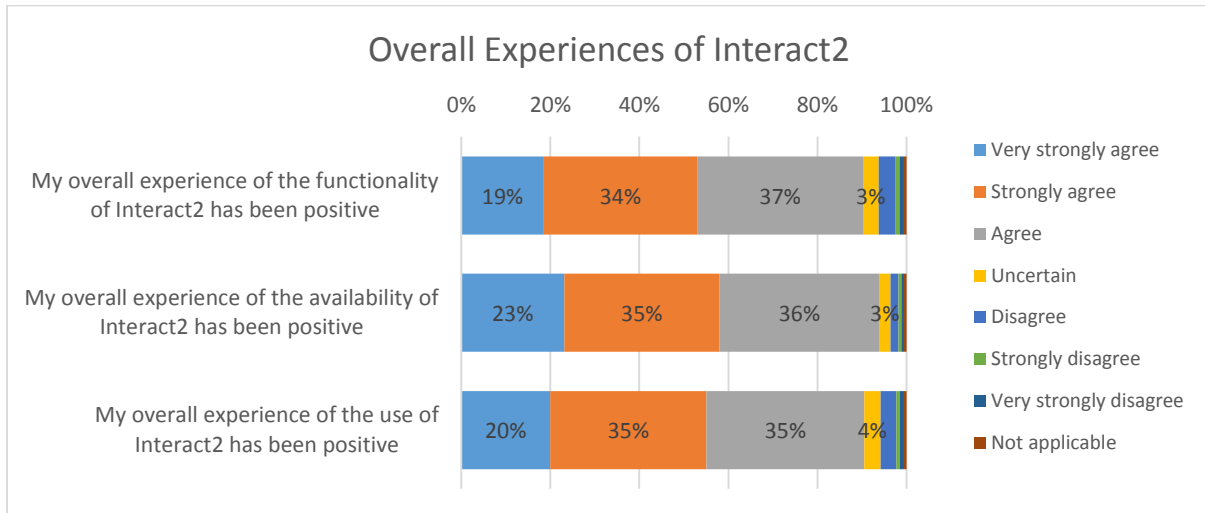


Figure 3b.2 – Overall Experience of the Functionality of Interact2 by Level of Study

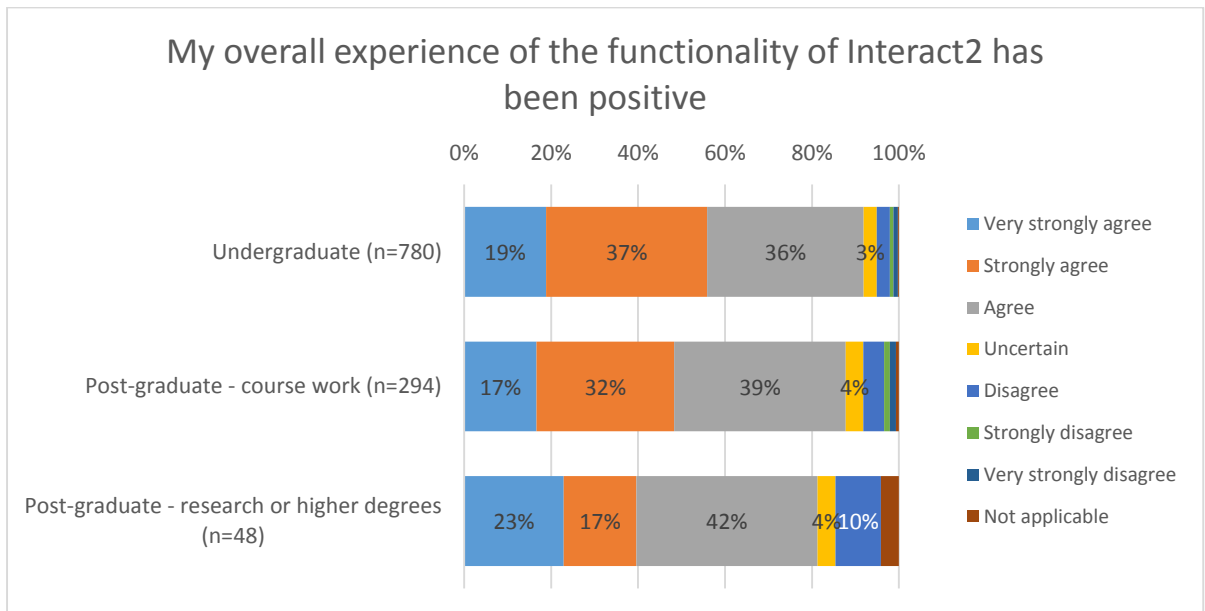


Figure 3b.3 – Overall Experience of the Availability of Interact2 by Level of Study

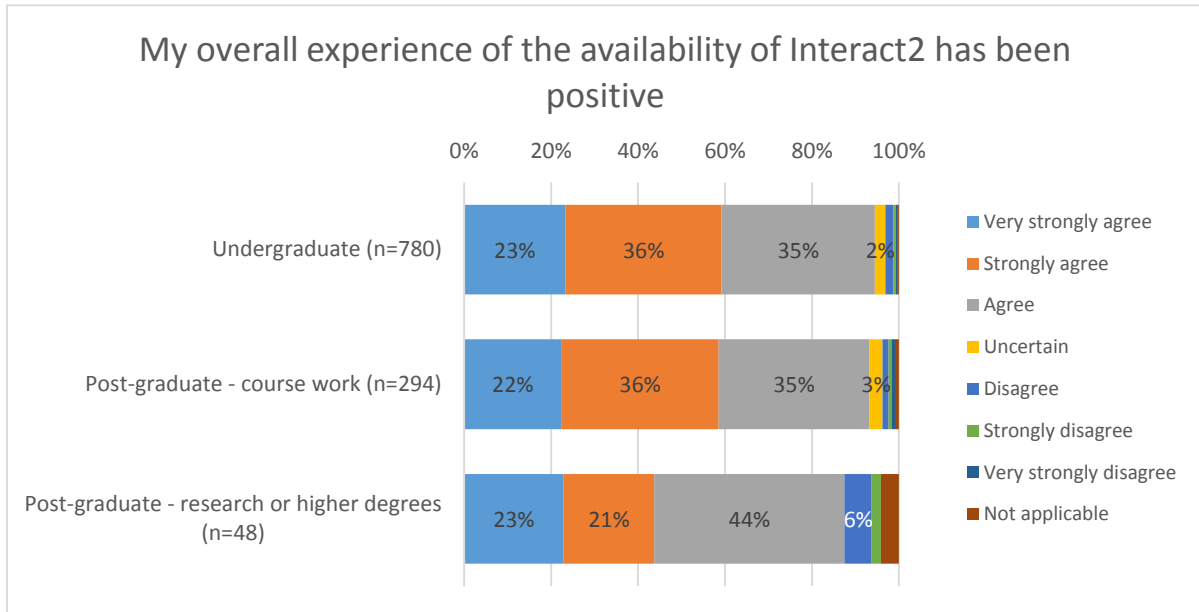


Figure 3b.4 – Overall Experience of the Use of Interact2 by Level of Study

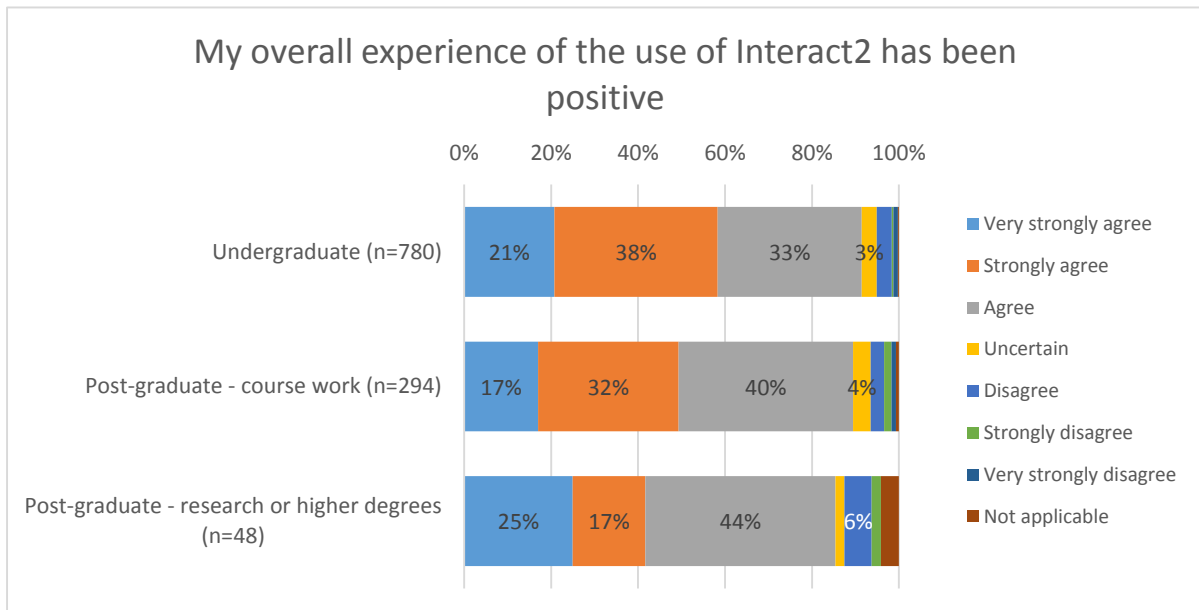


Figure 3b.5 – Overall Experience of the Functionality of Interact2 by Mode

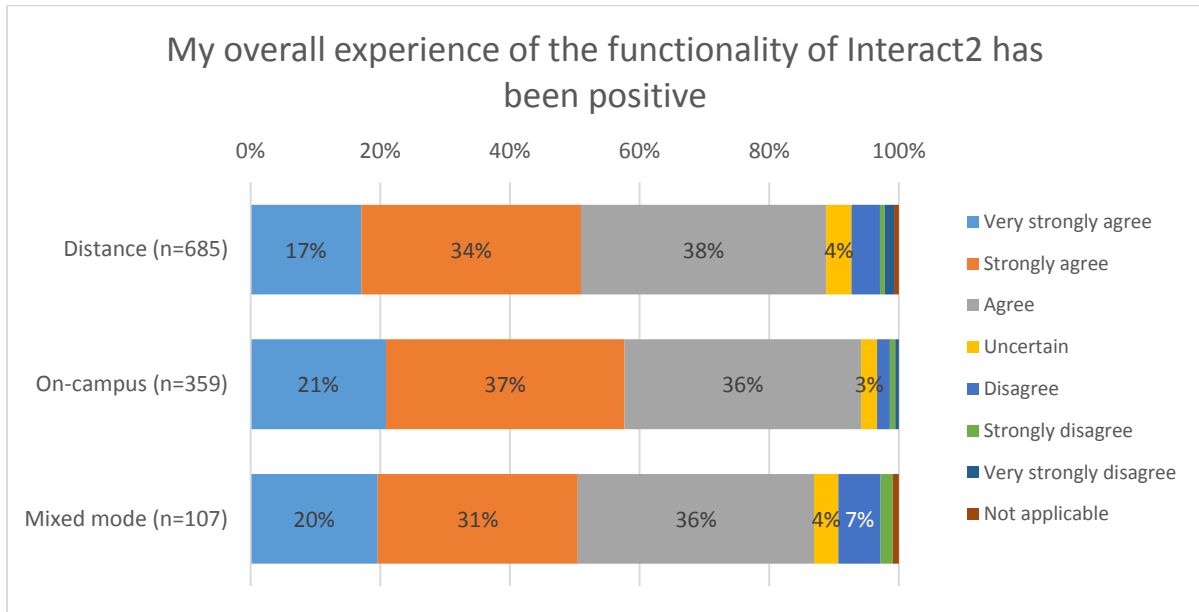


Figure 3b.6 – Overall Experience of the Availability of Interact2 by Mode

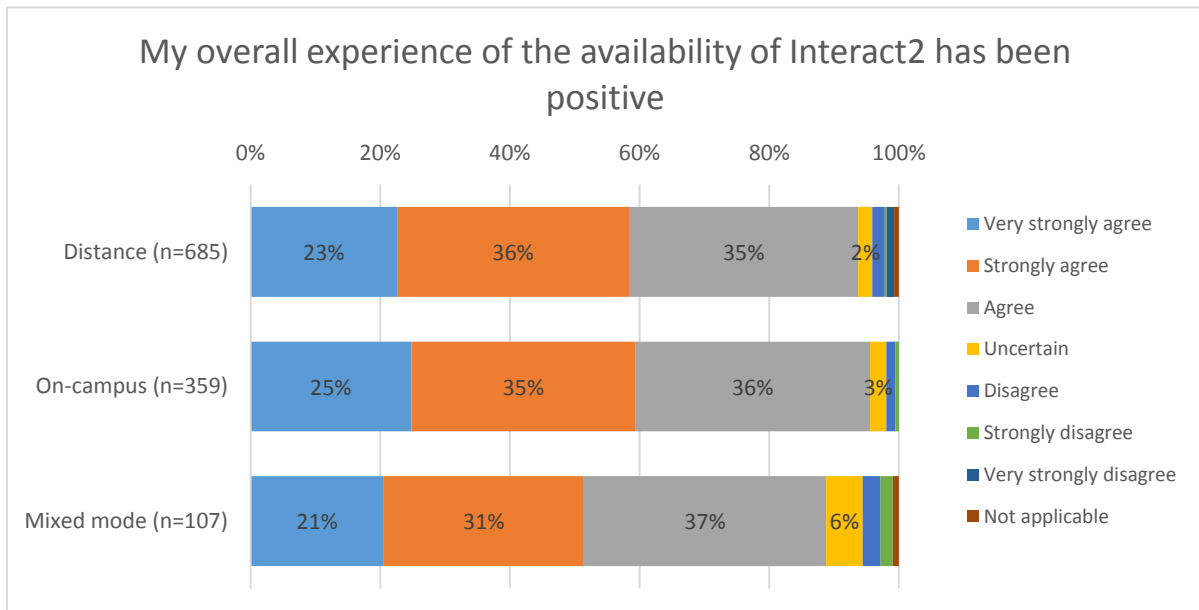


Figure 3b.7 – Overall Experience of the Use of Interact2 by Mode

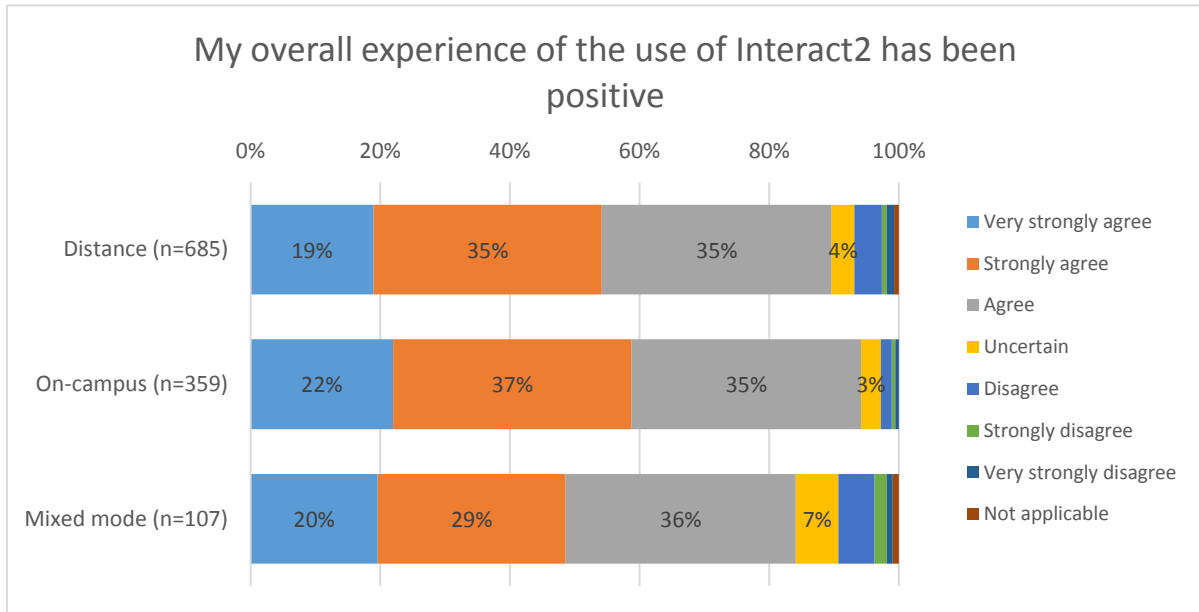


Figure 3b.8 – Views of use of and support for Interact2

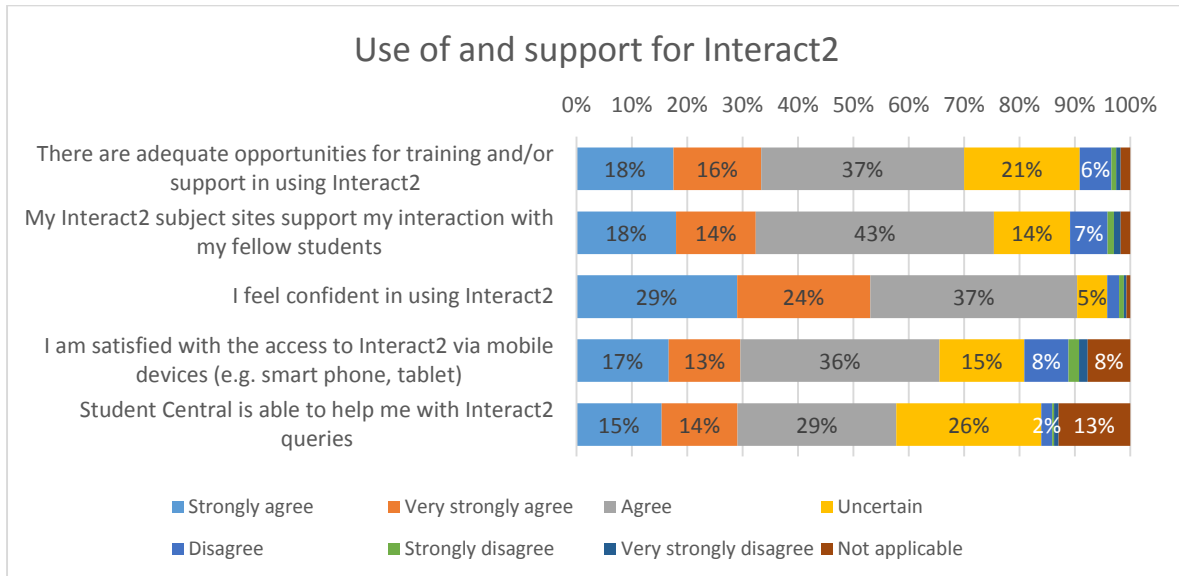


Figure 3b.9 – I feel confident in using Interact2 by Level of Study

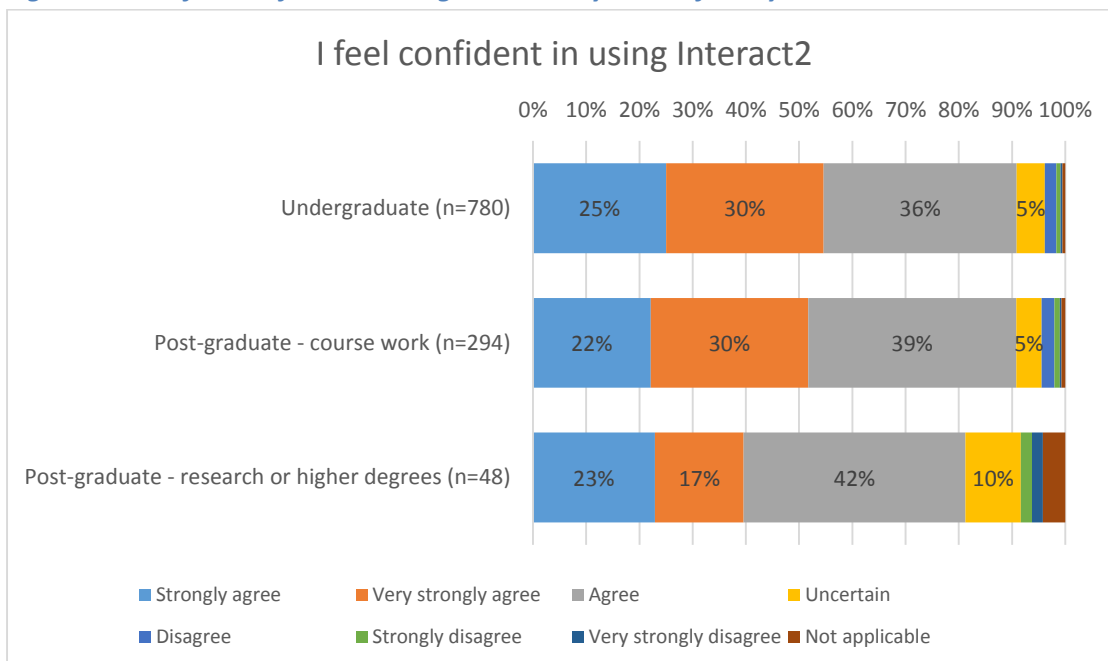


Figure 3b.10 – Interact2 supports my interaction with my fellow students by Mode

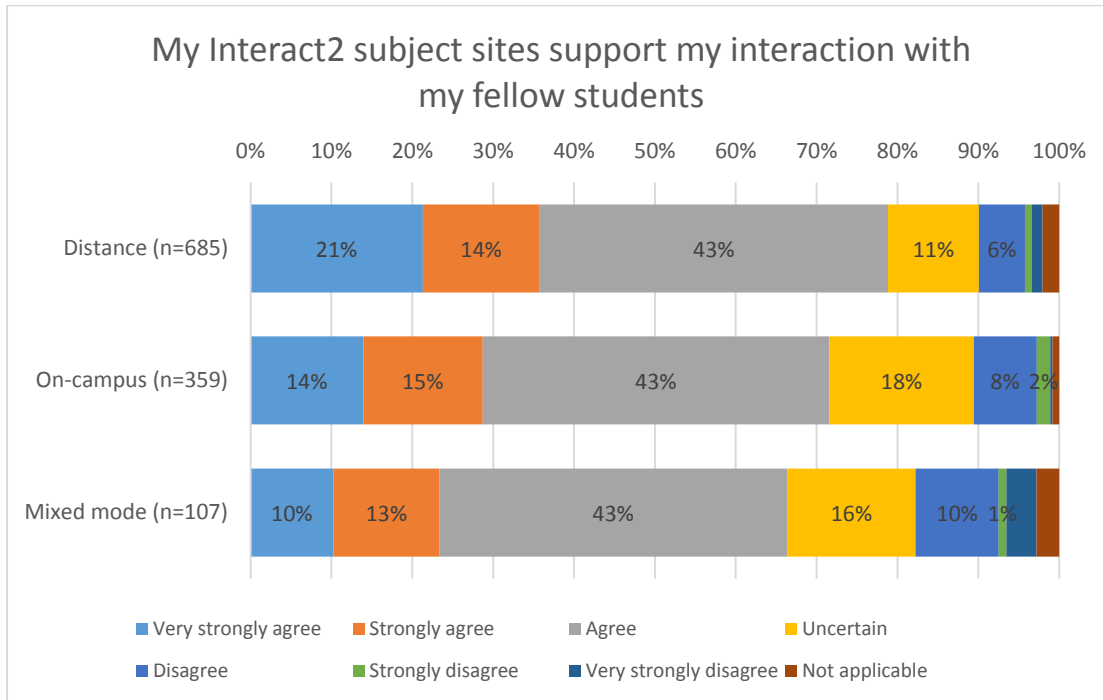
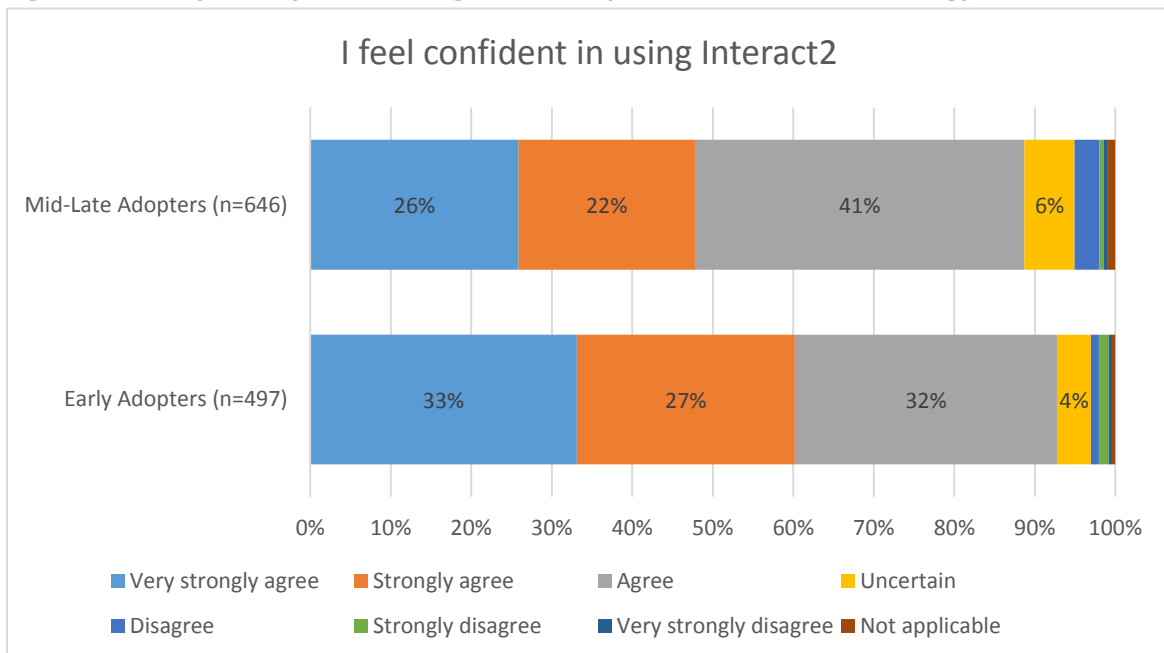


Figure 3b.11 – I feel confident in using Interact2 by Attitude Toward Technology



3c. Technologies for Delivering Learning Content

This section explores students' perceptions of learning technologies that deliver content for learning at CSU. Key findings are as follows.

Interact2 Content and Resources

- Students are positive about Interact2 content and resources [see Figures 3c.1-2]:
 - 87% of students are positive (where positive indicates always or often) that Interact2 subject sites provide easy access to the learning content needed for their studies;
 - 81% of students are positive that it was easy to find information that is important to them in the (online) Subject Outlines;
 - 87% of students have accessed online lecture recordings via CSU. Of these, 74% were positive that the use of online lecture recordings (via CSU Replay) enhances their learning experience;
 - 73% of students are positive that the learning content in their Interact2 subject sites makes use of different formats, media and activities - not just reading static text;
 - 92% of students have accessed resources in the library e-reserve (online readings). Of these, 69% were positive that resources in the library e-reserve (online readings) for their subjects are easy to access; and
 - 84% of students have accessed learning content via a mobile. Of these, 65% were positive that, overall, the learning content in subjects can be readily accessed via mobile device.

Simulations and Adaptive Learning Tools

- 24% of students have experienced delivery of content via simulations at CSU [see Figure 3c.3].
- Students in the Faculty of Arts are somewhat less likely to have experienced delivery of content via simulations (20%) than students in the faculties of Science (26%), Business (25%) and Education (24%) [see Figure 3c.4].
- On whether simulations would enhance the learning experience in their subjects:
 - 61% of all students agreed, with 36% of students uncertain or selecting "don't know/can't say" [see Figure 3c.5];
 - for the 24% of students who have experienced delivery of content via simulations at CSU, 93% agreed simulations would enhance the learning experience in their subjects, with 30% agreeing "very strongly" [see Figure 3c.6]; and
 - early adopters of technology are more likely to agree that simulations would enhance the learning experience in their subjects (66%) than mid-late adopters (56%) [see Figure 3c.7].
- 33% of students have experienced delivery of content via adaptive learning tools at CSU [see Figure 3c.8].

- Students in the Faculty of Arts are least likely to have experienced delivery of content via adaptive learning tools (24%) than students in the faculties of Science (39%), Business (34%) and Education (29%) [see Figure 3c.9].
- On whether adaptive learning tools would enhance the learning experience in their subjects:
 - 65% of all students agreed, with 33% of students uncertain or selecting “don’t know/can’t say” [see Figure 3c.10];
 - for the 33% of students who have experienced delivery of content via adaptive learning tools at CSU, 96% agreed adaptive learning tools would enhance the learning experience in their subjects, with 28% agreeing “very strongly” [see Figure 3c.11];
 - students in the Faculty of Science are also most likely to agree adaptive learning tools would enhance the learning experience in their subjects (69%), with those in the Faculty of Arts least likely to agree (but still at 57%), and the faculties of Education (65%) and Business (64%) in between [see Figure 3c.12]; and
 - early adopters of technology are more likely to agree that adaptive learning tools would enhance the learning experience in their subjects (71%) than mid-late adopters (61%) [see Figure 3c.13].

Figure 3c.1 – Interact2 content – Not Applicable Removed

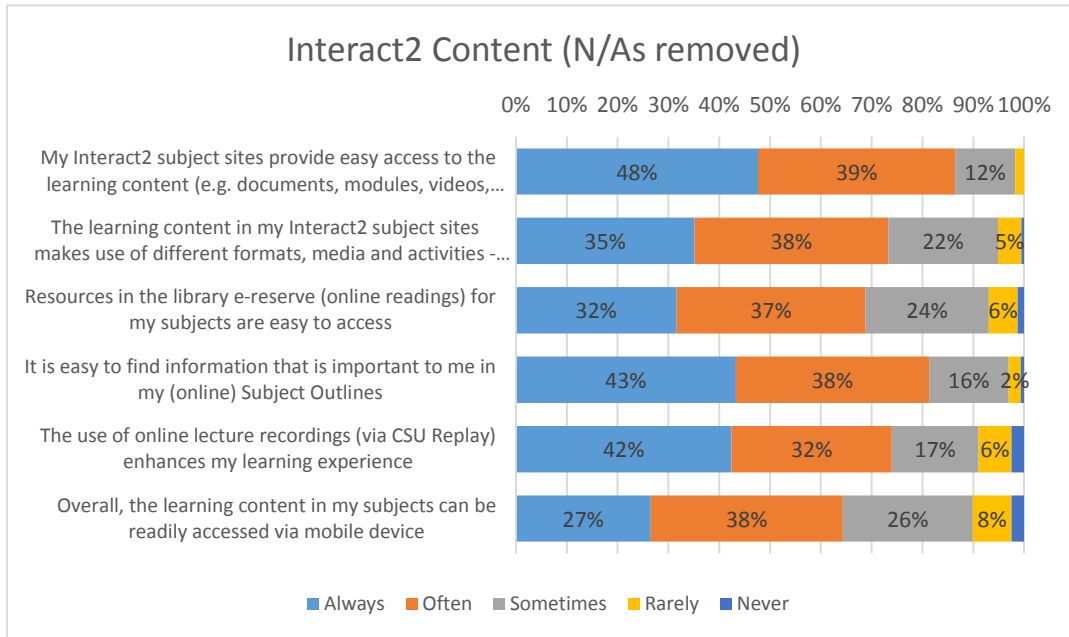


Figure 3c.2 – Interact2 content

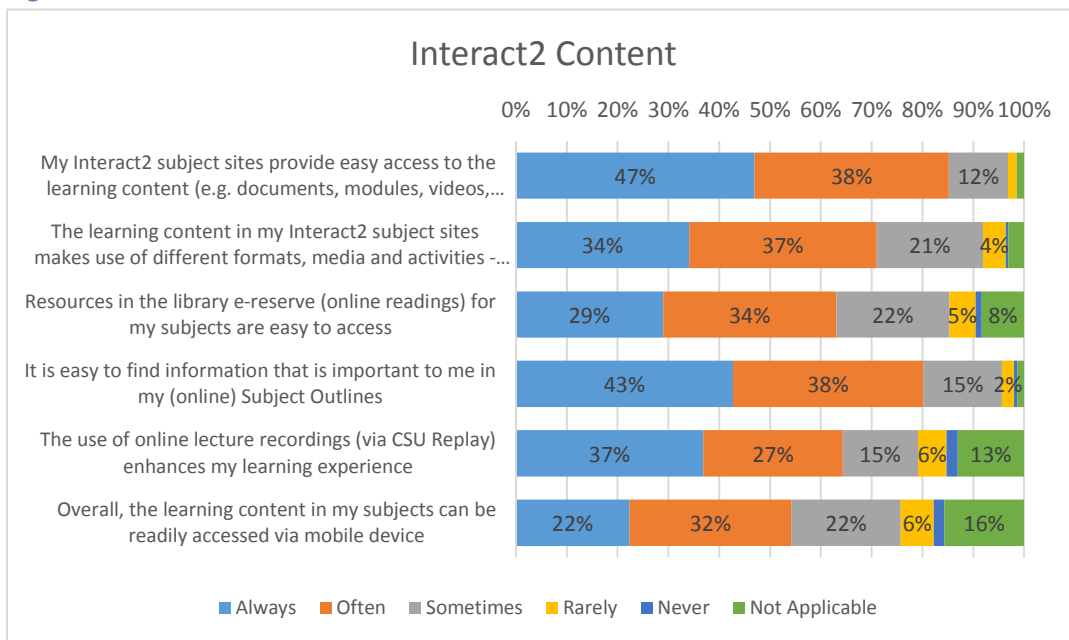


Figure 3c.3 – Have you experienced delivery of content via Simulation at CSU?

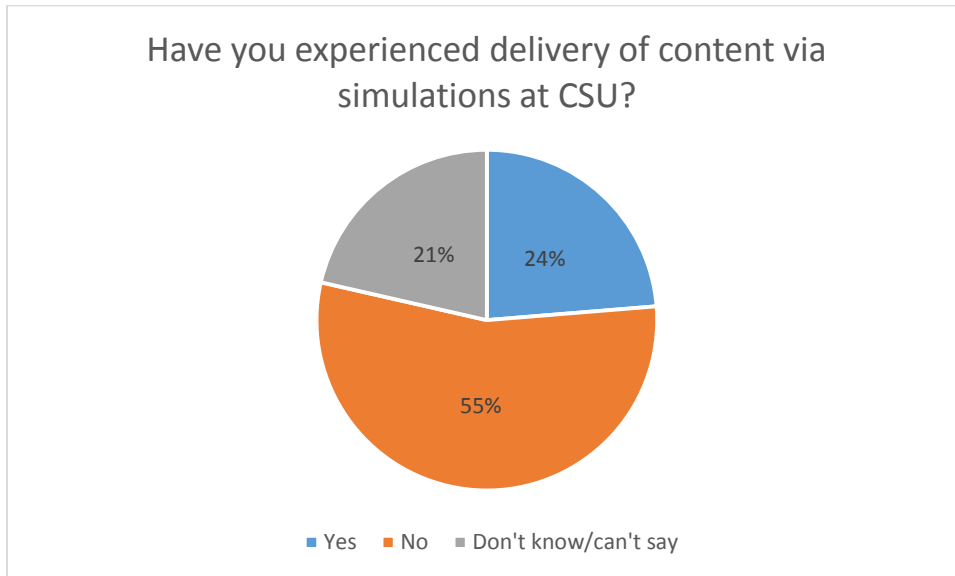


Figure 3c.4 – Have you experienced delivery of content via Simulation at CSU? – By Faculty

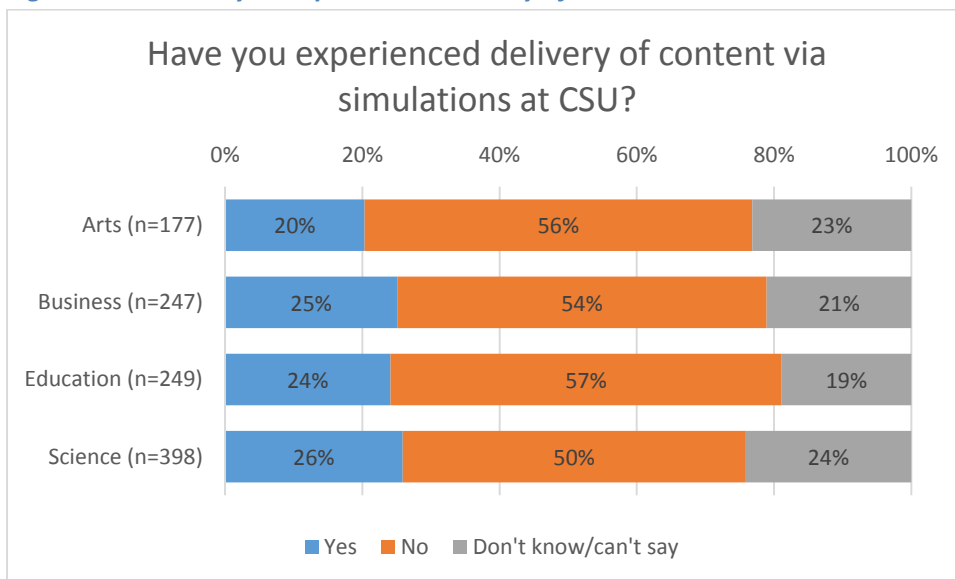


Figure 3c.5 – Simulations would enhance the learning experience in my subjects – all students

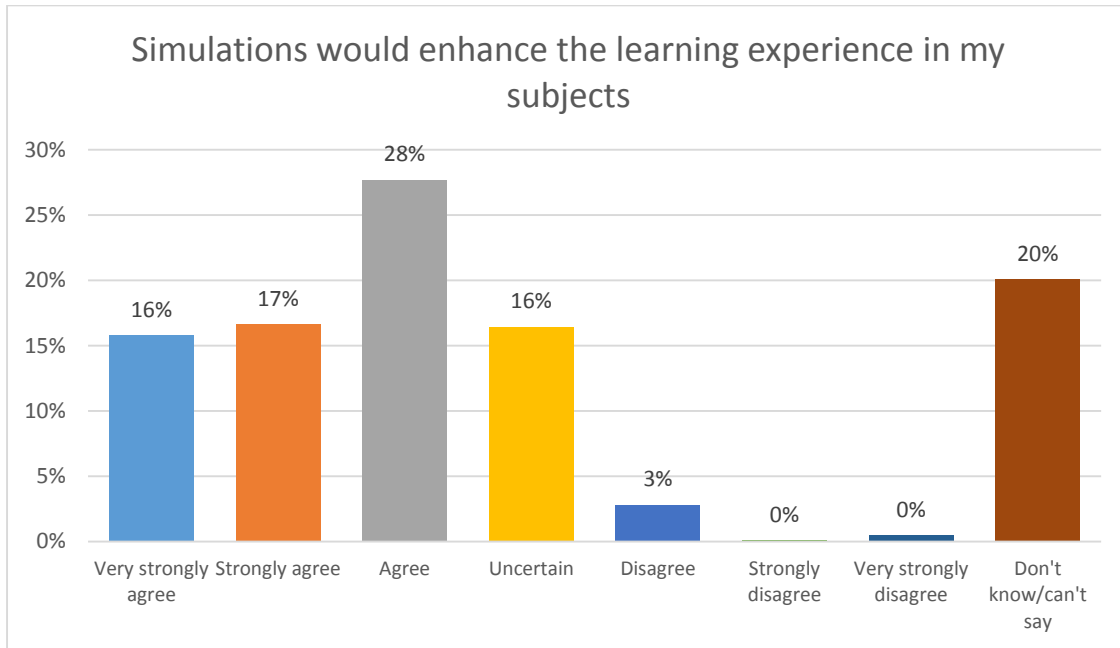


Figure 3c.6 – Simulations would enhance the learning experience in my subjects – students who have experienced a simulation at CSU

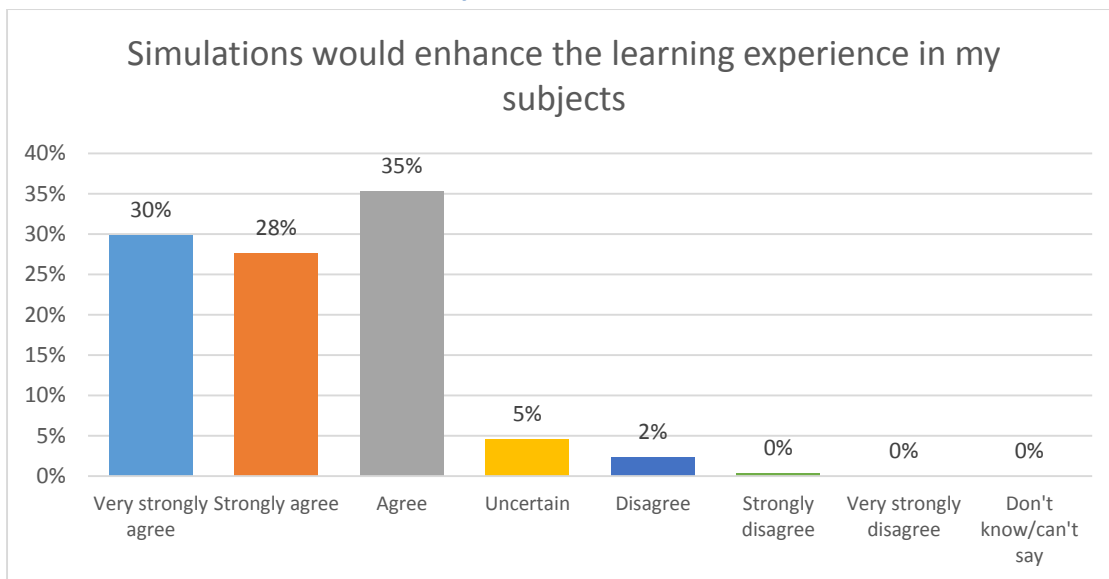


Figure 3c.7 – Simulations would enhance the learning experience in my subjects by Attitude Toward Technology

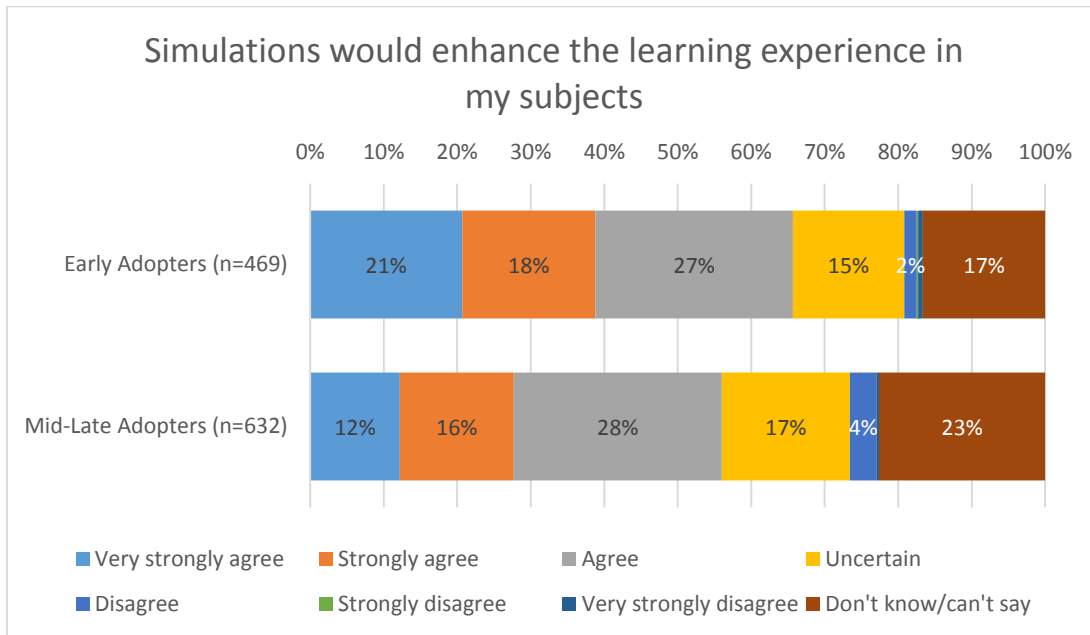


Figure 3c.8 – Have you experienced delivery of content via Adaptive Learning Tools at CSU?

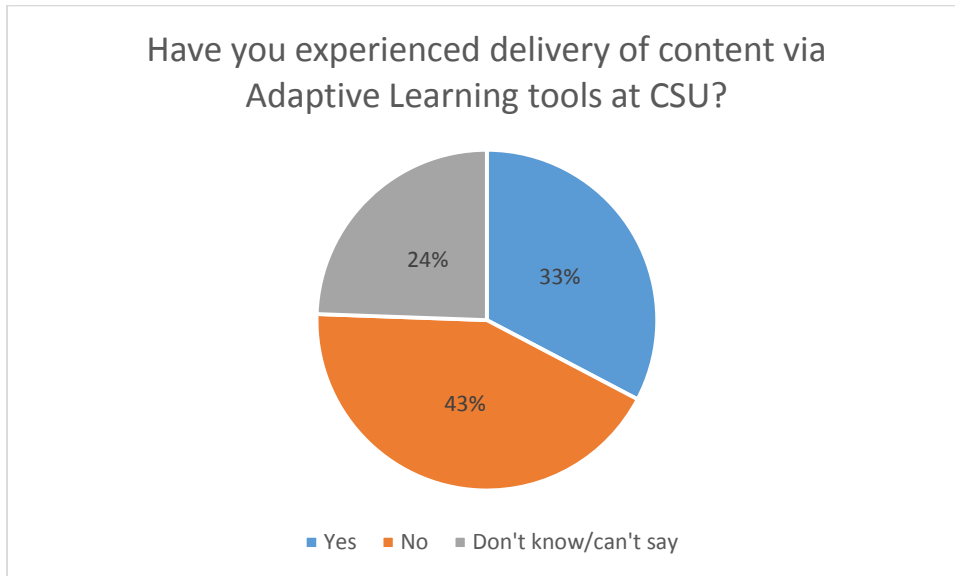


Figure 3c.9 – Have you experienced delivery of content via Adaptive Learning Tools at CSU? – By Faculty

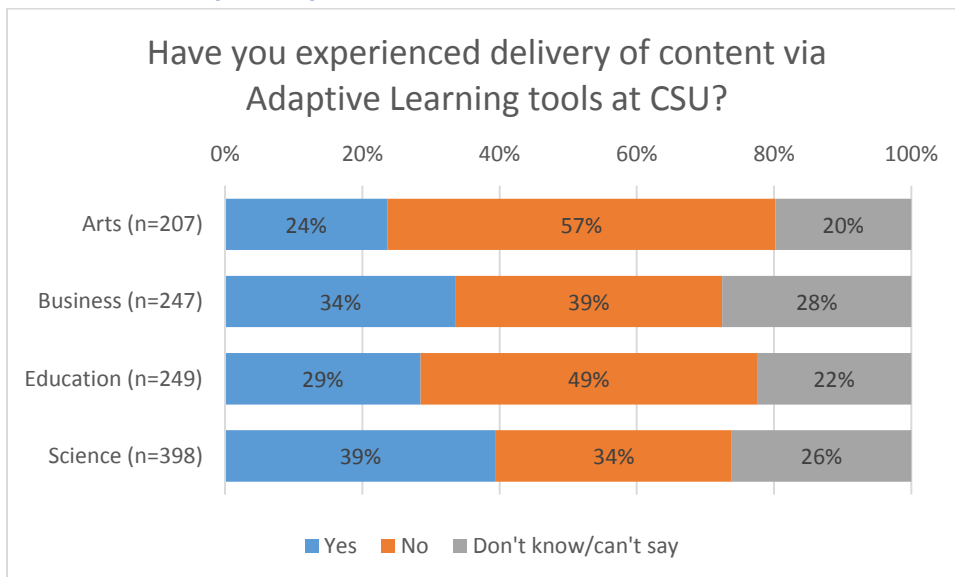


Figure 3c.10 – Adaptive Learning tools would enhance the learning experience in my subjects – all students

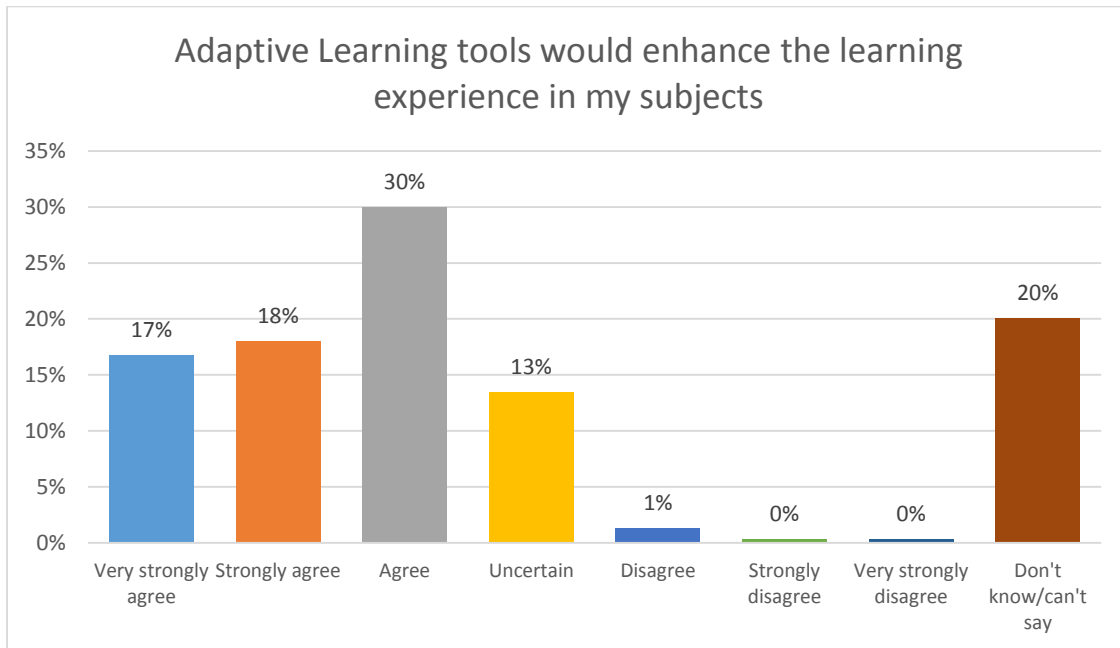


Figure 3c.11 – Adaptive Learning tools would enhance the learning experience in my subjects – students who have experienced Adaptive Learning Tools at CSU

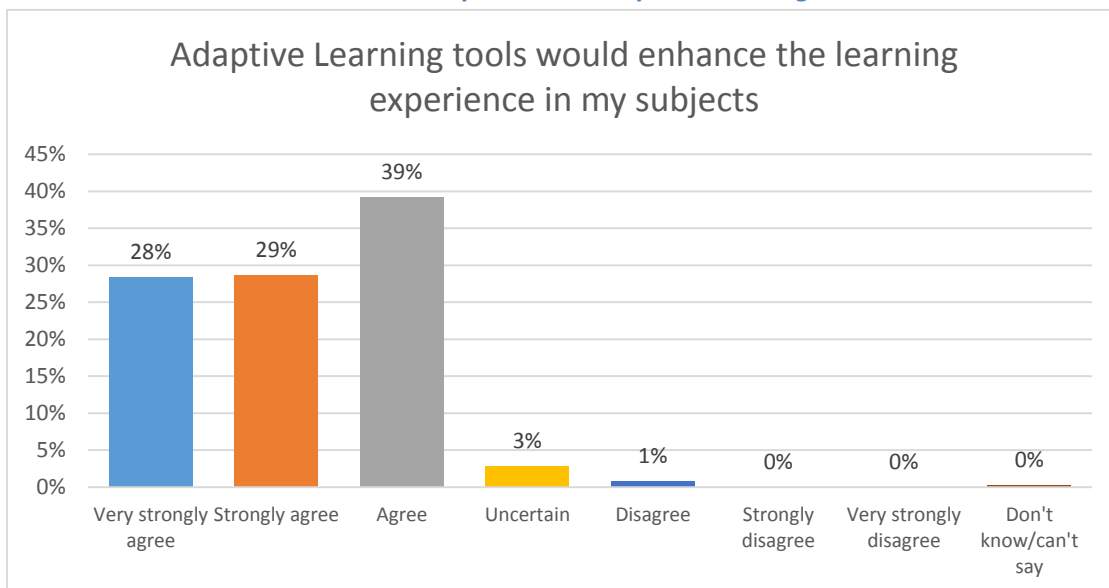


Figure 3c.12 – Adaptive Learning tools would enhance the learning experience in my subjects – By Faculty

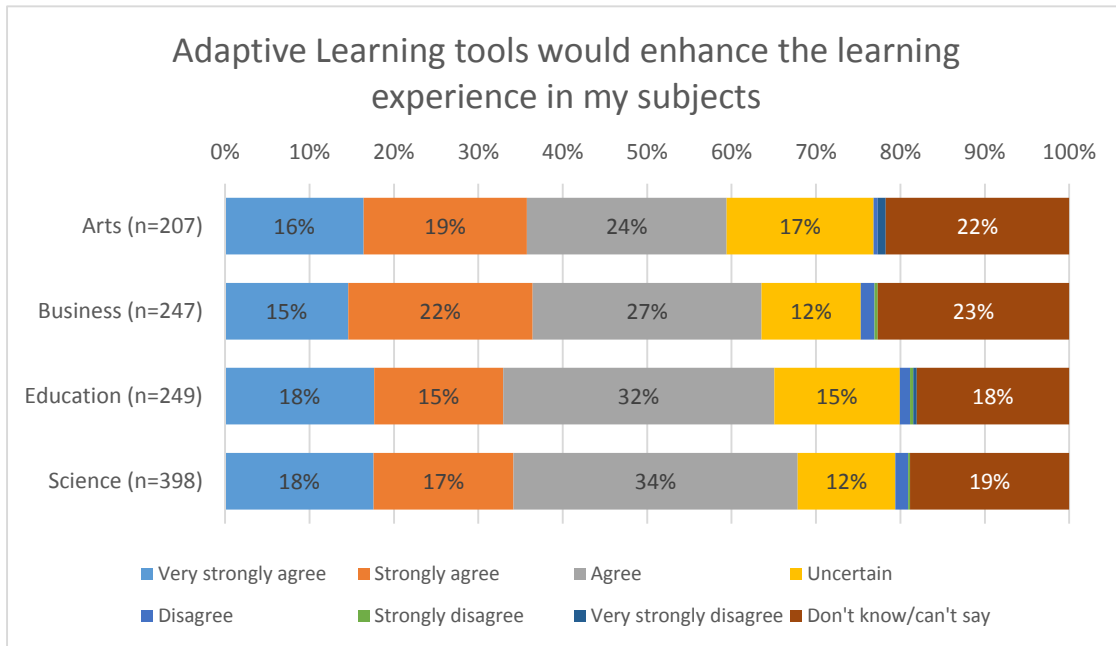
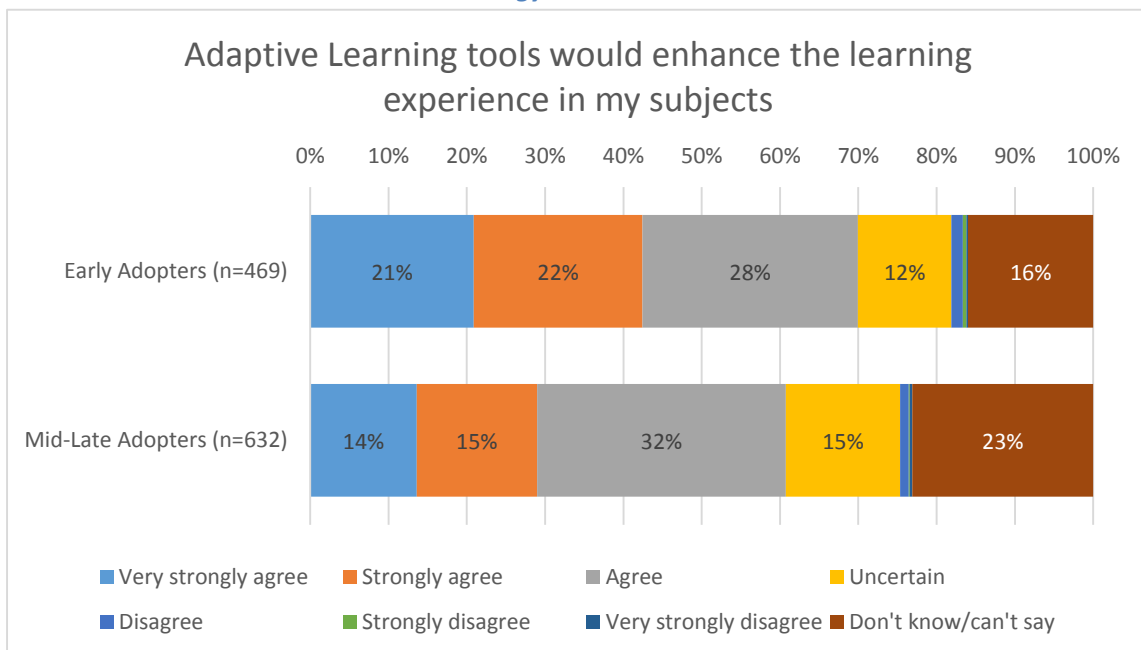


Figure 3c.13– Adaptive Learning tools would enhance the learning experience in my subjects by Attitude Toward Technology



3d. Technologies for Information Searching

This section explores students' perceptions of learning technologies for information searching at CSU. Key findings are as follows.

Online Information Tools

- The CSU Library search (PRIMO) is the most-used information search tool by students for studies overall, followed by general internet search engines and then Google Scholar. After these comes academic journals, specialised information sites (e.g. YouTube, Wikipedia) and then social media [see Figure 3d.1].
- General internet search engines are the most-used information search tool for Post-graduate – Research or Higher Degree students, followed by Google Scholar and then the CSU Library search (PRIMO). Post-graduate – Research or Higher Degree students also use social media as an information search tool more than Undergraduate and Post-graduate – Coursework students [see Figure 3d.2].

EndNote

- 36% of students overall have used EndNote to manage their references [see Figure 3d.3].
- Post-graduate students are more likely to use EndNote to manage their references compared to Undergraduate students [see Figure 3d.4].

Figure 3d.1 – Use of online information search tools for study

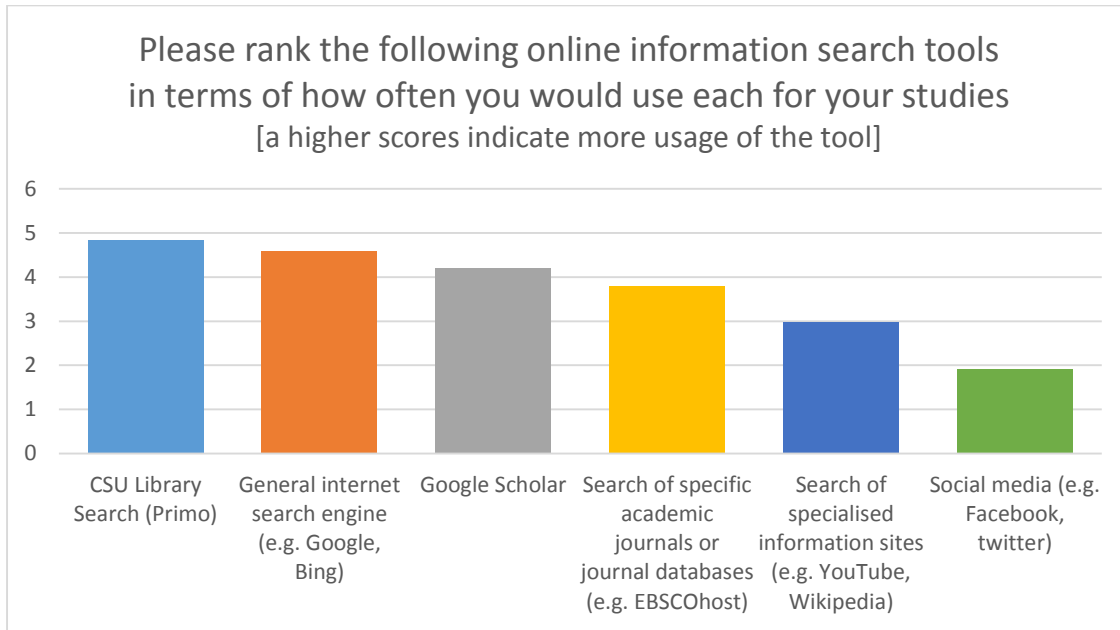


Figure 3d.2 – Use of online information search tools for study by Level of Study

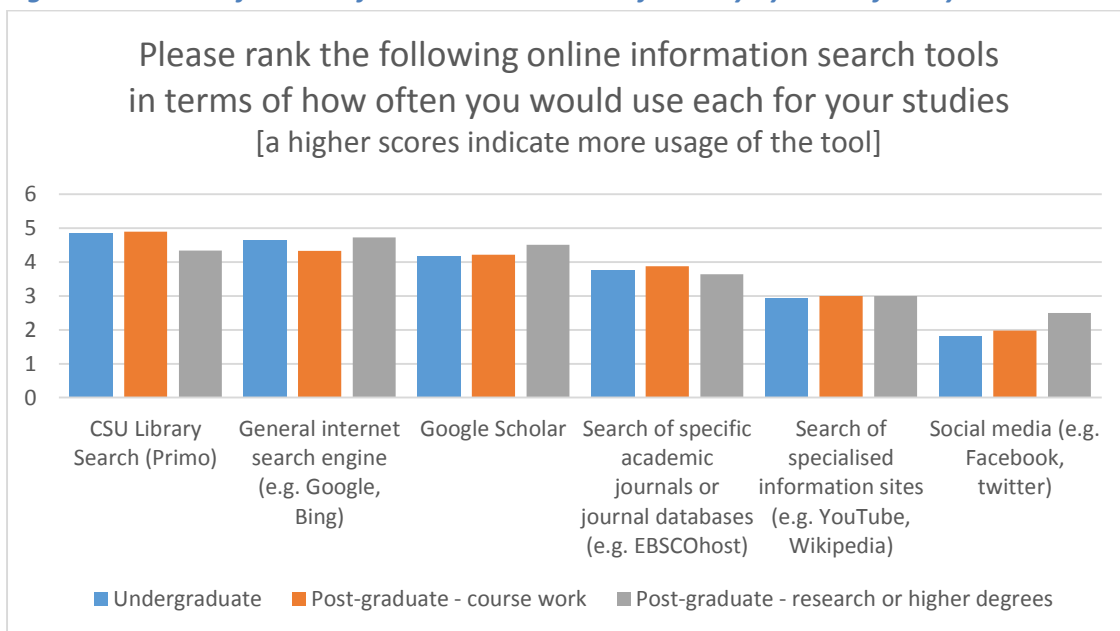


Figure 3d.3 – Use of EndNote

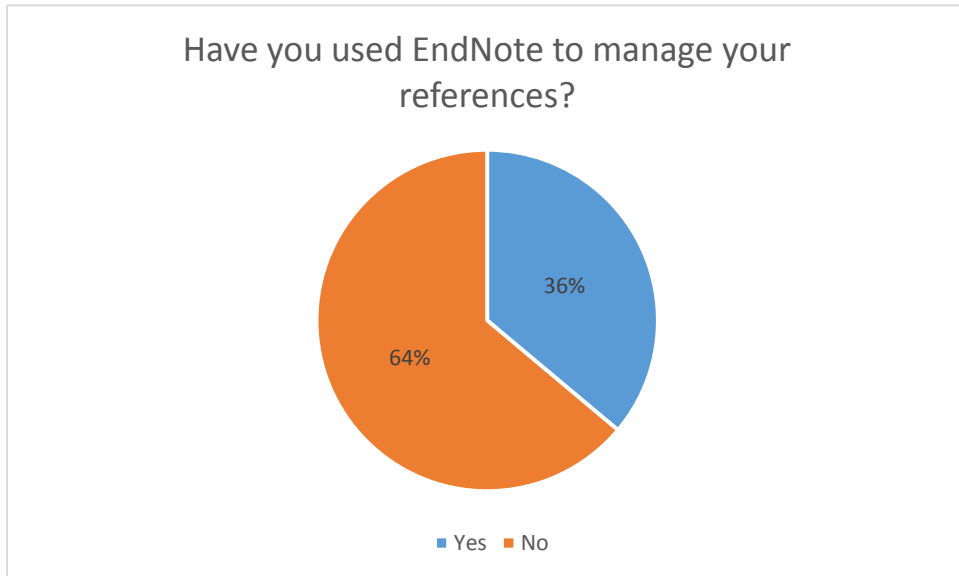
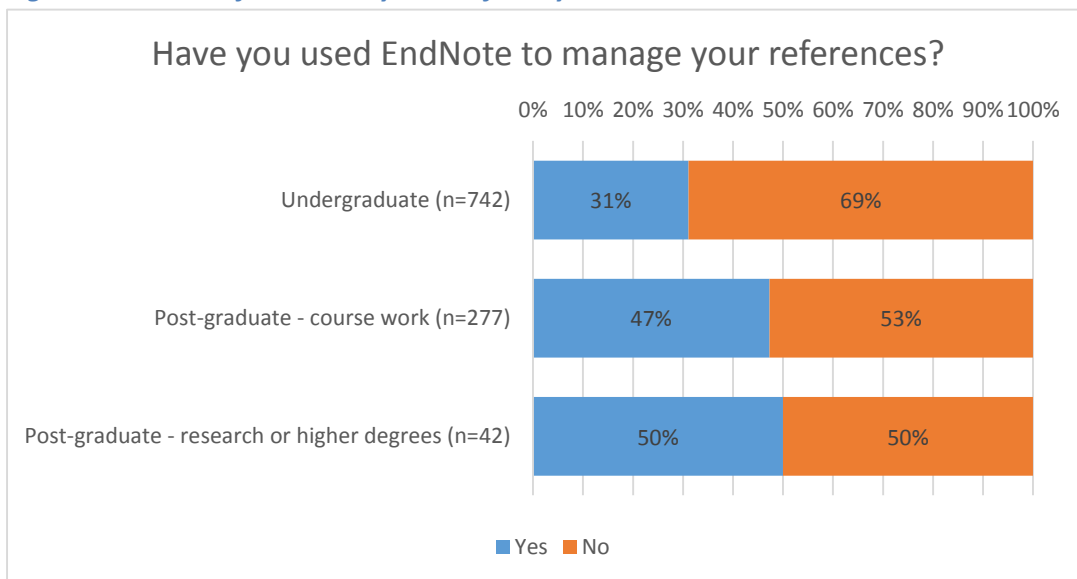


Figure 3d.4 – Use of EndNote by Level of Study



3e. Technologies for Communication and Collaboration

This section explores students' perceptions of learning technologies for communication and collaboration at CSU. Key findings are as follows.

Ease of Use of Communication and Collaboration Tools

- For students who had experience using the communication and collaboration tools [see Figure 3e.1]:
 - 84% of students rated Announcements in Interact2 as easy to use;
 - 77% rated Interact2 Discussion Forums as easy to use; and
 - 68% rated both Online Meeting and Google Drive as easy to use;
 - 56% considered the Interact2 Chat tool easy to use; and
 - 46% of students rated the Interact2 Wiki tool as easy to use.
- Of the communication and collaboration tools surveyed [see Figure 3e.2]:
 - 56% of students had no experience with the Interact2 Wiki tool;
 - 47% had no experience with the Interact2 Chat tool;
 - 46% had no experience with Google Drive for shared documents; and
 - 26% had no experience with Online Meeting (Adobe Connect).
- Students classified as early adopters of technology found it easier to use the Interact2 Wiki tool, Online Meeting, Interact2 Chat and Google Drive in particular than those students classified as mid to late adopters of technology [see Figures 3e.3 to 3e.6].

Social Media

- 31% of students reported that social media has been used to support learning and teaching in any of their subjects at CSU [see Figure 3e.7].
- Social media is used to support learning and teaching more in Undergraduate subjects (34% of students) compared to Post-graduate Research or Higher Degree subjects (29%) and Post-graduate – Coursework subjects (23%) [see Figure 3e.8].
- Students in Education (36% of students) and Science (33%) are more likely to encounter the use of social media to support learning and teaching compared to students in the faculties of Arts (25%) and Business (27%) [see Figure 3e.9].
- 51% of students overall are uncertain or against the use of social media for learning and teaching [see Figure 3e.10]. However, for the 31% of students who have experienced the use of social media to support learning and teaching, 81% were in favour of the use of social media for learning and teaching [see Figure 3e.11].
- On the use of social media for learning and teaching:
 - Post-graduate – Research or Higher Degree students were more in favour of social media for learning and teaching (59% of students) compared to other students, but also have the highest percentage of students against it (27%). Post-graduate – Research or Higher Degree students are also more decided one-way or the other with only 15% uncertain on the use of social media to support learning and teaching [see Figure 3e.12];

- On Campus students are more in favour of the use of social media for learning and teaching (62% of students) than Mixed Mode (52%) or Distance (42%) students [see Figure 3e.13];
- students aged under 18 – 25 were most enthusiastic about the use of social media for learning and teaching, being the only age group with more than 50% of students in favour of its use for learning and teaching, with 63% of those in the under 18 – 21 group in favour and 52% of those in the 22 – 25 group in favour. Those aged over 60 were least in favour with only 29% in favour [see Figure 3e.14];
- females were more in favour of the use of social media for learning and teaching than males, with 52% of females in favour compared to 43% of males [see Figure 3e.15];
- international students were more in favour of the use of social media for learning and teaching (64%) than domestic students (47%) [see Figure 3e.16];
- students in the Faculty of Education (55%) were the most likely to be in favour of the use of social media for learning and teaching with those from the Faculty of Business the least in favour (42%). Students from Arts (48%) and Science (51%) fell in between [see Figure 3e.17]; and
- early adopters of technology were more in favour of the use of social media for learning and teaching (55%) than mid-late adopters of technology (45%) [see Figure 3e.18].

Communication and Collaboration Tools

- For students who had experience using the communication and collaboration tools [see Figure 3e.19]:
 - 74% of students were positive (where positive indicates always or often) that the use of technology in their subjects makes communication with lecturers more effective;
 - 66% of students were positive that use of technology in my subjects makes communication and collaboration with fellow students more effective;
 - 60% of students were positive that discussion forums in their subjects enhances the learning experience;
 - 56% were positive that communication and collaboration technologies used in subjects can be readily accessed via mobile device; and
 - 53% were positive that use of the group tools in Interact2 supports effective group work.
- Of the communication and collaboration tools surveyed, 33% of students had no experience with the Interact2 Group tools and 23% had no experience with accessing the communication and collaboration tools via a mobile device [see Figure 3e.20]
- Students categorised as early adopters were more positive than mid-late adopters that the use of technology in my subjects makes communication with my lecturers more effective, the use of technology in my subjects makes communication and collaboration with my fellow students more effective, and the communication and collaboration technologies used in my subjects can be readily accessed via mobile device [see Figures 3e.21 to 3e.23].

Figure 3e.1 – Usability of Communication and Collaboration Tools – Not Applicable removed

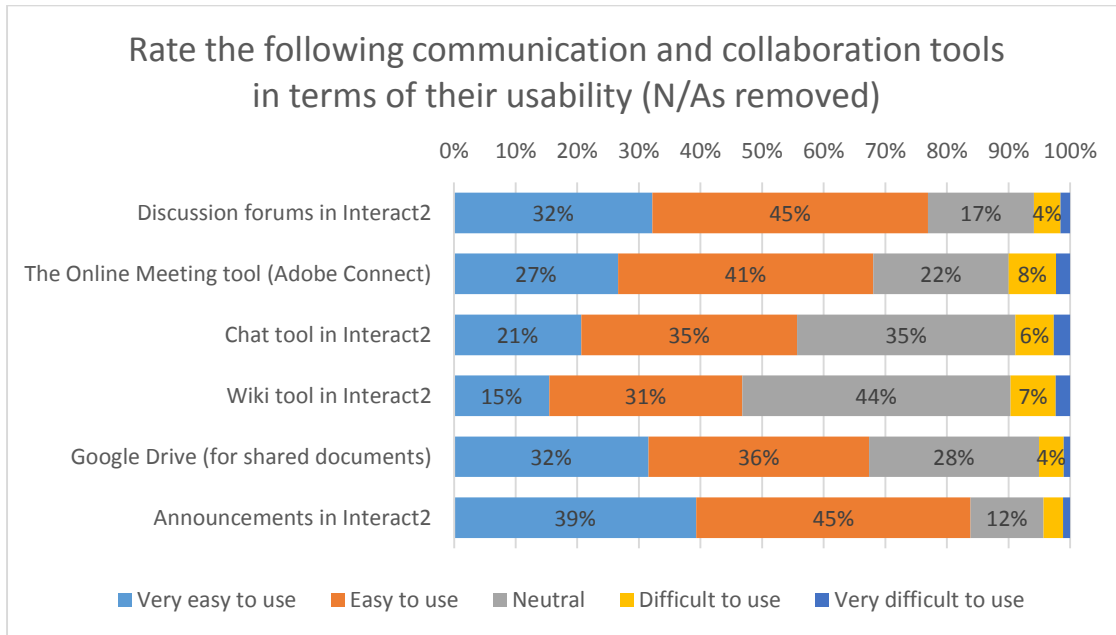


Figure 3e.2 – Usability of Communication and Collaboration Tools

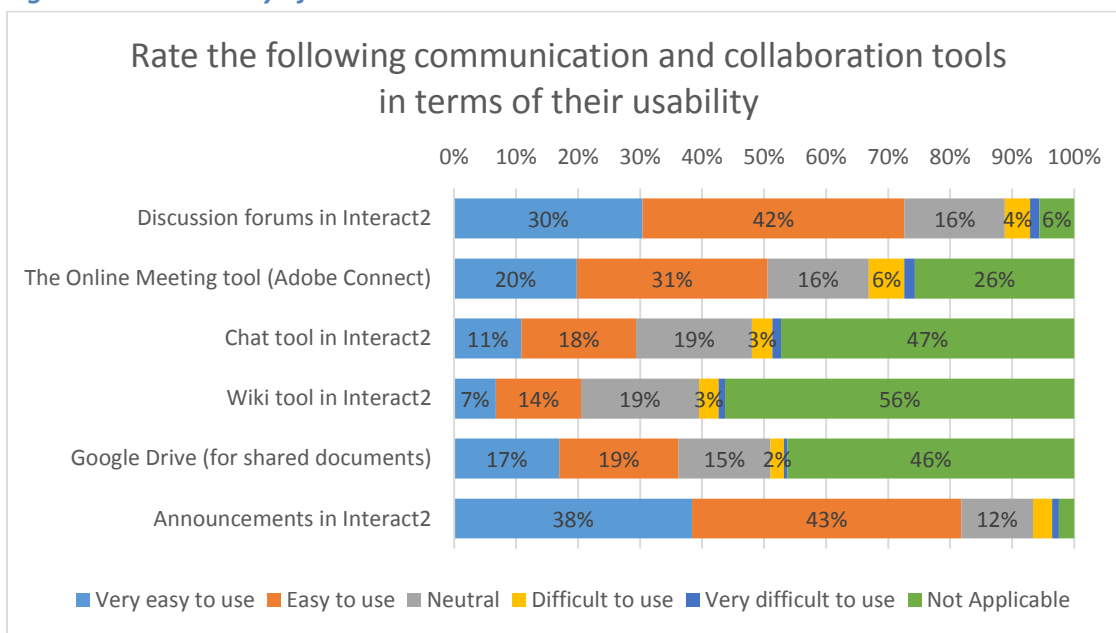


Figure 3e.3 – Usability of Online Meeting by Attitude Toward Technology – Not Applicable removed

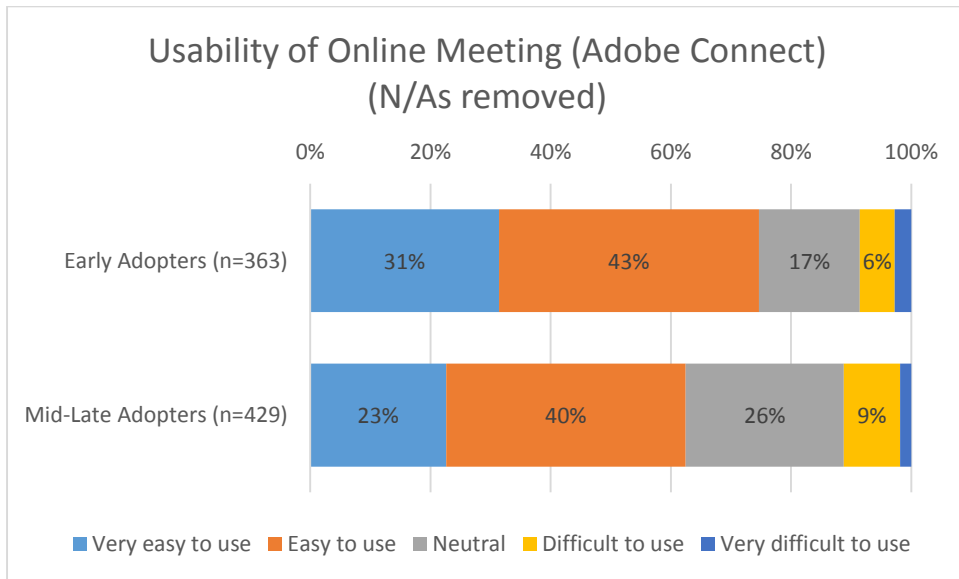


Figure 3e.4– Usability of Interact2 Chat by Attitude Toward Technology – Not Applicable removed

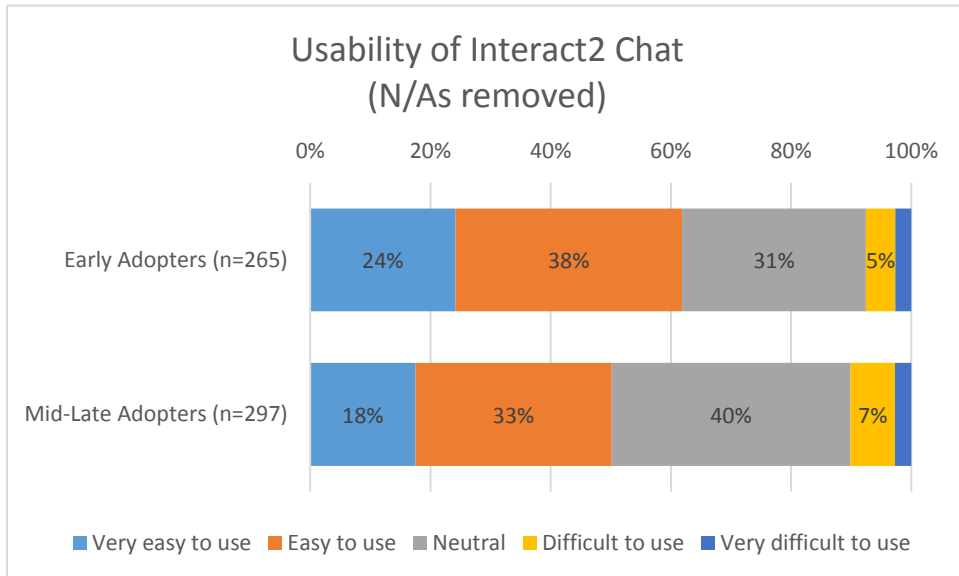


Figure 3e.5– Usability of Interact2 Wikis by Attitude Toward Technology – Not Applicable removed

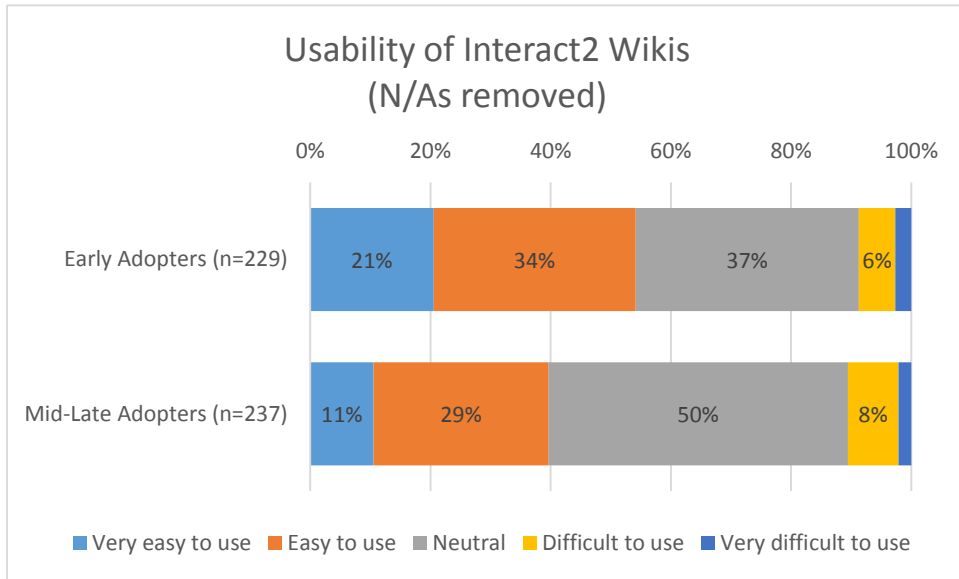


Figure 3e.6– Usability of Google Drive by Attitude Toward Technology – Not Applicable removed

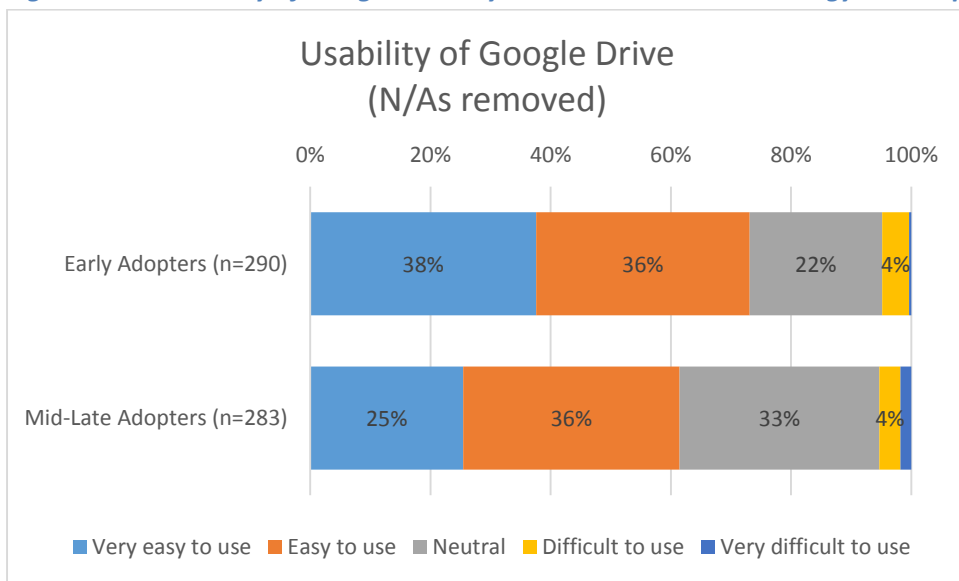


Figure 3e.7 – Use of social media to support learning and teaching

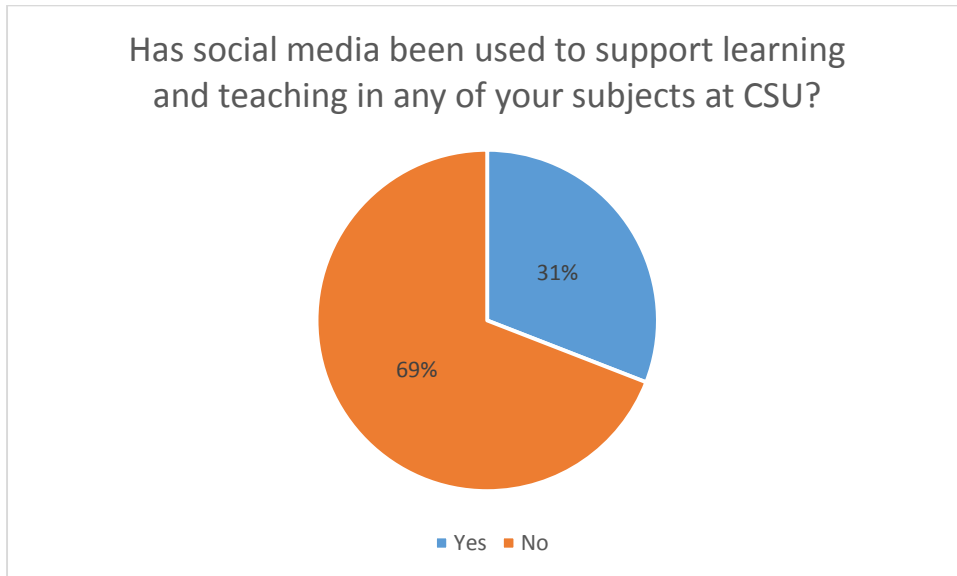


Figure 3e.8 – Use of social media to support learning and teaching by Level of Study

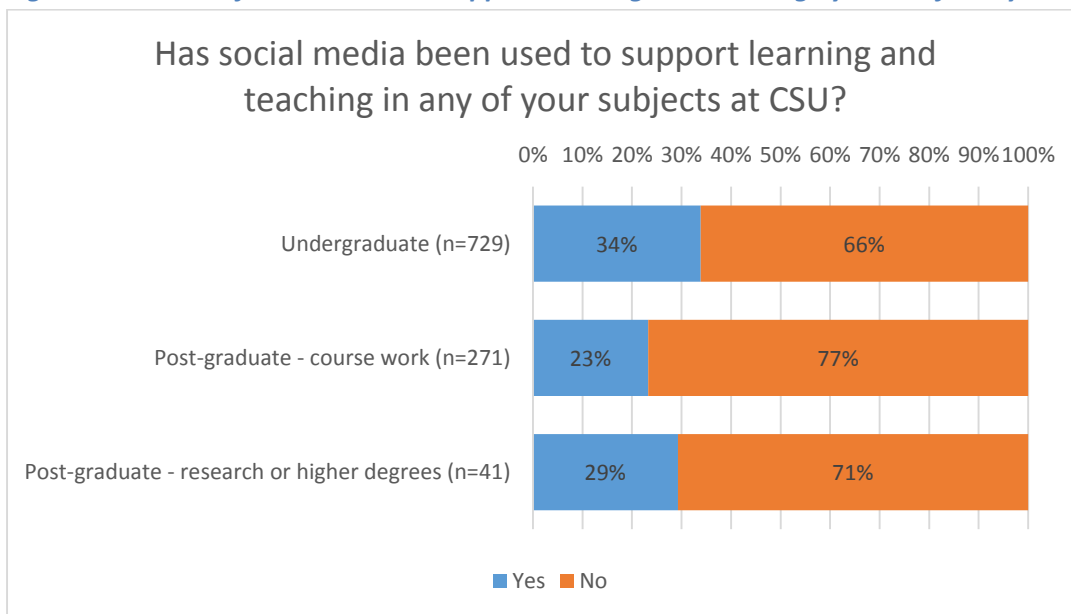


Figure 3e.9 – Use of social media to support learning and teaching by Faculty

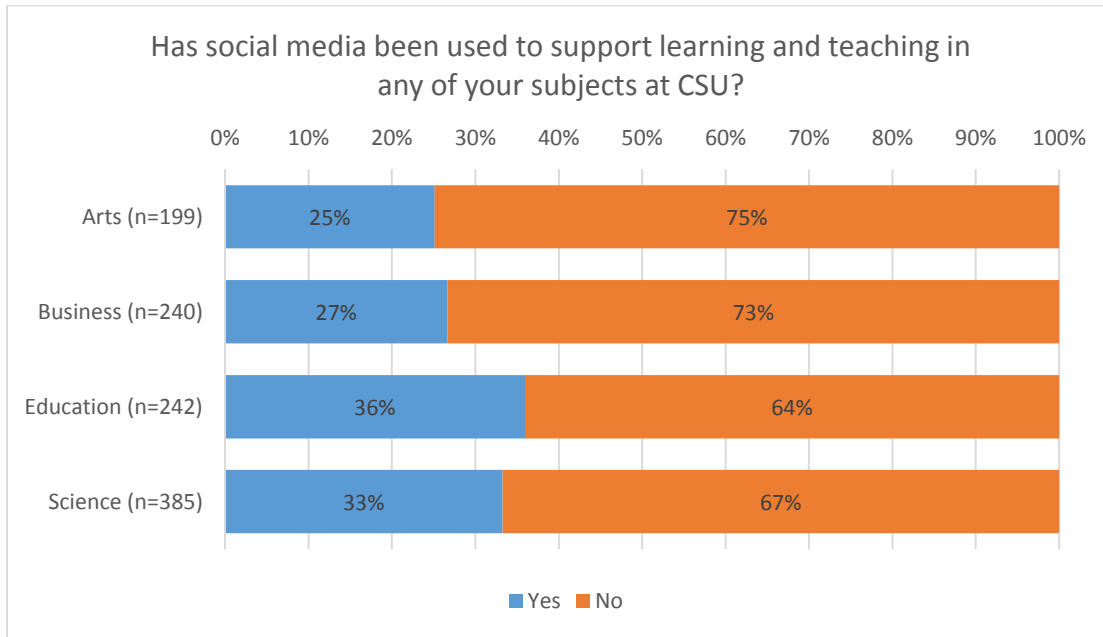


Figure 3e.10 – Attitude to using social media for learning and teaching

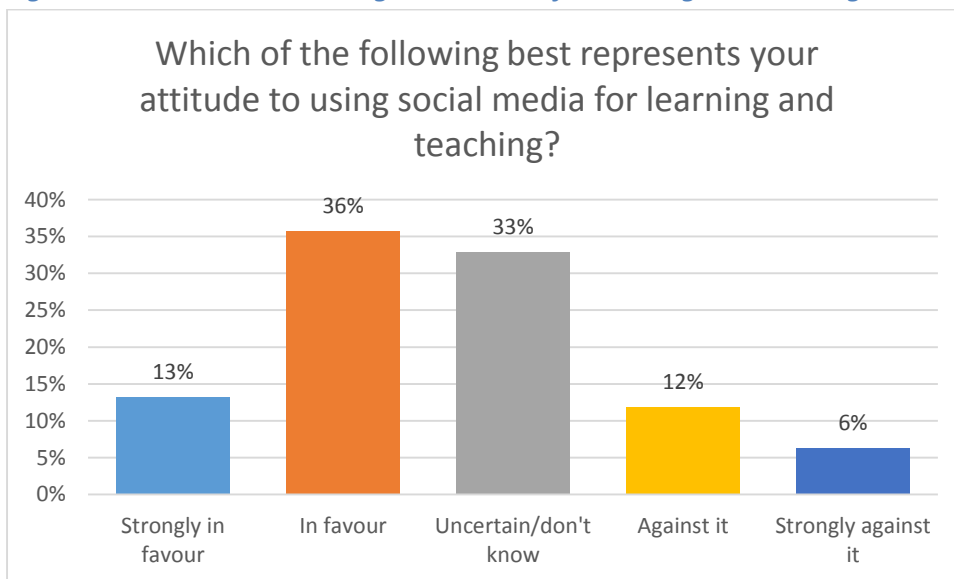


Figure 3e.11 – Attitude to using social media for learning and teaching - Students who have experienced the use of social media

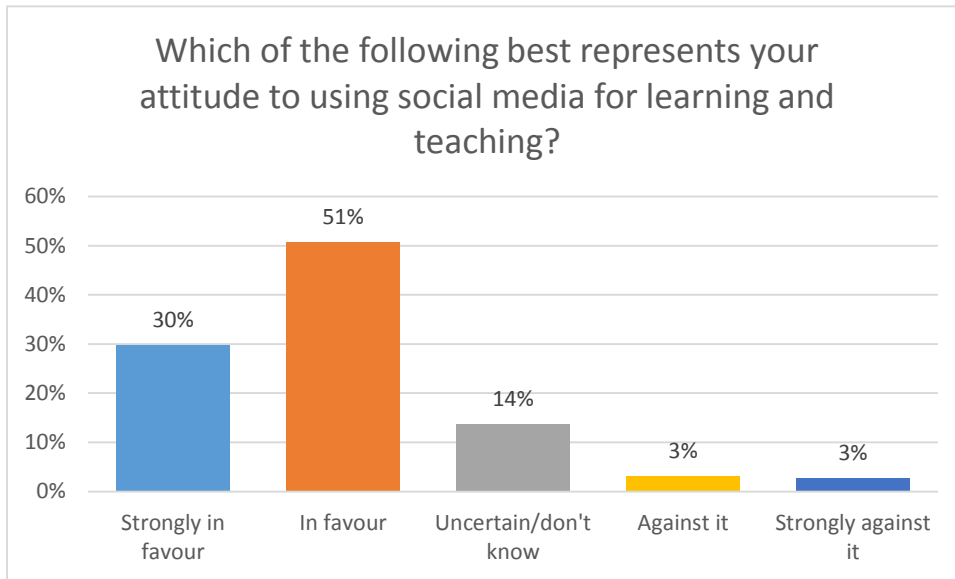


Figure 3e.12 – Attitude to using social media for learning and teaching by Level of Study

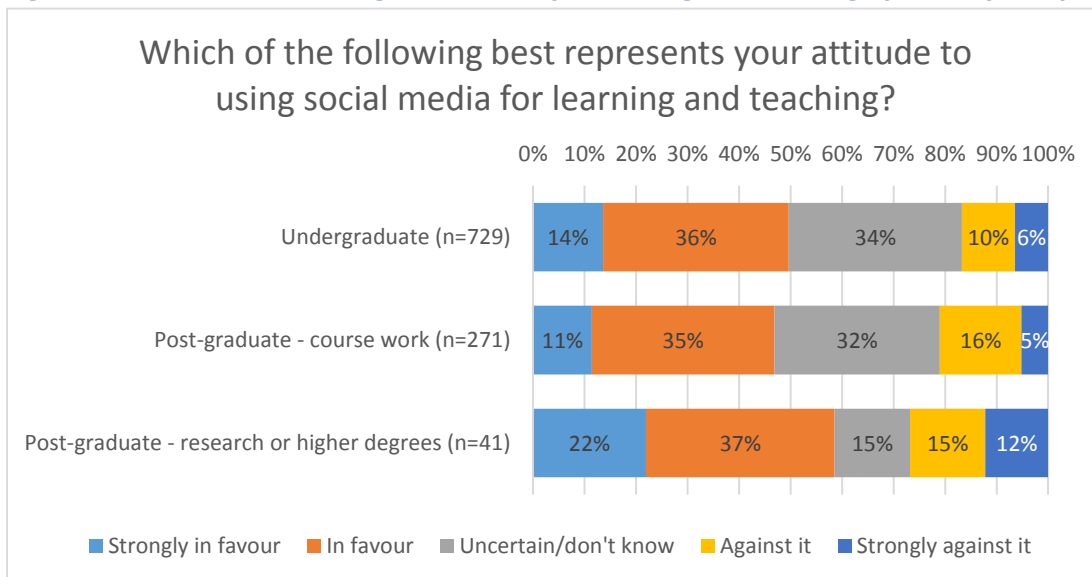


Figure 3e.13 – Attitude to using social media for learning and teaching by Mode

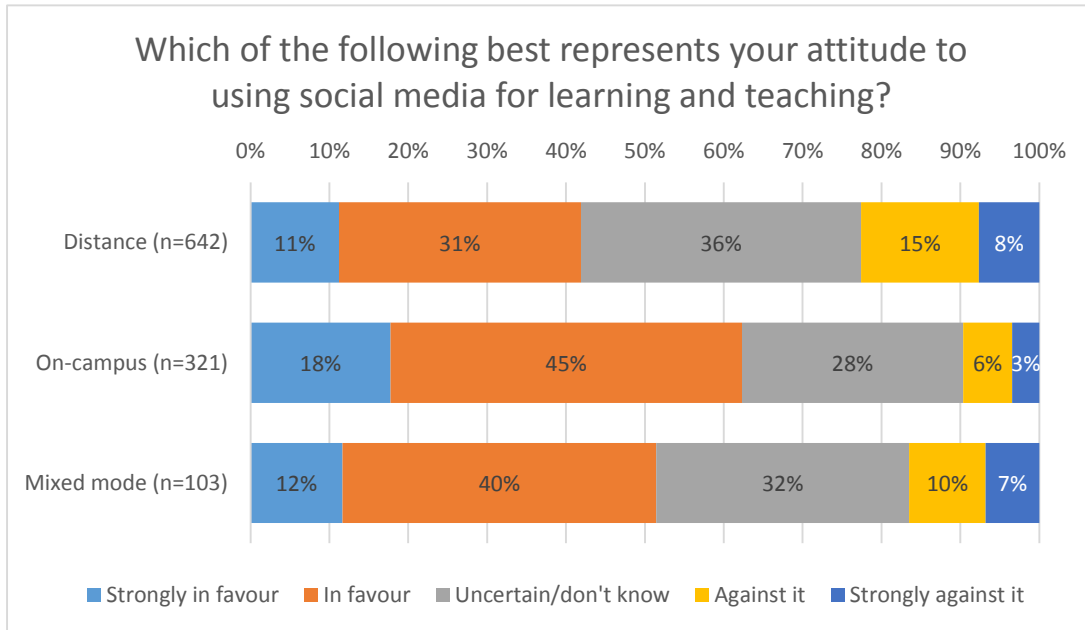


Figure 3e.14 – Attitude to using social media for learning and teaching by Age

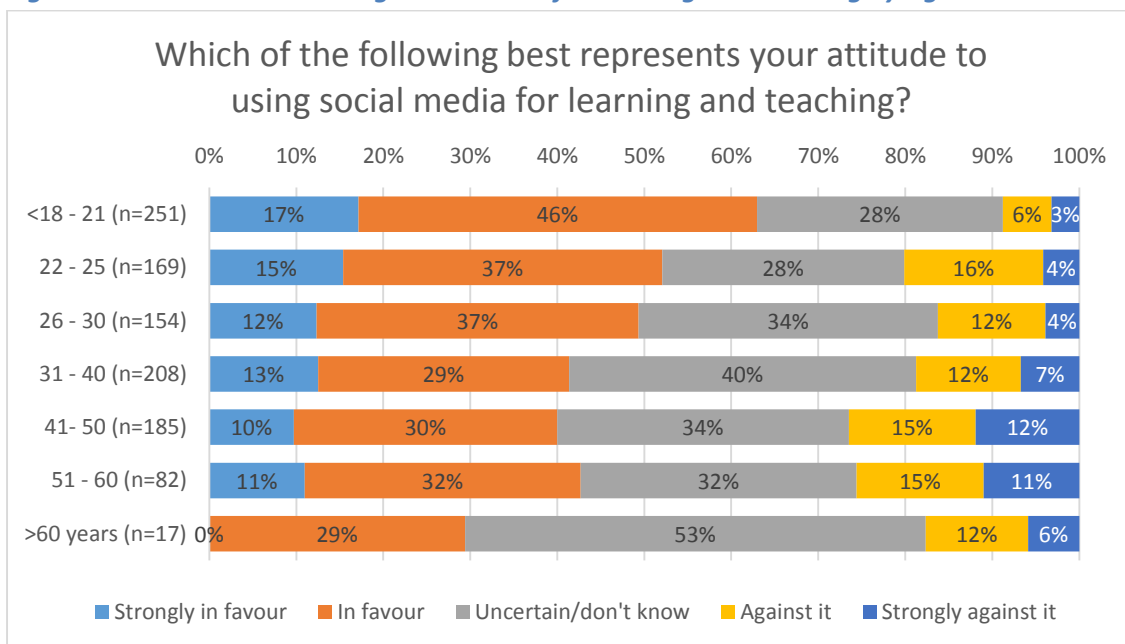


Figure 3e.15 – Attitude to using social media for learning and teaching by Gender

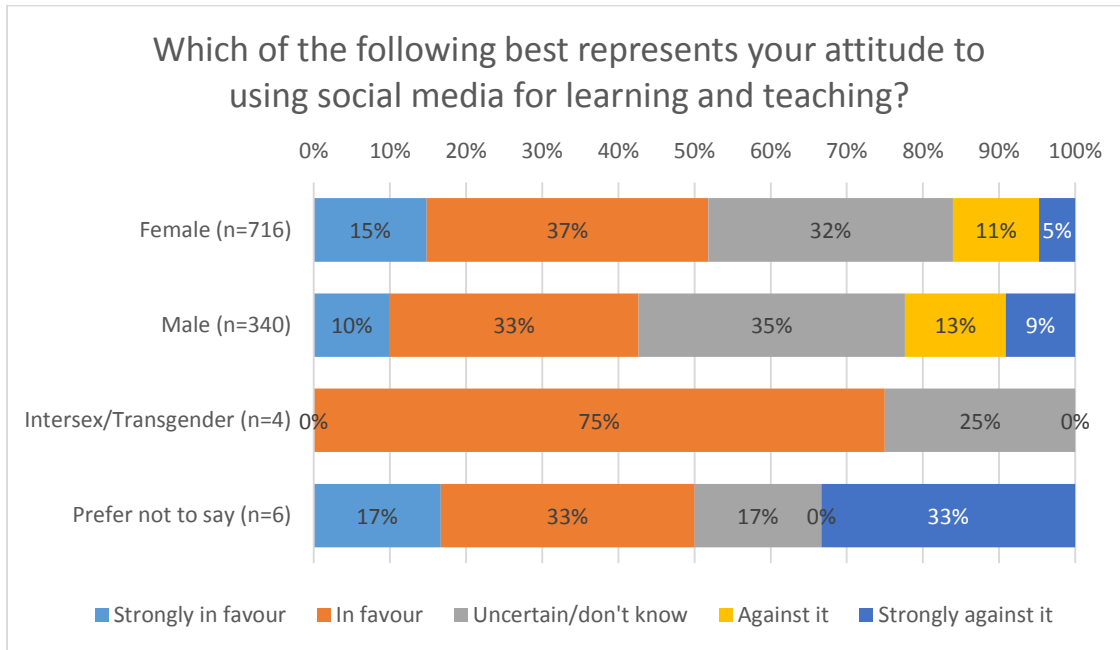


Figure 3e.16 – Attitude to using social media for learning and teaching by Domesticity

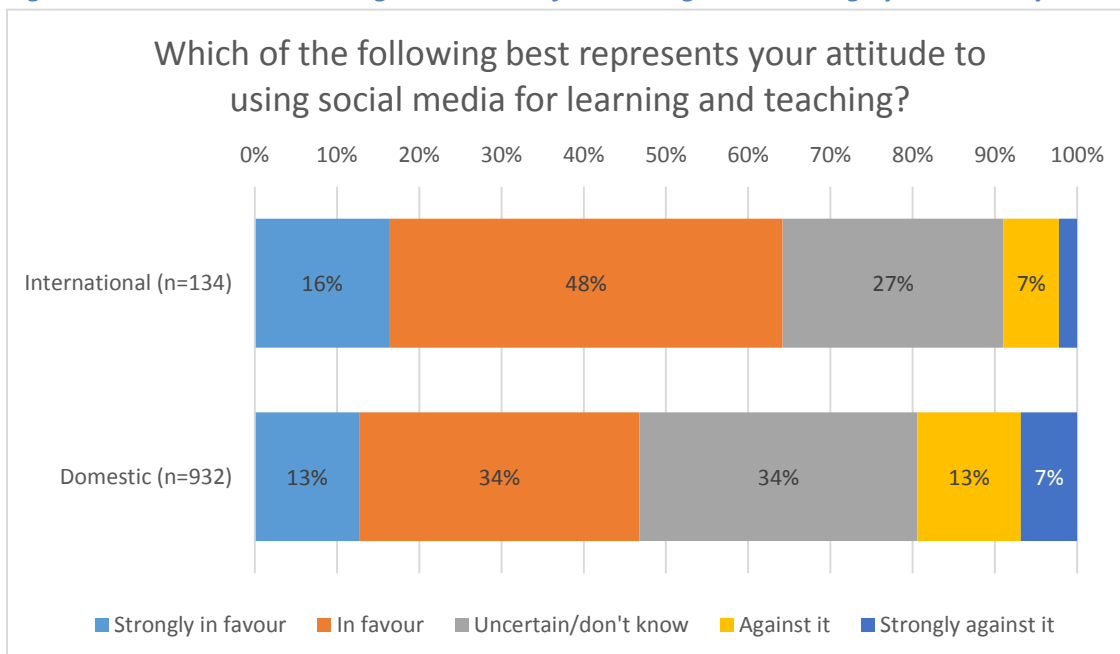


Figure 3e.17 – Attitude to using social media for learning and teaching by Faculty

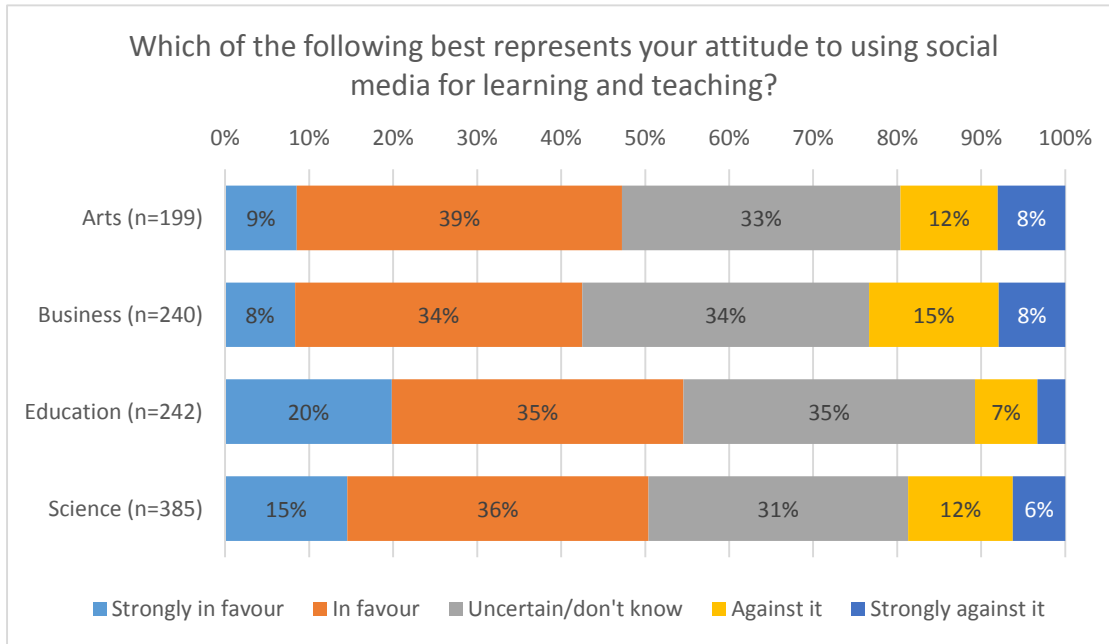


Figure 3e.18 – Attitude to using social media for learning and teaching by Attitude Toward Technology

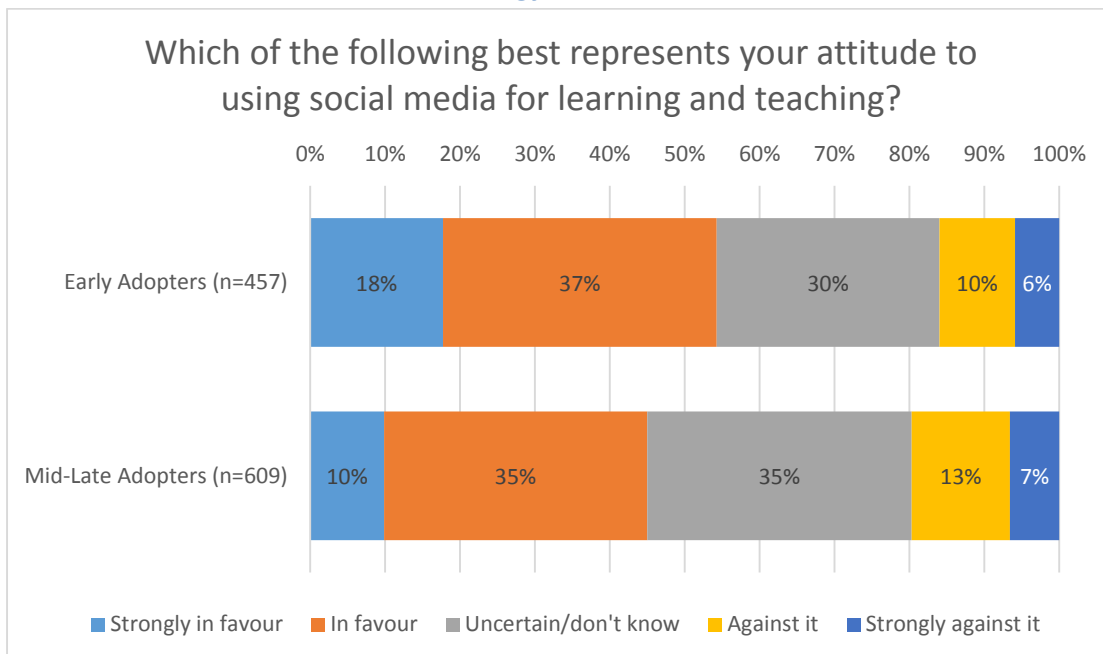


Figure 3e.19 – Communication and Collaboration tools – Not Applicable removed

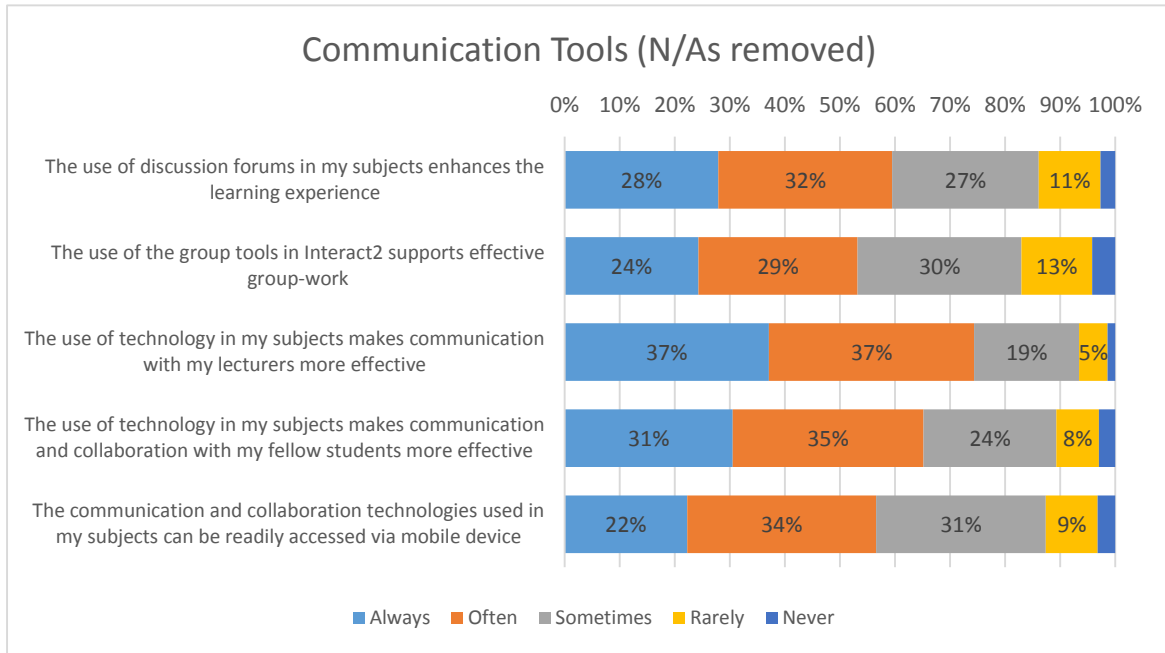


Figure 3e.20 – Communication and Collaboration tools

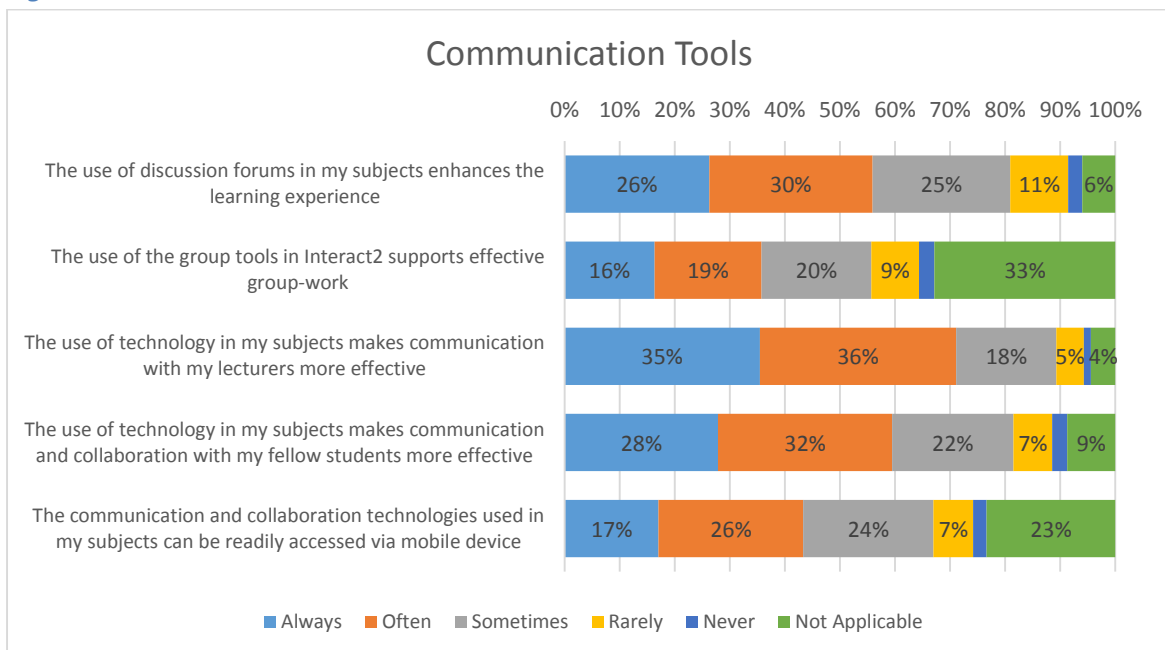


Figure 3e.21 – The use of technology in my subjects makes communication with my lecturers more effective by Attitude Toward Technology – Not Applicable removed

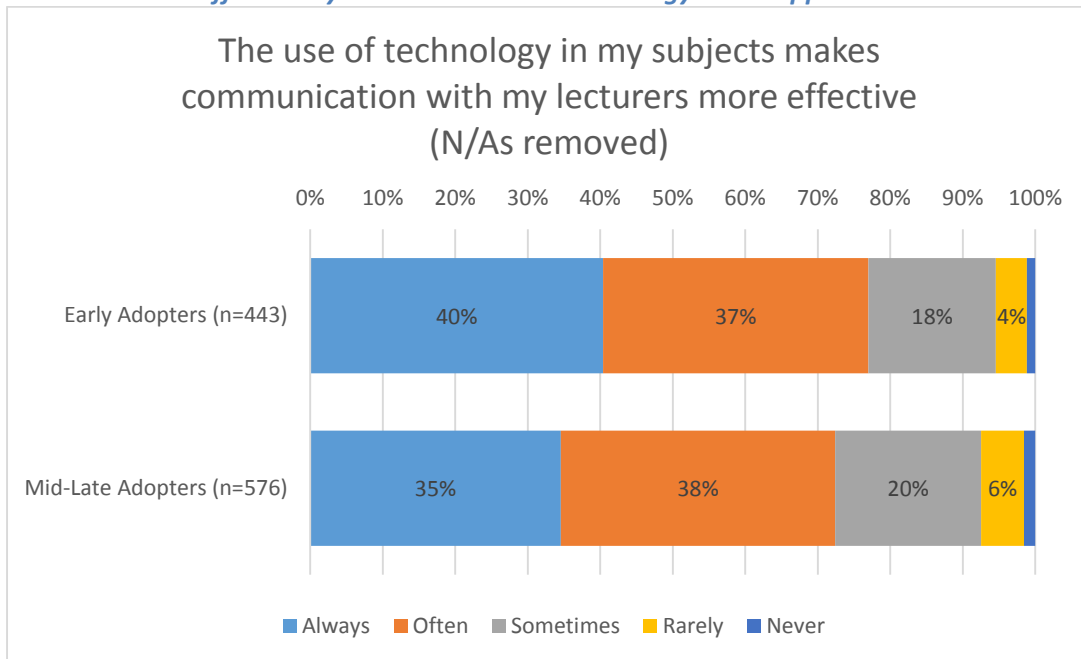


Figure 3e.22 – The use of technology in my subjects makes communication and collaboration with my fellow students more effective by Attitude Toward Technology – Not Applicable removed

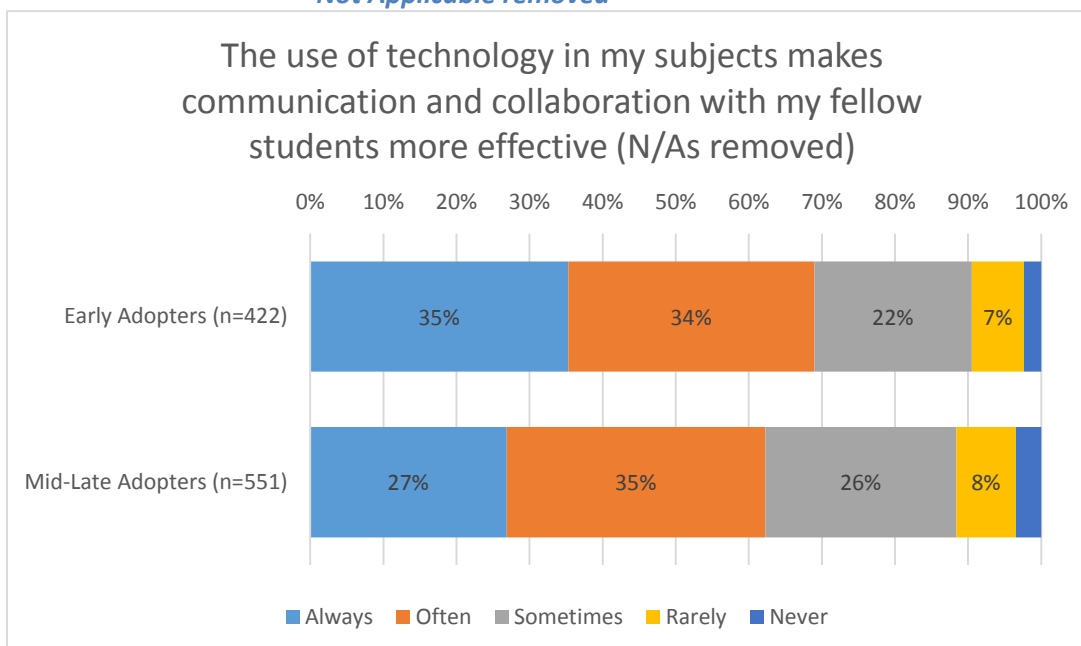
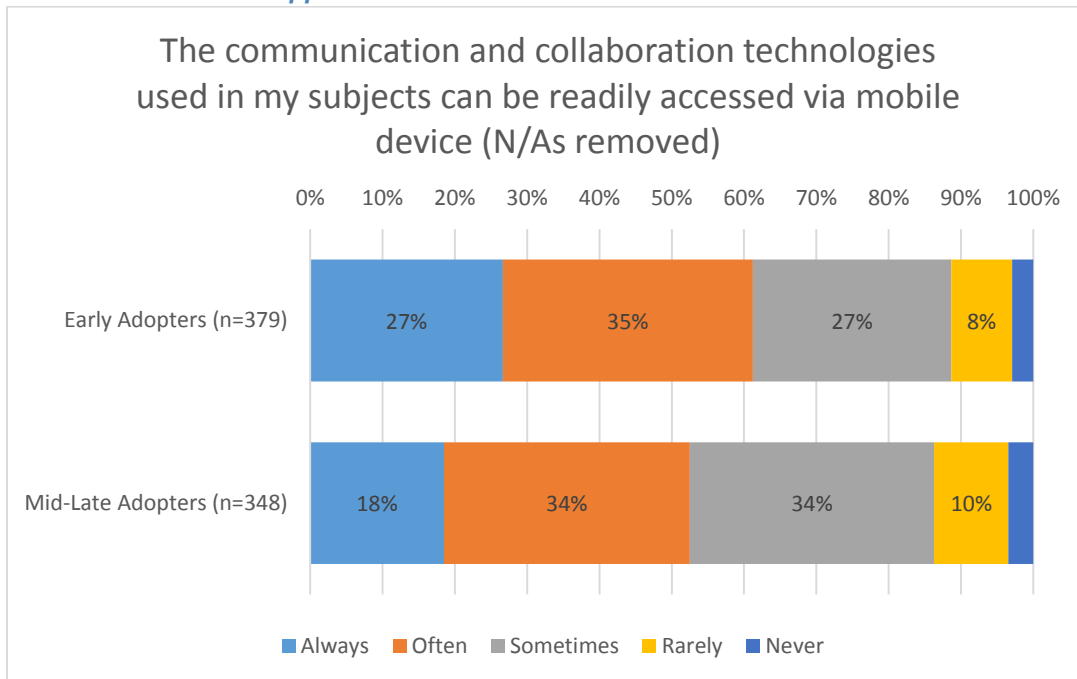


Figure 3e.23 – The communication and collaboration technologies used in my subjects can be readily accessed via mobile device by Attitude Toward Technology – Not Applicable removed



3f. Technologies for Feedback and Assessment

This section explores students' perceptions of learning technologies for feedback and assessment in use at CSU. Key findings are as follows.

Assessment Tools

- On the assessment tools surveyed [see Figure 3f.1]:
 - EASTS was rated the most easy to use assessment tool with 92% of students rating it easy to use;
 - tests and quizzes in Interact2 were rated as easy to use by 89% of students; and
 - 66% of students rated Turnitin as easy to use.
- Of the assessment tools surveyed, 26% of students had no experience with Turnitin and 19% had no experience with test and quizzes in Interact2 [see Figure 3f.2].
- More early adopters of technology found Turnitin easier to use (72%) than mid to late adopters (62%) [see Figure 3f.3].

Grade Centre and Tests/Quizzes

- On Grade Centre and tests/quizzes [see Figure 3f.4]:
 - 77% of students were positive (where positive indicates always or often) that the use of tests/quizzes in their subjects enhances their learning; and
 - 70% of students were positive that the use of Grade Centre in subject sites allowed them to track their progress and marks.
- 19% of students had no experiences with tests and quizzes and 11% of students had no experience with tracking marks through Grade Centre [see Figure 3f.5].

eExams

- 11% of students have experienced eExams in the delivery of content at CSU [see Figure 3f.6].
- Students across the faculties have almost an equal chance of having experience an eExam, with those in the Faculty of Science slightly more likely to have experienced one [see Figure 3f.7].
- On whether eExams would enhance their learning experience in their subjects:
 - 36% of all students agree that eExams would enhance their learning experience in their subjects, with 52% of students uncertain or responding "don't know/can't say" [see Figure 3f.8];
 - for the 11% of students who have experienced eExams, 88% agree that eExams would enhance their learning experience in their subjects, including 30% agreeing "very strongly" [see Figure 3f.9].
 - students in the Faculty of Business are more likely to agree that eExams would enhance their learning experience in their subjects (44%), followed by Arts (36%), Science (35%) and Education (30%) [see Figure 3f.10]; and

- early adopters of technology are more likely to agree that eExams would enhance their learning experience in their subjects (42%) than mid to late adopters (31%) [see Figure 3f.11].

Figure 3f.1 – Assessment tools – Not Applicable removed

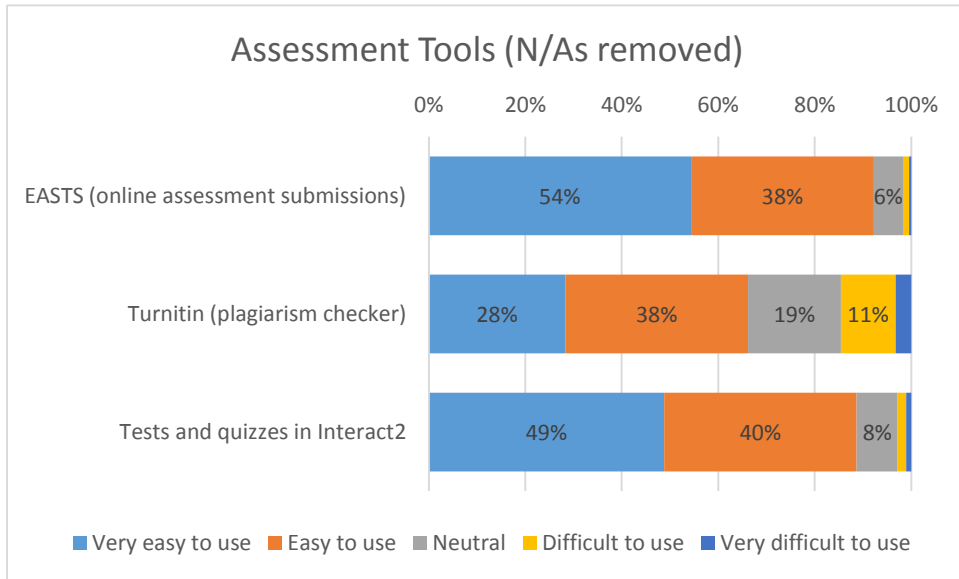


Figure 3f.2 – Assessment tools

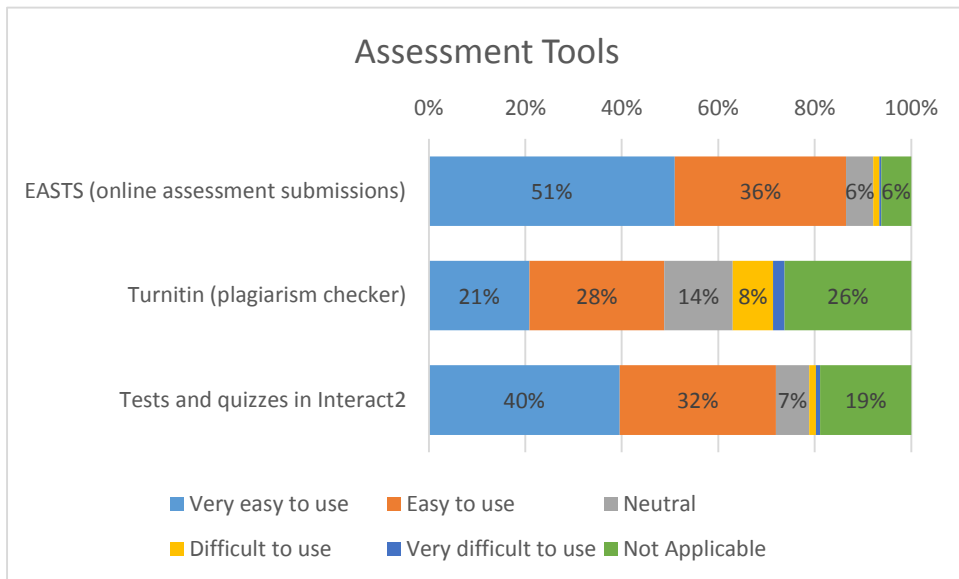


Figure 3f.3 – Ease of use of Turnitin for Attitude Toward Technology – Not Applicable removed

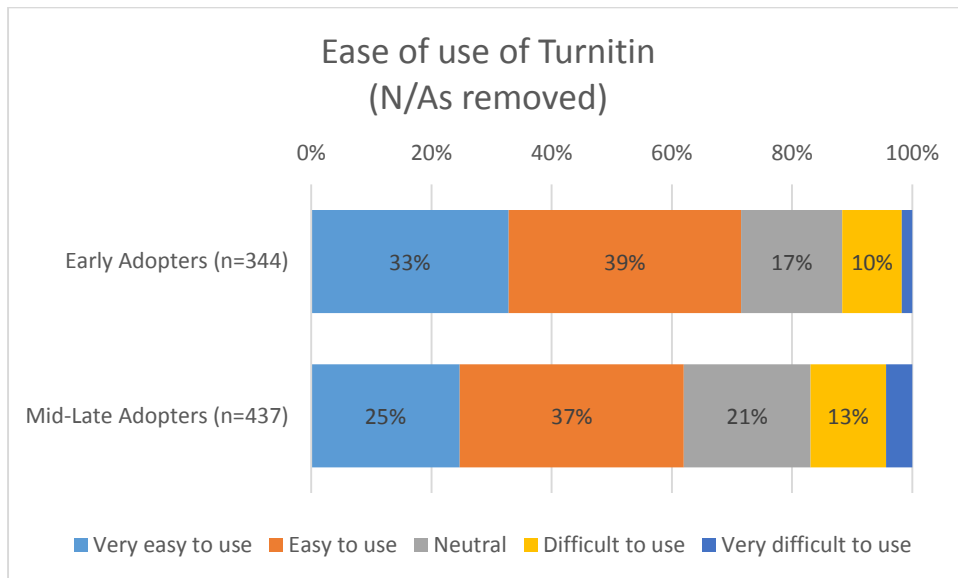


Figure 3f.4 – Grade Centre and tests/quizzes – Not Applicable removed

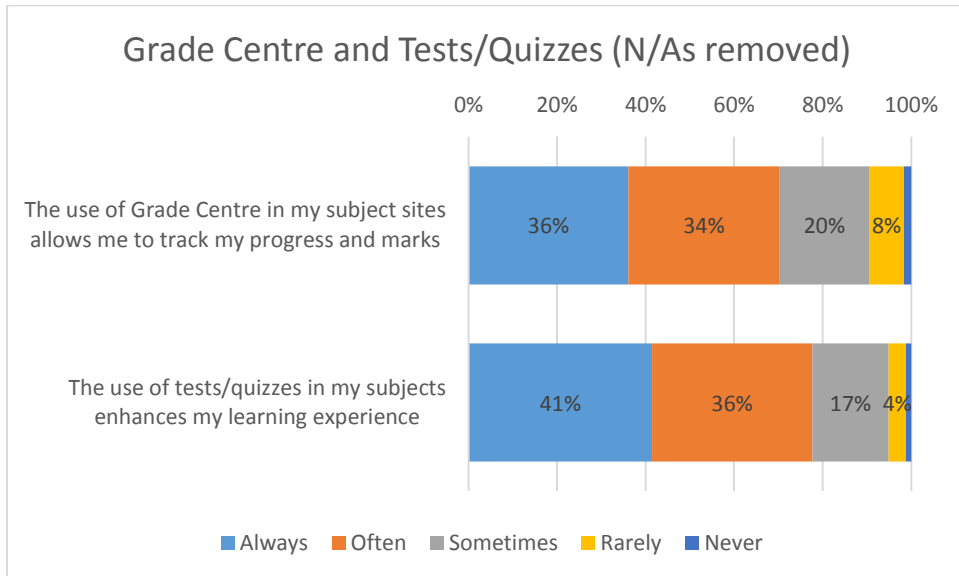


Figure 3f.5 – Grade Centre and tests/quizzes

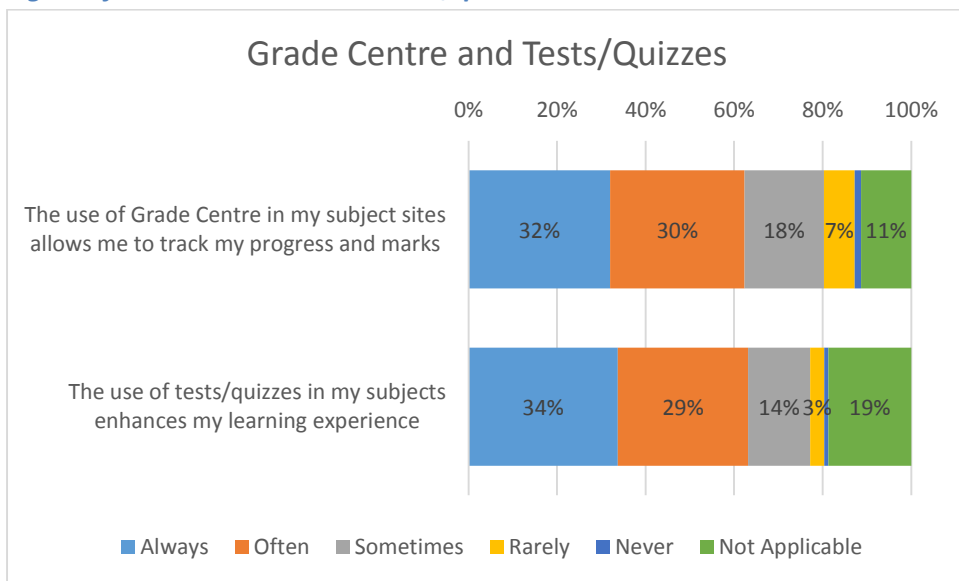


Figure 3f.6 – Have you ever experienced eExams in the delivery of content at CSU?

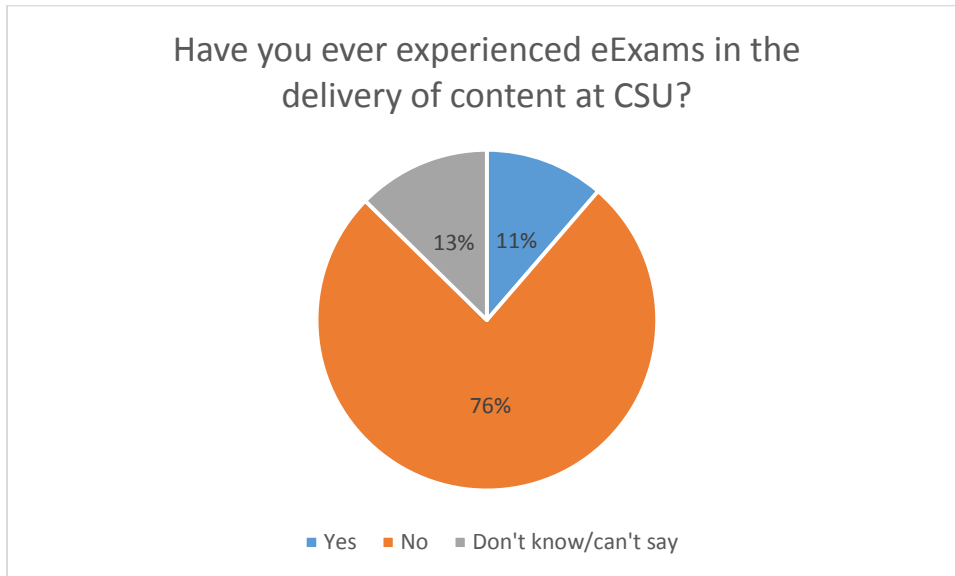


Figure 3f.7 – Have you ever experienced eExams in the delivery of content at CSU? – By Faculty

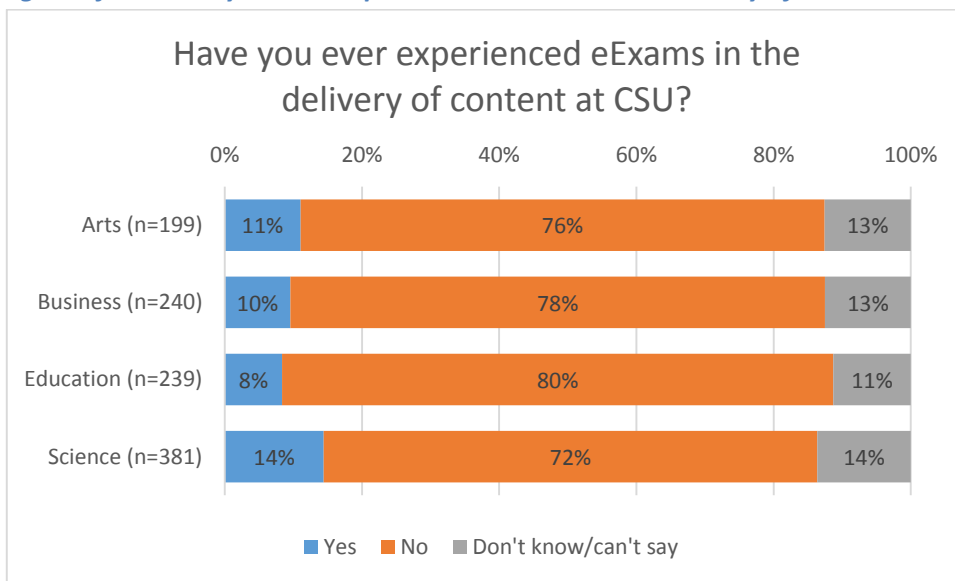


Figure 3f.8 – eExams enhancing the learning experience

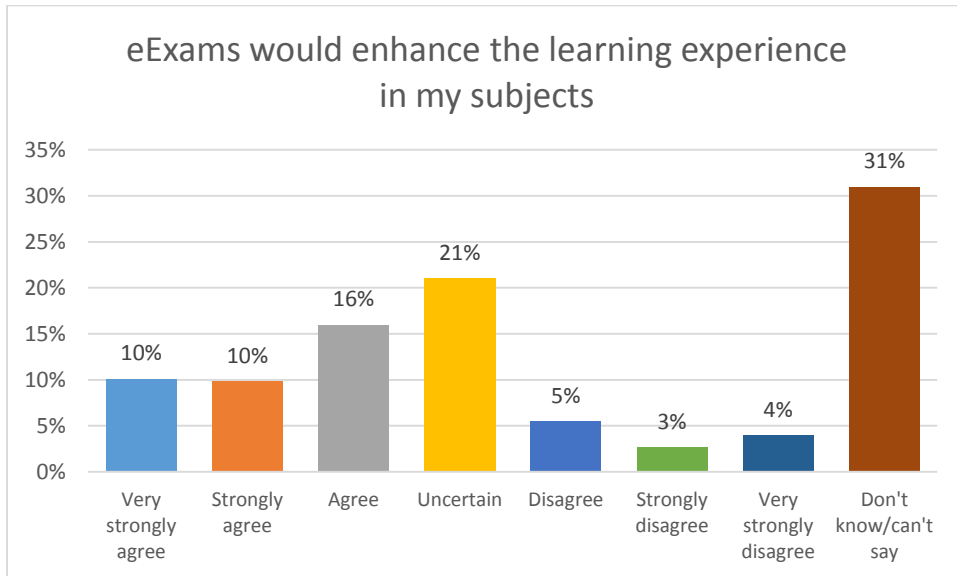


Figure 3f.9– eExams enhancing the learning experience – students who have experienced an eExam

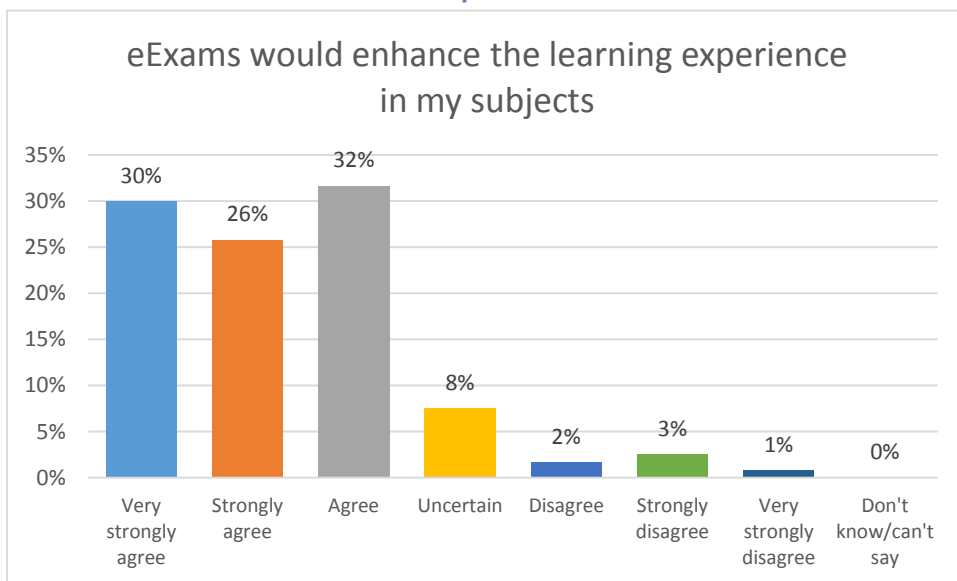


Figure 3f.10 – eExams enhancing the learning experience By Faculty

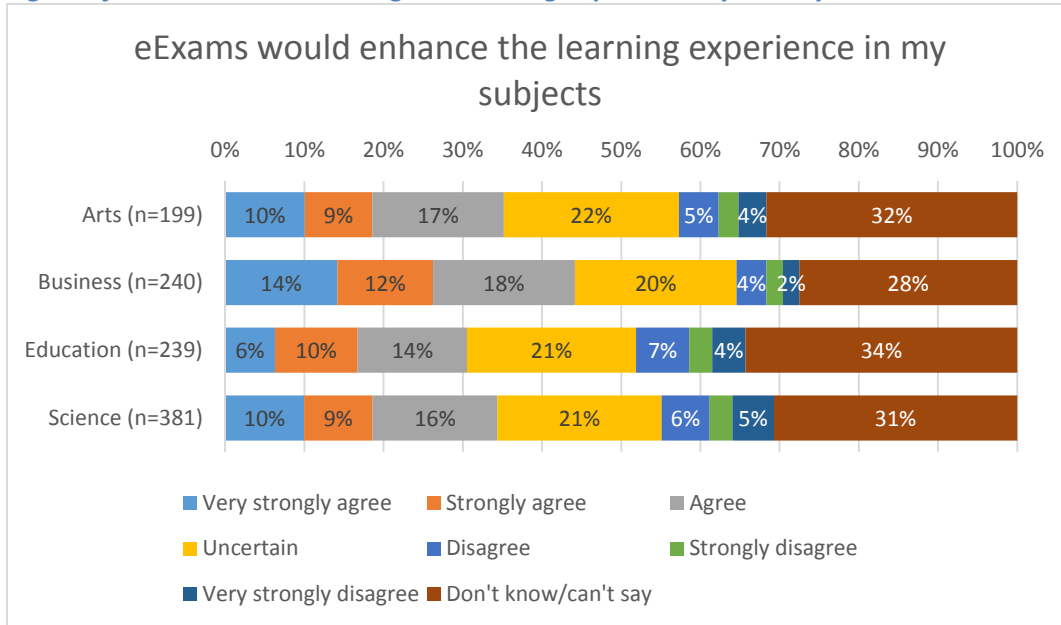
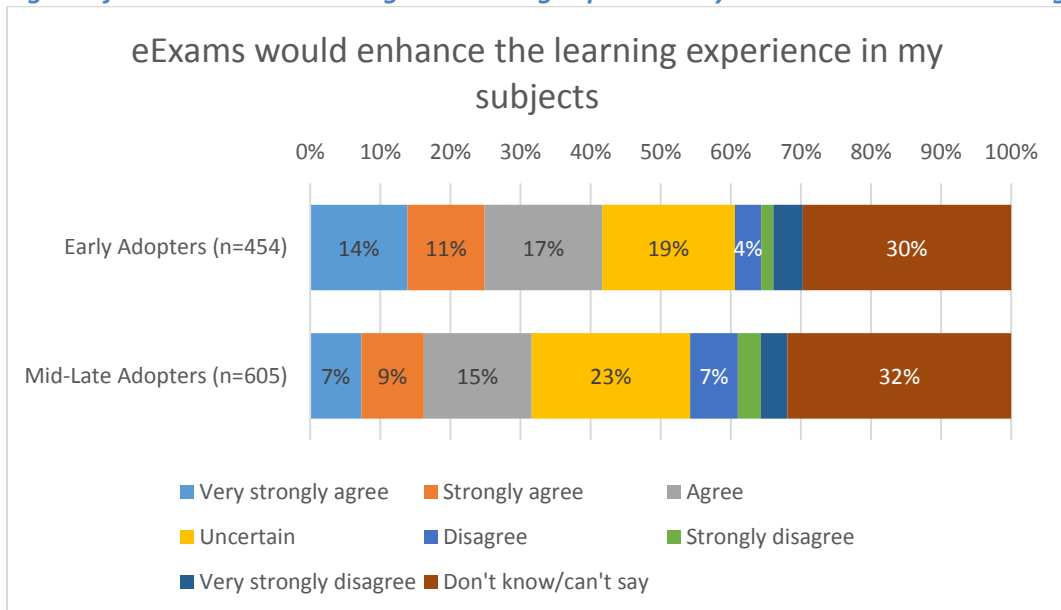


Figure 3f.11– eExams enhancing the learning experience By Attitude Toward Technology



3g. Technologies for Reflection

This section explores students' perceptions of learning technologies for reflection at CSU. Key findings are as follows.

Reflection and Content Creation Tools

- For students who had experience using reflection and content creation tools, noting all tools had over 50% of students with no experience of the tool [see Figure 3g.1]:
 - journals in Interact2 was rated the most easy to use reflection and content creation tool with 68% of students rating it easy to use;
 - the Blog tool in Interact2 was rated as easy to use by 62% of students;
 - 54% of students rated the CSU Thinkspace blog tool as easy to use; and
 - 35% of students rated ePortfolio (Pebble Pad) as easy to use.
- Of the reflection and content creation tools surveyed, all tools had over 50% of students with no experience of the tool [see Figure 3g.2]:
 - 80% of students had no experience with the CSU Thinkspace blog tool;
 - 74% had no experience ePortfolio (Pebble Pad);
 - 64% had no experience with the Blog tool in Interact2; and
 - 56% had no experience with Journals in Interact2.
- Students labelled early adopters of technology are more likely to find the CSU Thinkspace blog tool and ePortfolio (Pebble Pad) easier to use than those students labelled mid-late adopters of technology [see Figures 3g.3, 3g.4].

Reflection and Creativity

- For students who had experience using tools for reflection and creativity, 70% of students agree their subjects make innovative use of technology to support the creation of reflective content and 66% agree that, overall, the technologies provided by CSU for reflection and personal content enable them to be creative [see Figure 3g.5].
- 17% of students had no experience with the technologies provided by CSU for reflection and personal content enabling them to be creative and 15% of students had no experience with their subjects making innovative use of technology to support the creation of reflective content [see Figure 3g.6].
- Early adopters of technology are more likely to agree that both subjects make innovative use of technology to support the creation of reflective content and, overall, the technologies provided by CSU for reflection and personal content enable me to be creative, than mid-late adopters of technology [see Figures 3g.7, 3g.8].

Figure 3g.1 – Reflection and content creation tools – Not Applicable removed

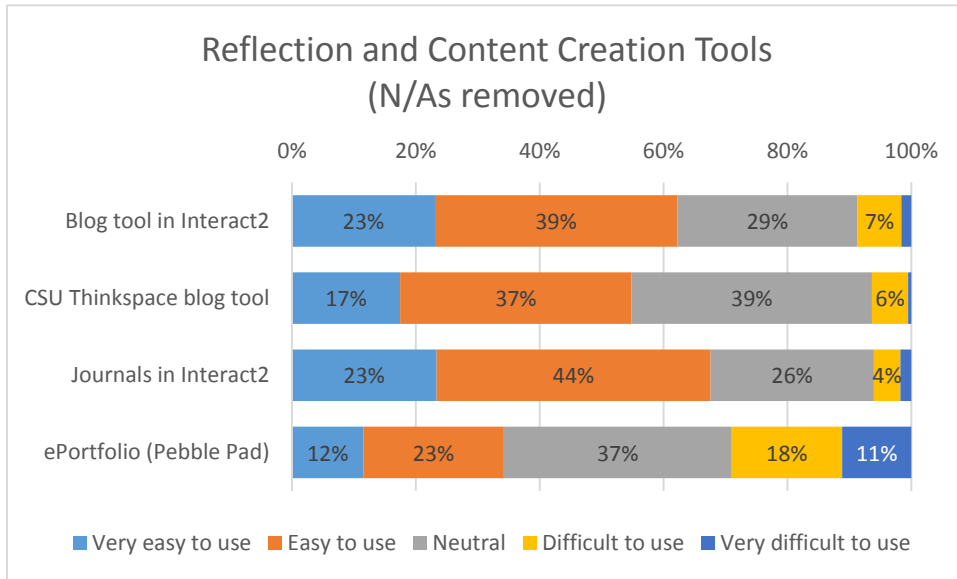


Figure 3g.2 – Reflection and content creation tools

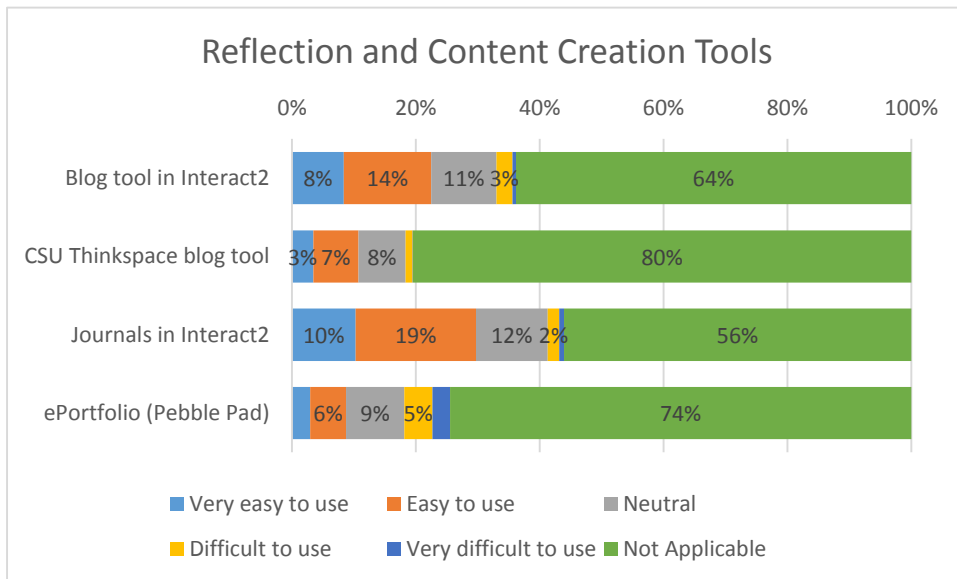


Figure 3g.3 – Ease of use of CSU Thinkspace by Attitude Toward Technology – Not Applicable removed

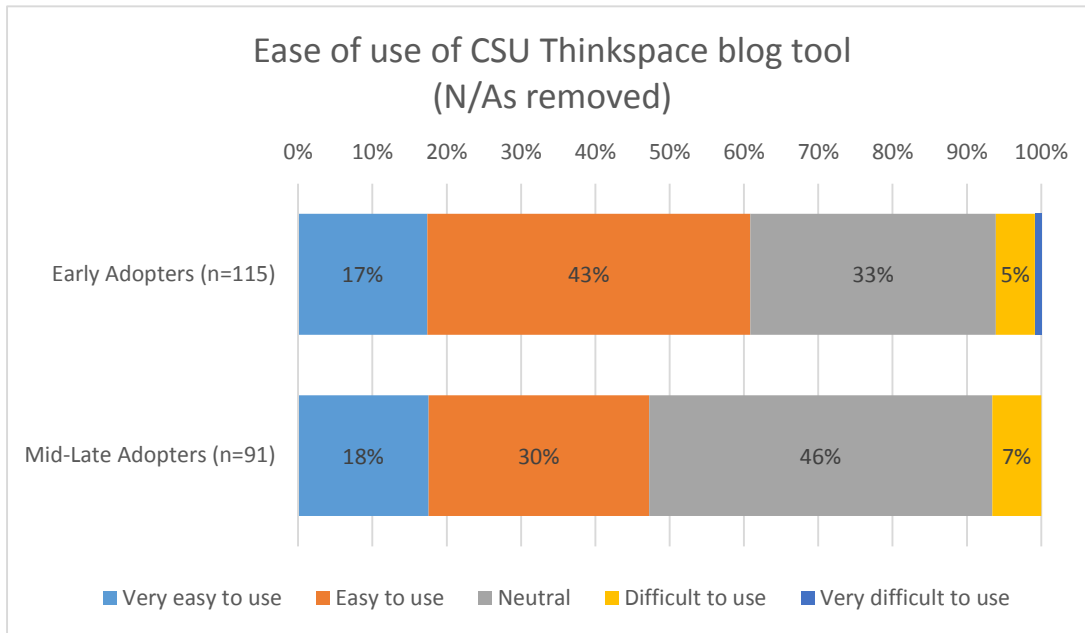


Figure 3g.4 – Ease of use of ePortfolio (Pebble Pad) by Attitude Toward Technology – Not Applicable removed

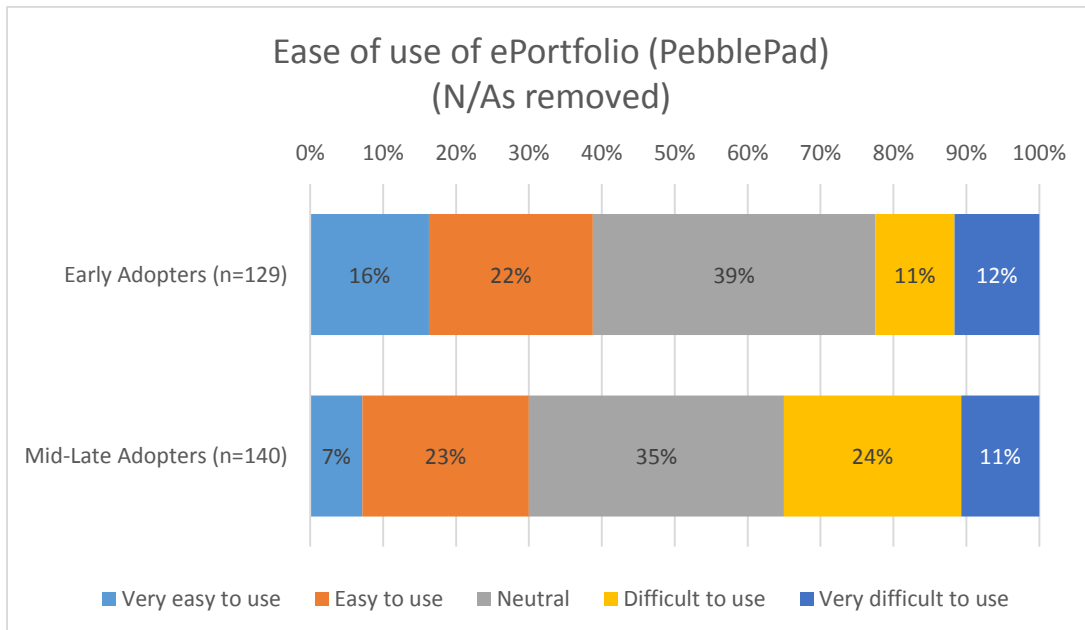


Figure 3g.5 – Use of technologies – Not Applicable removed

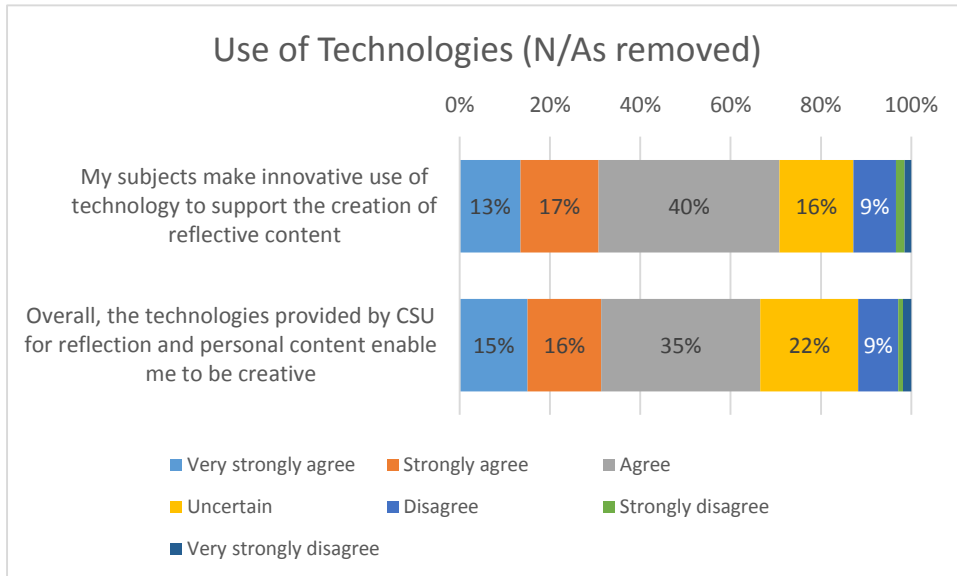


Figure 3g.6 – Use of technologies

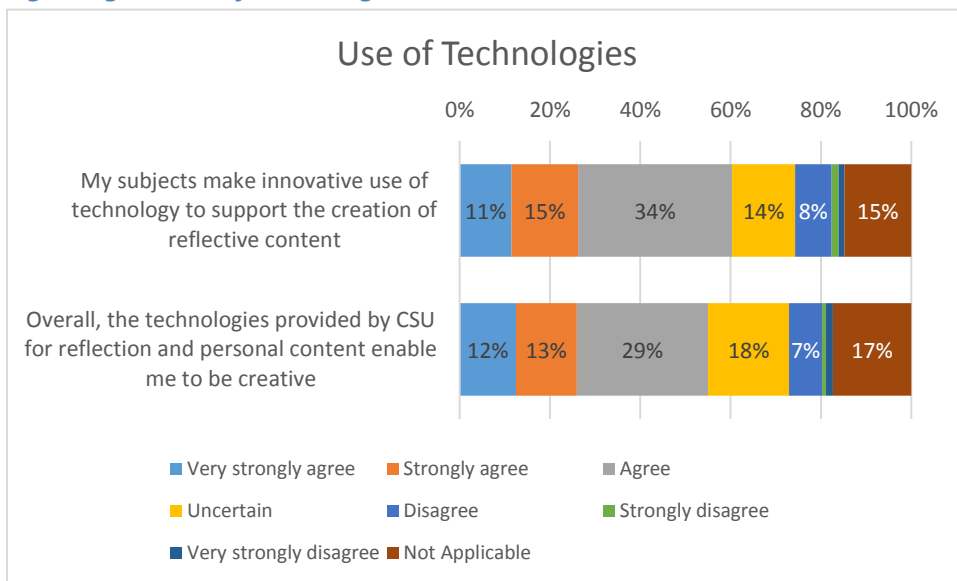


Figure 3g.7 – My subjects make innovative use of technology to support the creation of reflective content by Attitude Toward Technology – Not Applicable removed

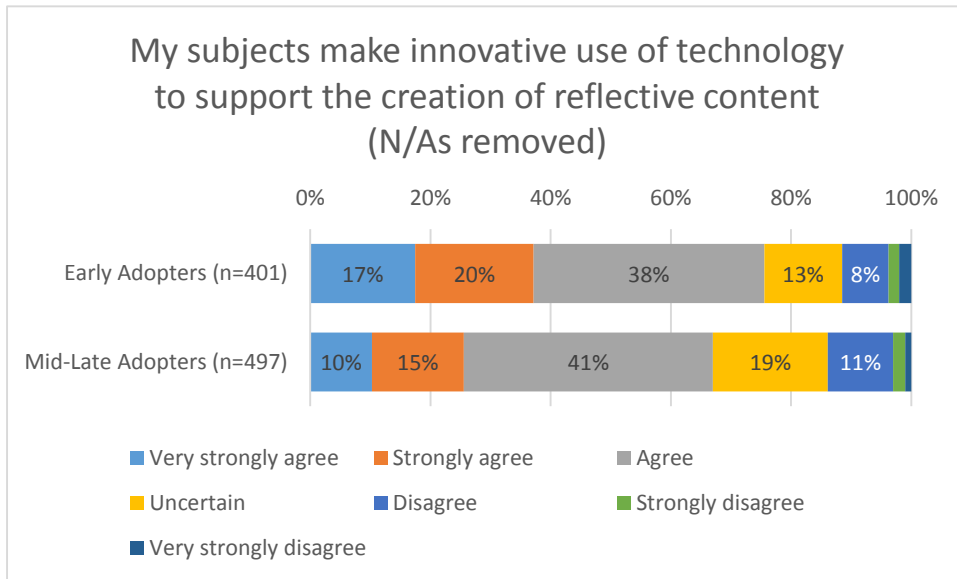
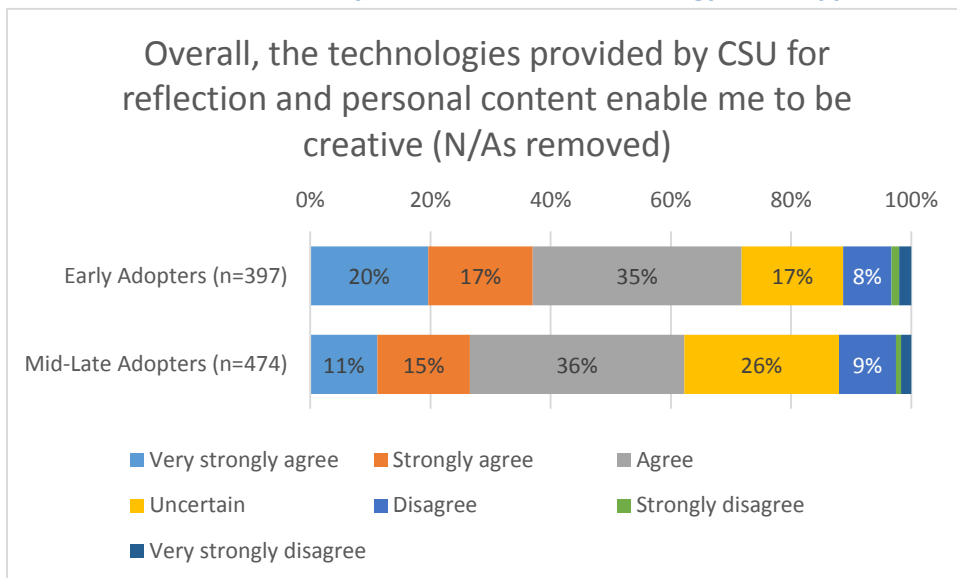


Figure 3g.8 – The technologies provided by CSU for reflection and personal content enable me to be creative by Attitude Toward Technology – Not Applicable removed



3h. Technologies for Workplace Learning

This section explores students' perceptions of learning technologies for workplace learning in use at CSU. Key findings are as follows.

Work Placement

- 19% of student respondents have been on work placement while at CSU [see Figure 3h.1].
- On the questions asked about the learning technologies for work placement, excluding responses of “Don’t know/can’t say” [see Figure 3h.2]:
 - 63% agreed technologies provided by CSU enable good communication between me and University staff while on work placement;
 - 60% agreed that the technologies provided by CSU supported my learning while on work placement;
 - 57% agreed that the InPlace tool is effective in helping manage my placement; and
 - 52% agreed that the technologies provided by CSU kept me connected with my peers while on work placement.
- Looking at the prevalence of responses of “Don’t know/can’t say” [see Figure 3h.3]:
 - 55% of students answered “Don’t know/can’t say” to the InPlace tool is effective in helping manage my placement;
 - 27% of students answered “Don’t know/can’t say” to the technologies provided by CSU kept me connected with my peers while on work placement;
 - 23% of students answered “Don’t know/can’t say” to the technologies provided by CSU enable good communication between me and University staff while on work placement; and
 - 22% of students answered “Don’t Know/can’t say” to the technologies provided by CSU supported my learning while on work placement.
- Excluding responses of “Don’t know/can’t say”, and looking at the answers by attitude toward technology [see Figures 3h.4 – 3h.7]:
 - early adopters of technology were more likely than mid to late adopters of technology to agree with all 4 questions:
 - the InPlace tool is effective in helping manage my placement (64% vs 53%);
 - technologies provided by CSU enable good communication between me and University staff while on work placement (68% vs 59%);
 - the technologies provided by CSU kept me connected with my peers while on work placement (57% vs 49%); and
 - the technologies provided by CSU supported my learning while on work placement (63% vs 58%);
 - however, mid to late adopters of technology were more likely than early adopters to “strongly agree” or “very strongly agree” with these questions:
 - the InPlace tool is effective in helping manage my placement (28% vs 25%);
 - technologies provided by CSU enable good communication between me and University staff while on work placement (25% vs 19%); and
 - the technologies provided by CSU supported my learning while on work placement (21% vs 17%).

Figure 3h.1 – Work placement at CSU

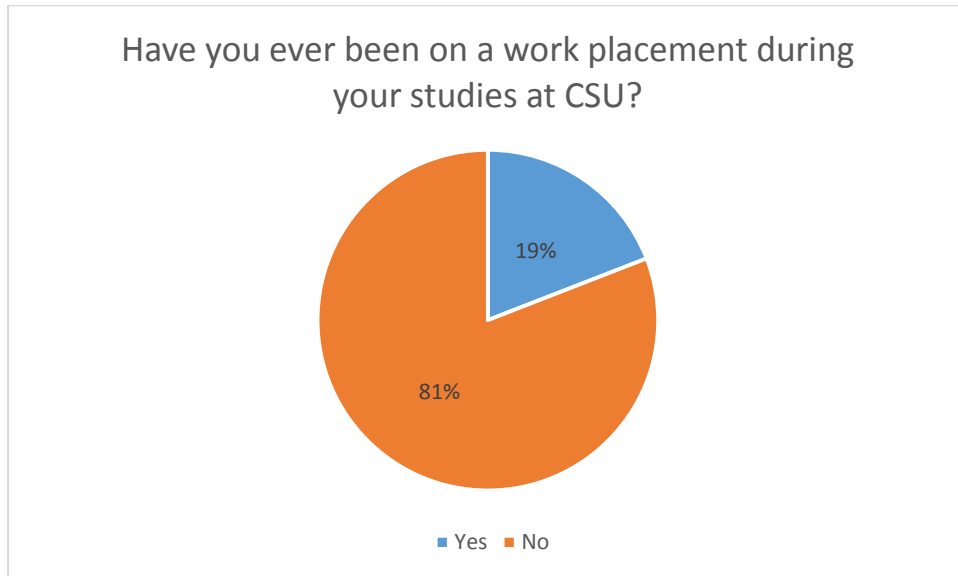


Figure 3h.2 – Technologies for workplace learning – Don't Know/Can't Say Removed

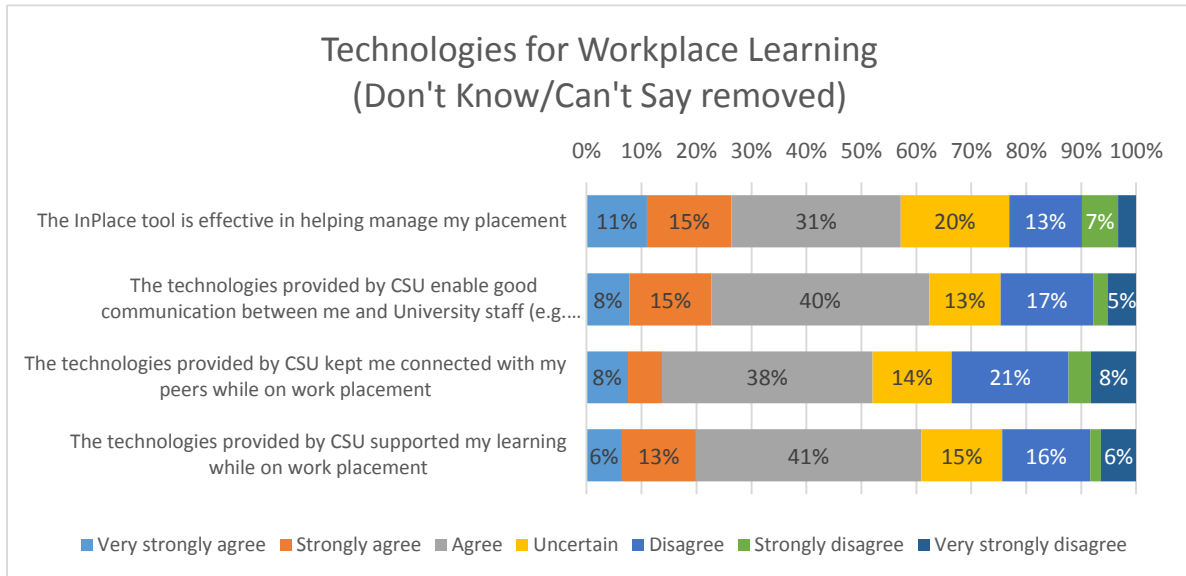


Figure 3h.3 – Technologies for workplace learning

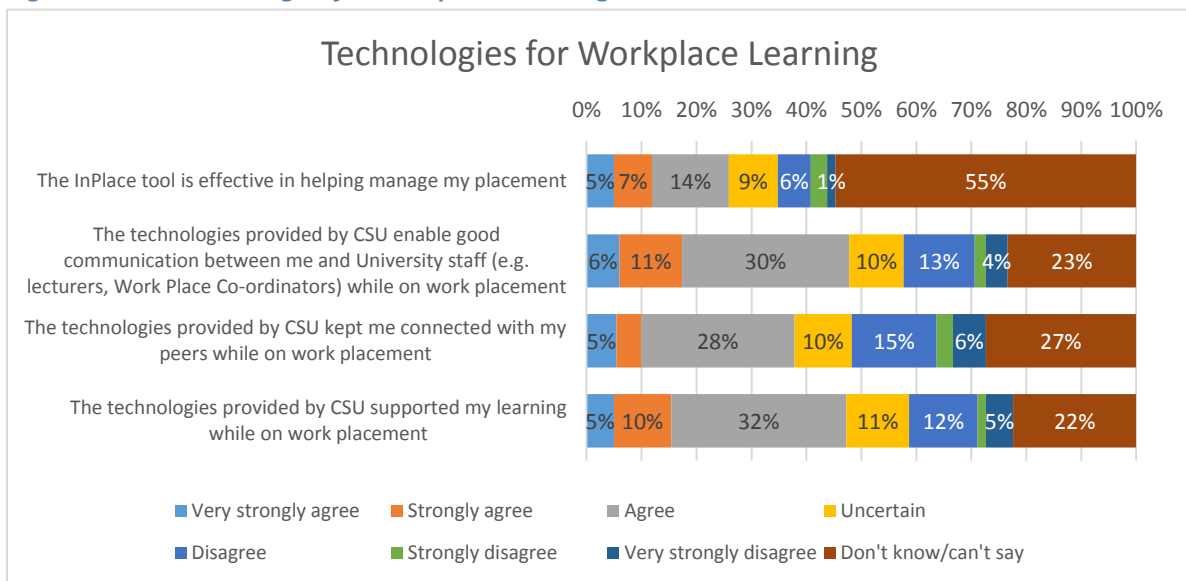


Figure 3h.4 – The InPlace tool is effective in helping manage my placement – Don't Know/Can't Say Removed

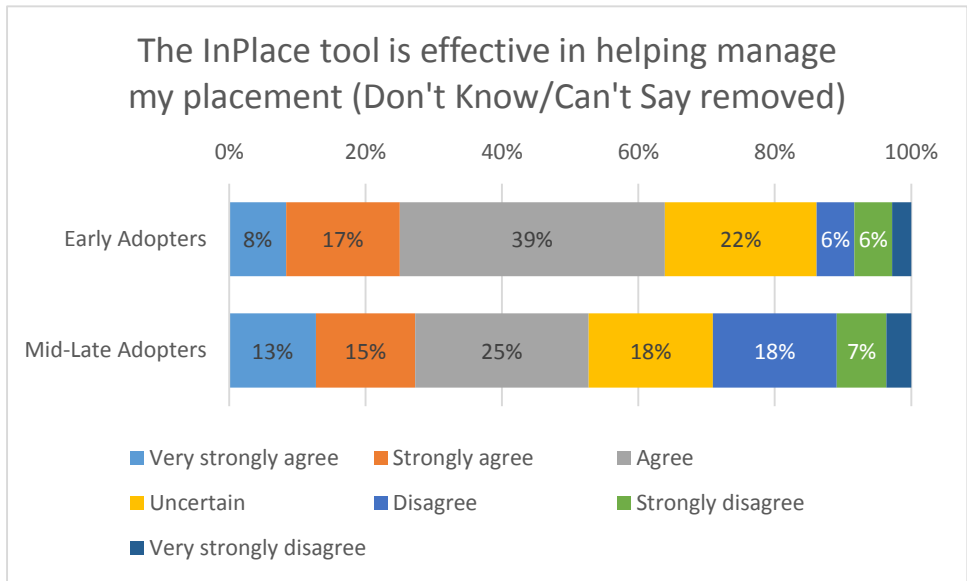


Figure 3h.5 – The technologies provided by CSU enable good communication between me and University staff while on work placement – Don't Know/Can't Say Removed

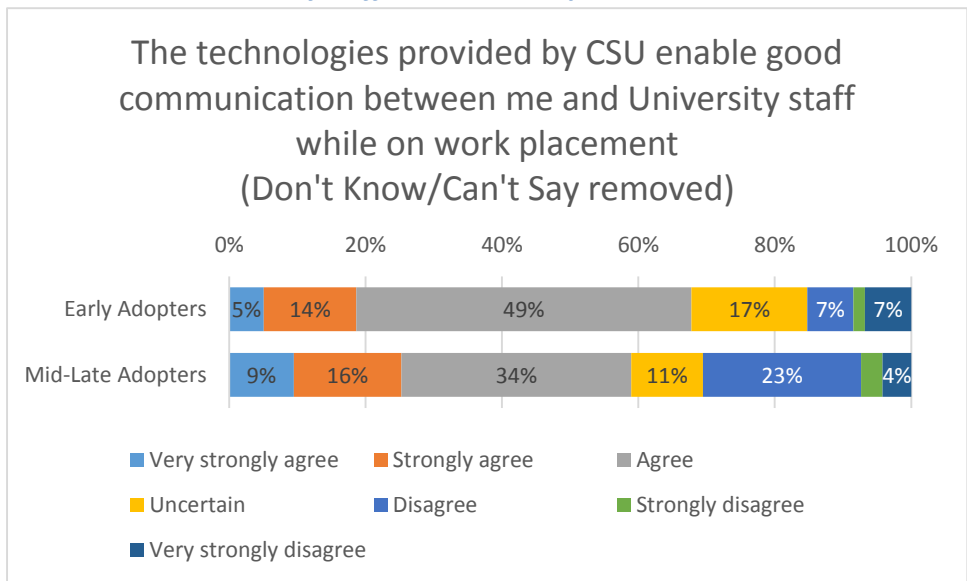


Figure 3h.6 – The technologies provided by CSU kept me connected with my peers while on work placement – Don't Know/Can't Say Removed

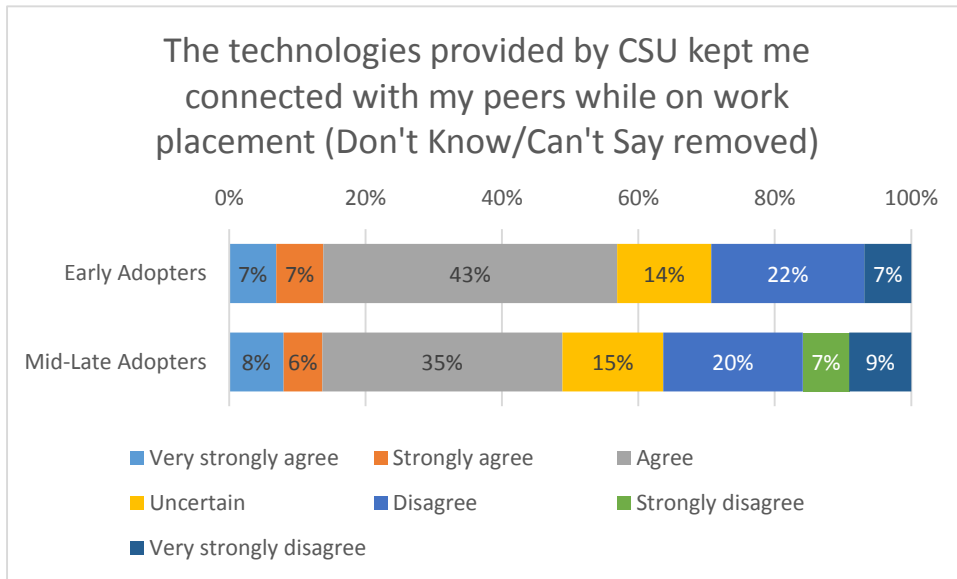
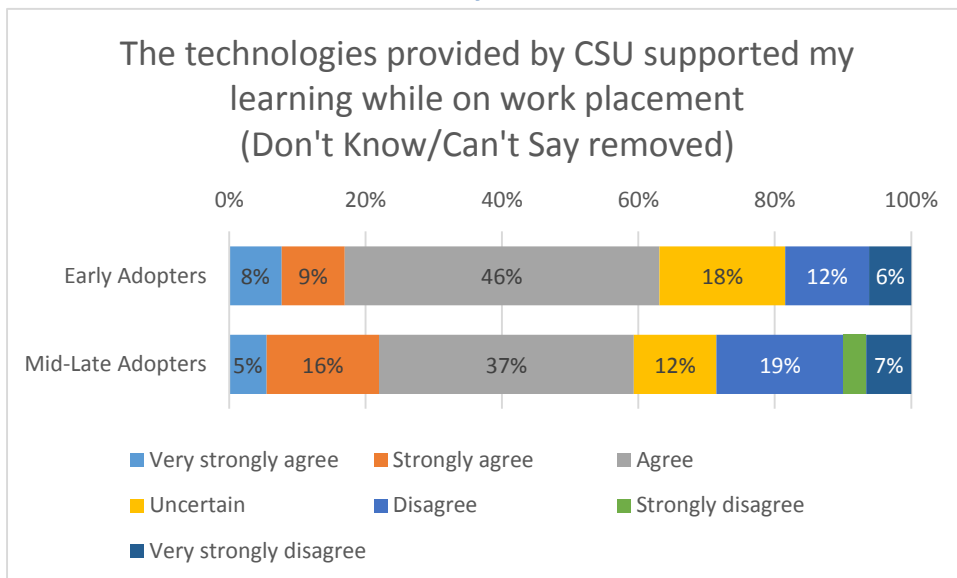


Figure 3h.7 – The technologies provided by CSU supported my learning while on work placement – Don't Know/Can't Say Removed



Appendix A – Introductory Script

Dear Student

Every two years, CSU conducts a student survey on the topic of educational technology. This survey helps us understand how you use technology in your learning, what you think of the technologies we provide and how we can improve those technologies. We encourage you complete this survey fully and honestly. Your responses are essential to the improving the systems that underpin online learning and teaching at your University.

Your responses will be anonymous. Even though Survey Monkey uses the IP address of a computer to enable you to continue if you exit the survey before the end, this information will not be used to identify your contribution. Any reporting as an outcome of this survey will not identify any individual in any way.

Once you have completed the survey, a separate page will be displayed where you will be able to participate in a draw for one of two iPods. Again, any personal information you provide (e.g. name and email address) will not be linked to the anonymous survey.

The survey takes approximately 20 minutes to complete.

Once you begin, we encourage you to complete the survey in full. If you wish to exit the survey at any time and return later to finish it on the same computer, complete the current page you are working on and click the NEXT button. Clicking the NEXT button will save your survey and you will be able to return to the same place at a later time using the same computer. Please ensure you have cookies enabled in your browser or the survey will not be saved when you close the page.

Ethics approval for this survey has been obtained from the CSU Human Research Ethics Committee. Providing information through this online survey is taken as an indication of voluntary consent to participate. You have the right to withdraw from the research at any time without penalty. Please contact Assoc Prof Philip Uys if you wish withdraw after having completed part of the survey.

Any enquiries may be addressed to:

Associate Professor Philip Uys

Director Learning Technologies

Division of Student Learning (DSL)

Charles Sturt University, PO Box 883, Orange, NSW 2800 Australia

Email: puy@csu.edu.au <http://www.csu.edu.au/division/lts/>

Any complaints around ethical issues should be addressed to the University Human Research Ethics Committee.

Contact: ethics@csu.edu.au

To access and complete the survey, please click NEXT below.

The survey runs from Wednesday 27 April to Friday 20 May 2016.

Thank you for your participation.