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## What do you do with your tablet computer? Undergraduate student's perceptions of tablet computers and its use in their learning at the University of the South Pacific

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**Abstract:** Individual access to mobile devices in higher education has increased tremendously in recent years as tablet computers (hereinafter mentioned as tablets) are now widely available giving students greater access to these technologies than ever before. The increasingly widespread diffusion of tablets at The University of the South Pacific (USP) brings to the forefront questions about its usage and perceptions among undergraduate students. Against this backdrop, using a mixed-method approach, this study sought to evaluate the usage of tablets by undergraduate students at the university. Three hundred and fifty-two participants were administered a questionnaire that contained Likert scale items and open-ended questions to elicit information pertaining to their use and perception of tablets, while in-depth interviews were conducted with five undergraduate students. The findings of the study indicate that students are favourably disposed towards the use of tablets in their studies as it helps them engage with their learning activities, mainly in accessing academic resources, communication and collaboration with their lecturers and peers. However, several technical issues with the tablets were identified by the students that the university needs to address to improve the adoption, implementation and diffusion of this device in students' learning.

**Keywords:** Diffusion/rollout of tablets, usability, portability, flexibility, student perceptions, cooperative learning

### Introduction

In 2013, a program called the Tablet Learning Project was rolled out at USP (Tablet Report, 2013). This project involved the distribution of tablets to all full-time students. It was deemed educationally advantageous for each student to have easy access to their own personal computer and the tablets were chosen as the most portable option. In the first round, 600 students in selected courses offered at Alafua, Emalus, Kiribati, Solomon Islands, Tonga, Lautoka, and Labasa Campuses received a tablet each. In an effort to ensure that the regional students made the most of this technology, the tablets were loaded with course materials and other applications to support their learning.

One of the expected outcomes of this initiative was to reduce students' printing cost of course materials, increase collaboration with peers and instructors, and provide access to lecture notes and learning resources anytime, anywhere. This initiative was also seen as a first significant step toward a paperless higher education environment (Tablet Report, 2013). After the success of the initial rollout, the University approved the distribution of more tablets to selected students in a number of USP campuses. In this respect, 440 tablets were issued to all undergraduate students in 2017, while 1,409 tablets were given out to first-year degree students in 2018. Since its first rollout in 2003, 2,449 tablets have been given out to the students under this initiative.

In spite of the increased investment in the acquisition of tablets, little research has been conducted to see if this initiative has been successful. More specifically, the university needs to know how the students



are using this device in relation to their learning and their perceptions about it. This study sought to explore how the students, the main adopters of this technology, used the tablets in their studies. The findings from this study are expected to provide valuable insights into the adoption of this initiative and directions for the future.

### Literature

The 21st century has witnessed a surge in the use of mobile devices such as smartphones and tablets in all spheres of life resulting in instant access to information from anytime and anywhere. Cell phones, iPads, iPods, laptops and tablets are not luxuries anymore but the essential means for being connected, educated and entertained. Tablets, which are pen-enabled devices much like a laptop, are being recognized as useful tools in educational settings (Weitz, Wachsmuth, & Mirliss, 2006). These devices afford a number of learning activities such as the ability to read, write, browse, connect and communicate (Mohseni, 2014). Research shows that the use of tablets makes students feel a lot more confident because of greater opportunities to collaborate with one another (El-Gayar, Moran, & Hawkes, 2011; Weitz, Wachsmuth, & Mirliss, 2006). Moreover, institutions are finding that tablets can be used to advance equal and equitable access to learning opportunities (Ally, Balaji, Abdelbaki, & Cheng, 2012; Henderson, Selwyn, & Aston, 2017; Tambouris et al., 2012; Voss, 2013).

The use of tablets, in particular, is growing rapidly over the world especially in schools and higher education to alter the education process in various settings. Research in this respect indicates that tablets have the potential to increase access to education, not only in urban areas but in rural areas as well. For example, in a bid to provide equal access to education in Swat, Pakistan, a mobile learning project was carried out in two schools involving Grades 8, 9 and 10, where tablets were used to provide learning resources to students. The findings of this study revealed that students found learning with tablets useful as they could download the learning materials in schools and revise them at home. Students with minor visual impairments found tablets especially useful, as they were able to read well using the zoom out function of the tablets (Ally, Balaji, Abdelbaki, & Cheng, 2017).

The portability of the device makes it a preferred medium to access quizzes and other activities outside the classroom. This was highlighted in a study conducted by Foti and Mendez (2014) who investigated the frequency and quality of mobile device use among 46 students as part of the Occupational Therapy program in a university in New Jersey, United States of America. The findings of this study revealed that students' ability to collaborate and cooperatively engage with their peers was enhanced by the mobile device. Results from this study are consistent with studies conducted by Rossing, Miller, Cecil, and Stamper (2012) and Shaibu, Shonola, Mike, Oyelere, and Suhonen (2016) also confirming that the use of this device encourages participation and supports cooperative learning environments.

Similar findings were also reported in an action research project conducted by Chen (2013), investigating the language learning habits of Chinese students who used tablets to learn English outside the classroom and how they optimized the use of this device to self-regulate their foreign language learning. This study found that students developed positive attitudes toward the usability and effectiveness of tablets as a tool for mobile-assisted language learning owing to its easy-to-operate functionalities, expandable application installment and portability.

While researchers such as Alyahya and Gall (2012) have noted positive perceptions of students in their study that was conducted in the University of Colorado (USA) stating that the students engaged with the device and felt "more connected", studies conducted in other universities have noted unfavorable student perceptions toward this technology. One such study was conducted at Indiana University, in the USA, where the students using iPads in their classes were surveyed about their perceptions. The findings of the study indicated that even though some students expressed satisfaction with using the device, there were others who found it difficult for notetaking and perceived it as a source of distraction. The study also stated that the educators could help in the adoption of this technology by incorporating

it in their teaching so students can experience the potential of the device to enhance learning (Rossing, Miller, Cecil, & Stamper, 2012).

Even though researchers contend that tablets can be used as a supportive and interactive tool in the teaching and learning process (Lewis, 2014), the literature on students' perceptions about tablets is scant. Very little seems to be reported on how the students make use of this device, both inside and outside the classroom. Moreover, their perception of its use in their learning has not been thoroughly explored. The focus of this study has been to understand students' perception of the use of tablets and the meaning and values they associate with it. Knowledge about how the students think the tablets can help institutions make meaningful alterations in diffusion of technologies to support learning and teaching is of interest.

### **Purpose of the study**

The purpose of this study was to evaluate undergraduate students' perceptions and their usage of tablets in their learning. This research aimed to shed light on the actual usage of tablets by undergraduate students and help the university take a more systematic approach in the diffusion of this technology. In order to achieve this objective, the study aimed to address the following questions:

1. *What are undergraduate students' perceptions of the use of tablets in their learning?*
2. *In what ways, if any, do undergraduate students make educational use of tablets?*
3. *What are the ways in which students use tablets to connect, communicate, and collaborate with others?*
4. *What forms of interactions do students have with their tablets?*
5. *What are the factors that influence the students' decision to use tablets for academic purposes?*

### **Methodology**

#### **Research Method**

The study used a mixed-methods approach to gather data. This included an online student survey and in-depth face-to-face interviews. Both instruments were designed to measure the use patterns and perceptions of tablet computers by undergraduate students at the university.

#### **Research Procedure**

Data for this study was collected in two rounds: the first one in 2018 and a second one in 2019. The survey was conducted online via Survey Monkey, with a link to the survey emailed to the students. All undergraduate students studying on campus and through distance and online mode were approached to take part in an online survey as well as a series of in-depth face-to-face interviews.

#### **Population and Sample**

The target population for this study was first-year undergraduate students (studying on campus and online) who were issued a USP tablet computer in 2017, 2018, and 2019 as part of the Tablet Learning Project.

#### **Research Instrument**

A survey (see *Appendix A*) was designed to capture the perceptions of the use of USP tablets by undergraduate students. This instrument contained 44 questions with an expected completion time of approximately 20 minutes. The survey included a mixture of Likert scale items (see *Appendix B*) consisting of 1) student demographics, 2) usage of tablets by students, 3) perceptions of students about tablets in learning. It also contained open-ended questions. A link to the survey was forwarded to all the first-year undergraduate students enrolled in 2017, 2018 and 2019, who had been issued with a tablet. The respondents were asked to provide their email address if they were willing to participate in a prize draw to win tablets and headsets as an incentive to take part in the survey.

Qualitative data was obtained with a series of face-to-face interviews with five Laucala Campus students (who were randomly selected from the survey respondents) to gain detailed information about their perceptions and feelings about tablets.

### Validity of the instruments

An impartial review of the survey was done to test its content validity with the faculty staff and a group of students based at Laucala Campus. The two groups were asked to peruse the survey and answer the questions and provide feedback on the content of the survey especially on the face validity of the questions being asked in the survey. Adjustments were made to the instruments based on the comments from the two groups.

### Data Collection

This research was conducted using a survey in addition to interviews with selected participants.

- Quantitative data was collected using a student survey that was administered through Survey Monkey. The first round of responses was collected from 118 respondents with a response rate of 93% in 2018, whereas 234 students responded to the survey in 2019. Some of the respondents in Round 2 may have also responded to Round 1.
- Qualitative data was collected using semi-structured interviews conducted with five participants, each interview lasting approximately 15 to 20 minutes. To elicit more information from the interviewees, more questions and probes were used. The objectives of the study were explained to all the interviewees prior to the interview. The interview was recorded using the audio recording feature of a mobile phone.

### Data Analysis

Descriptive analysis was performed on qualitative data using the procedure: coding of the data, identification and organization of themes and finally identification and analysis of findings. The quantitative data was analyzed (using the 'analyse' feature of Survey Monkey and Excel) and presented using pie charts and bar graphs.

## Results: Round 1 Data

### Demographic Data

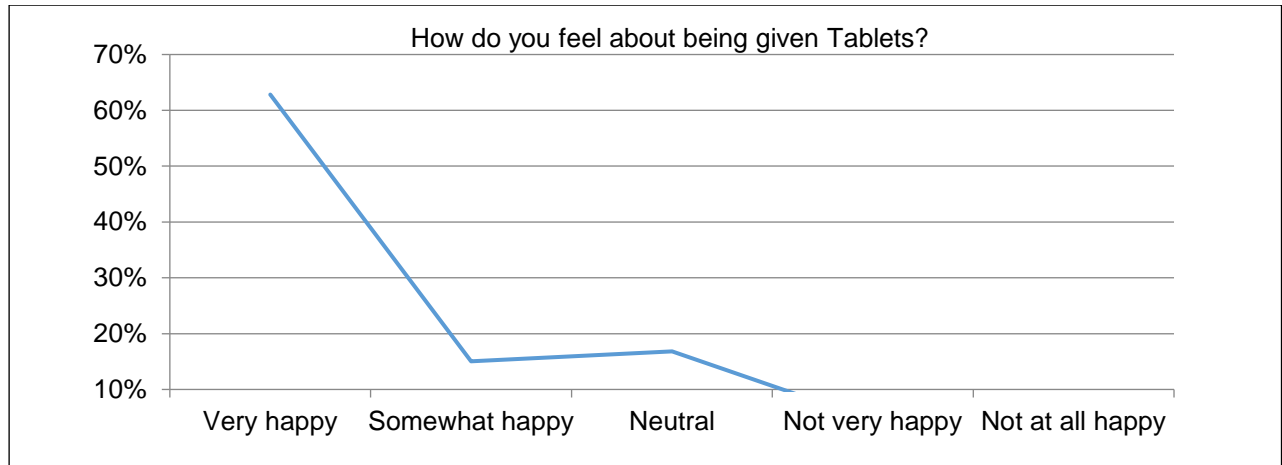
In total, 118 students from across the university took part in the survey. The demographic data highlighted in the table below shows that students surveyed included those from Bachelor of Arts, Science, Commerce, Laws, Agriculture and Unclassified Undergraduate Studies. The majority of the survey respondents were from the Laucala Campus (where most of the students are located) while one was from the Emalus Campus in the Solomon Islands.

**Table 1.** Demographics – Survey Respondents

		<i>Number of students</i>	<i>Percentage of students</i>	<i>Total</i>
<b>Campus</b>	Laucala	111	99.11	112
	Solomon Islands	1	0.89	
<b>Age</b>	18-24	98	87.5	112
	25-34	7	6.25	
	35-44	7	6.25	
<b>Program of study</b>	Bachelor of Commerce	59	52.21	113
	Bachelor of Science	25	22.12	
	Other disciplines	29	25.67	

### Feelings toward Tablets

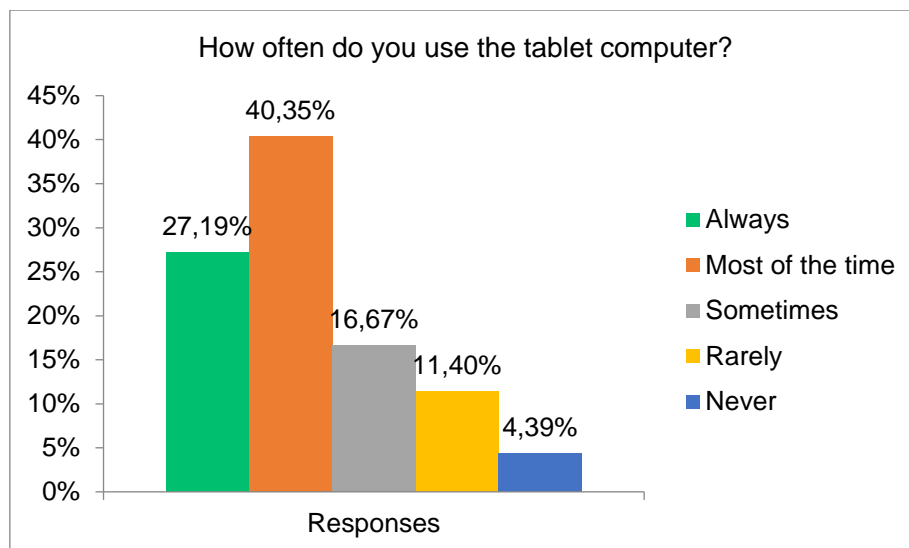
The next question explored the feelings of the students about being given a tablet (see *Figure 1*), using a 5-point Likert scale, where 1 indicated *not very happy at all* whereas 5 indicated *very happy*. Data was gathered from 108 respondents, out of which more than 60% stated that they were very happy about being given tablets. However, almost 5% of the respondents revealed that they were not very happy about being given a free tablet.



**Figure 1.** Feelings toward Tablets

### Frequency of Usage

The respondents in the survey were asked how frequently they used their tablets on four point scale. ; Their responses are presented on the graph given below (*Figure 2*). Almost 67% of the respondents indicated that they always or mostly used their tablets, while almost 16% of them indicated they rarely or never used their tablets.



**Figure 2.** Frequency of usage of Tablets

### Ease of Use

The respondents were further asked how comfortable they were about using tablets, and their responses were recorded on a 5-point Likert scale, where 1 indicated *not comfortable* and 5 indicated *very comfortable*. The results (see *Figure 3*) indicated that more than 80% of the students were comfortable or very comfortable with using a tablet to support their learning, while almost 11% of them were

moderately comfortable and 6.25% slightly comfortable, leaving slightly less than 1% of the students who were not comfortable using this device.

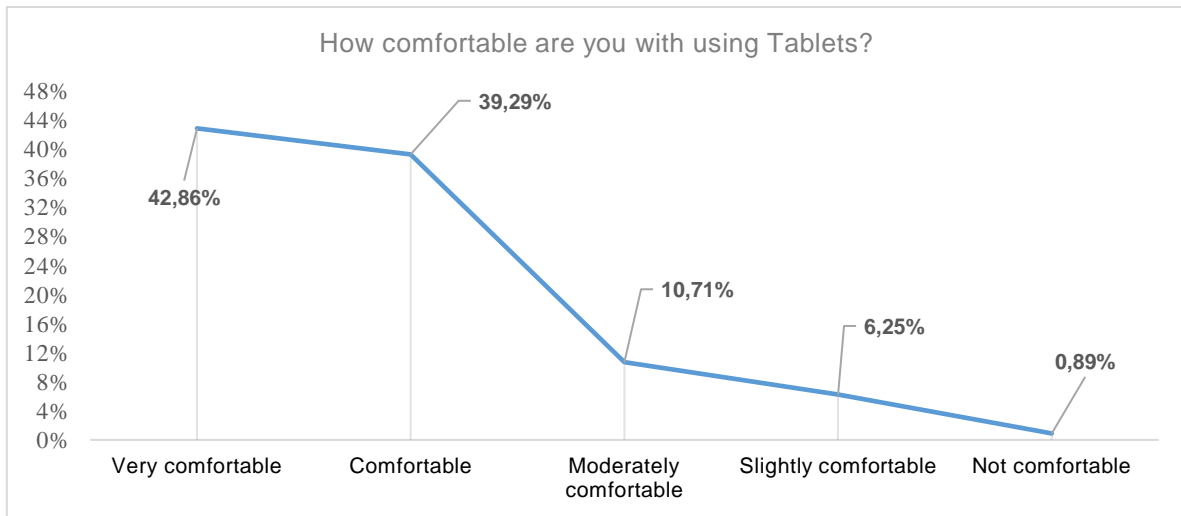


Figure 3. Ease of Usage of Tablets

**Usage of Tablets for Learning**

One of the main objectives of this survey was to investigate how undergraduate students used their tablets for learning. The usage of the tablets for various activities were represented on a 5-point Likert scale, where 1 indicated *never* and 5 indicated *almost always*. The results (see Figure 4) showed that majority of the students used their tablets to access course-related materials, which included usually using their tablets towards searching for information (81%), reading prescribed notes (69%), participating in online discussion forums (58%), completing assignments (47%), and notetaking (46%).

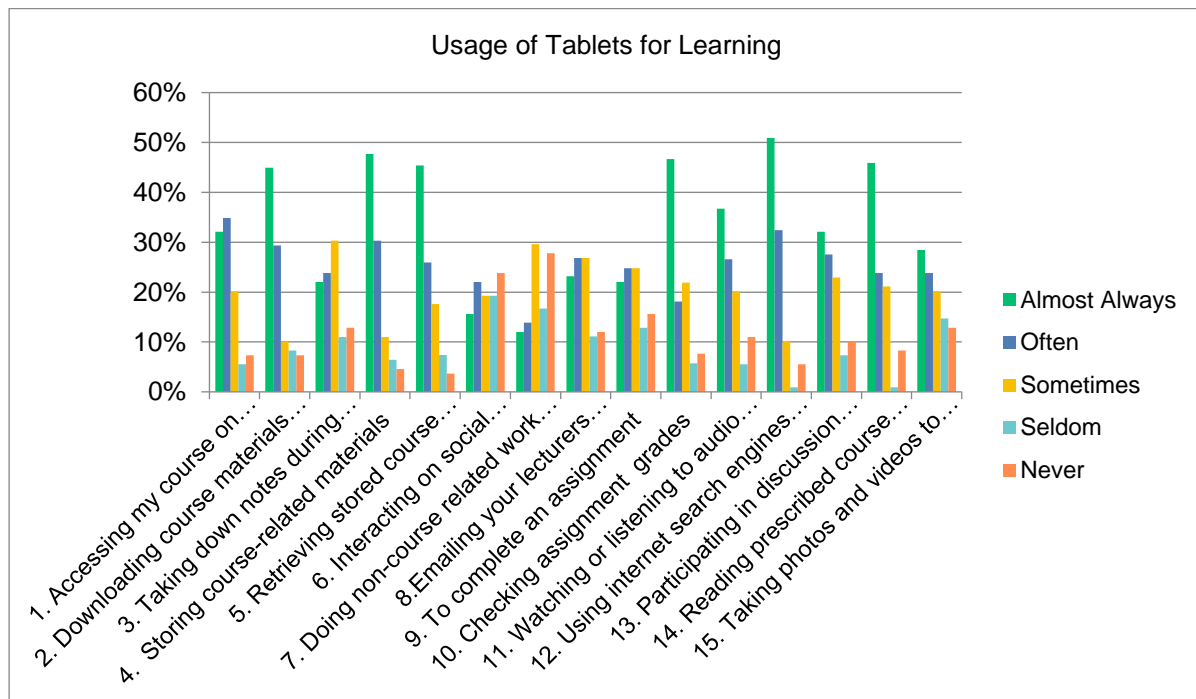


Figure 4. Students' use of Tablets for learning

**Tablets for non-study-related work**

The students were asked how they used their tablets other than for studying. The responses can be seen in Figure 5 given below. The most common use of the tablet was surfing the Internet (51.40%),

followed by sending and receiving emails (23.36%), and social media (15.74%), while playing games (15.74%) was the least popular activity reported in this context.

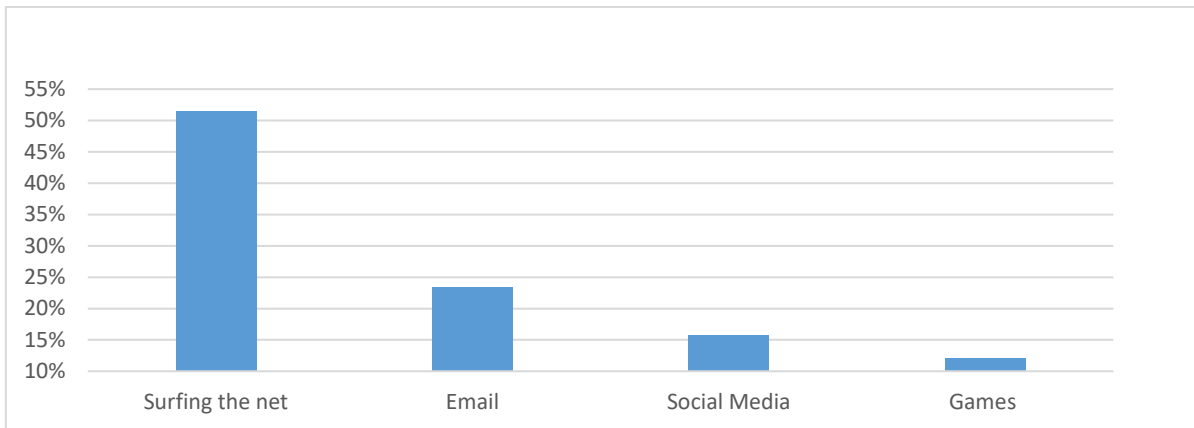


Figure 5. Tablet usage for non-study related work

**Students’ Perception of Tablets**

Another objective of the survey was to find out students’ perception of using tablets both in terms of their studies and non-study related activities; therefore, questions were asked to explore their perceptions using a 5-point Likert scale where 1 indicated *undecided* and 5 indicated *strongly agree*. Figure 6 given below shows that the majority of respondents (94%) indicated that they found the tablets very useful towards their studies, as they were able to access their notes anytime, anywhere (90%), without having to go to a computer lab and it reduced their cost of printing (85%). Further analysis of the survey questions revealed that more than 80% of the students were able to complete their assignments with the use of their tablets. However, 42.59% of students indicated that they preferred to study using their laptops rather than the tablets while 68% indicated that they could not use their tablets due to the technical difficulties.

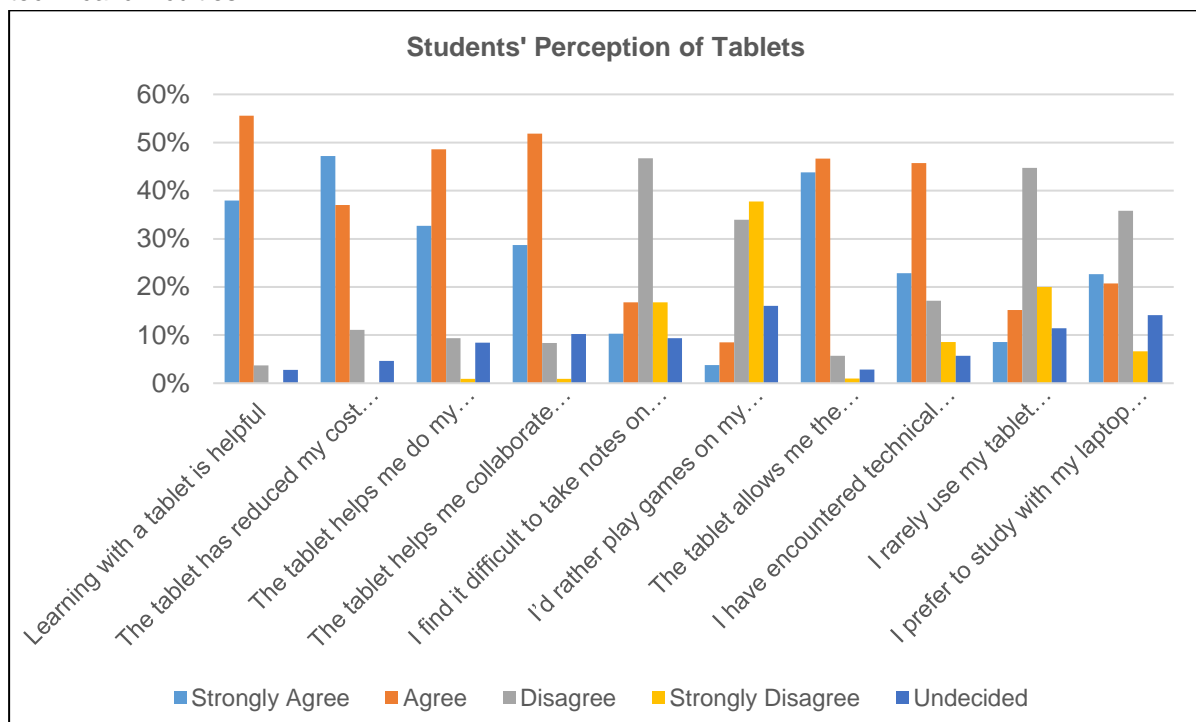


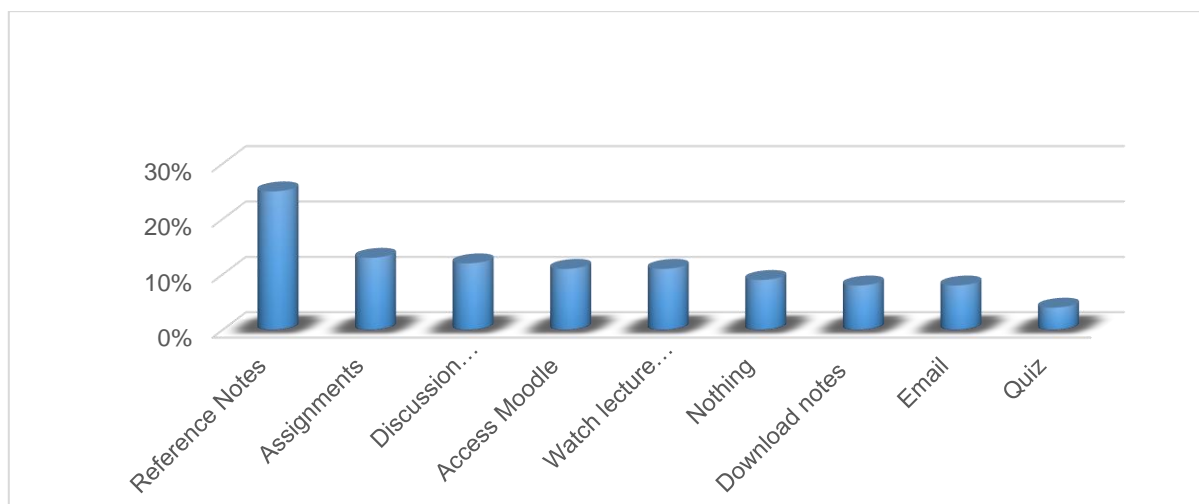
Figure 6. Students’ Perceptions of Tablets

### Challenges with Tablets

Further analysis of the open-ended response in the survey data revealed a number of issues faced by the students, which prevented them from fully utilizing the tablets in education. While some students were grateful about being given a tablet to enhance their academic pursuits, a majority of students had various concerns about the use of tablets in education. Out of the 79 students who responded to the question regarding their concerns with the use of tablet computers, more than half of them (50.63%) expressed their dissatisfaction with the use of the device. The main issues included inability to connect to the USP campus Wi-Fi, short battery life, problems with charging the device, inability to download documents and access Moodle, slow processing speed, automatic, continuous screen rotation, fragile screen, and concerns regarding bearing the cost of the repairs of the device.

### Activities using Tablets

The next question on the survey explored the activities they were able to do with their tablets that they were unable to do before. The results of the questions can be seen in *Figure 7* below, which shows that out of the 100 students who responded to this survey, one quarter ( $n = 25$ ) of them stated that the tablets helped them access their lecture notes and related materials easily while 22% of the students indicated that they were able to access Moodle better and watch course-related videos. Additionally, 13% of the students indicated that the tablets helped them to do their assignments better, while 12% of them stated that they were able to participate in discussion forums effectively using their tablets. Moreover, a very low percentage (8%,  $n=8$ ) of students indicated that downloading their lecture notes and other resources on their portable device made learning easier as they did not have to go to the library or the computer lab to download the notes. On the other hand, another 8% indicated that the tablets helped them stay in touch with their lecturers and peers through emails. A very small percentage (4%) of students stated that they were able to attempt quizzes on their device, which they were unable to do before. While the results show that a majority of the students were able to utilize the tablets to gain academic advantage through various activities as indicated in the chart below, 9% of the students stated that the tablets did not make much difference to their style of learning.



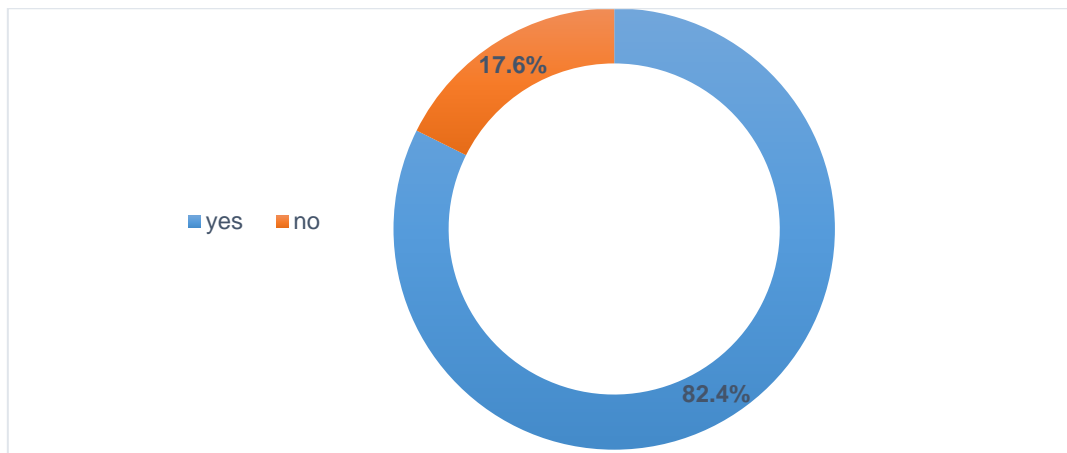
**Figure 7.** Activities that you are able to do with your tablets that you were unable to do before

### Engagement with studies using Tablets

When students were asked whether they engaged more with their studies using their tablets, the responses were mostly positive. *Figure 8* shows that out of 102 students, an overwhelming 82.4% of them agreed that the use of the tablets helped them engage with their studies more efficiently. The reasons students gave were centered on the portability and mobility of the device as it enabled them to



learn anytime, anywhere. Some students also commented that they could better organize their studies and self-regulate their learning with the use of tablets.



**Figure 8.** Engagement with Studies

### Responses from the Interviews

There were three important themes that emerged from the interviews. The first theme that emerged was that students used the tablets to support their learning. When asked specifically to expound on how the tablet helped them engage with their studies, students mainly focused on their ability to access their course materials through Moodle, completing assignments and collaborating with their lecturers and peers. One student stated, “The tablet computer helped me take down notes during lectures and tutorials, downloading and accessing lecture notes, completing assignments, accessing Moodle and generally keeping in touch with the lecturers and other colleagues.” Another student added, “The tablet was a blessing in disguise as I relied on it to access my notes and course-related activities when my laptop stopped working. I would like to thank the University for this Initiative.” Another student stated, “The use of the tablet greatly reduced the cost of printing course materials and allowed me the flexibility to access my lecture notes from anywhere. I used to download the notes on campus and read it on the bus, on my way home.”

All the interviewees noted that they liked carrying the device, as it was portable. One student stated “I like the fact that my tablet is light weight and easy to carry. At times, I prefer to work with my tablet rather than my laptop as it’s too heavy to carry”.

Aside from these, the students identified a number of technical issues they encountered with their tablets that prevented them from making optimum use of the device. One recurring issue that emerged from both the survey and the interviews was that the tablets’ screens were fragile and the students were required to repair the damages at their own cost. Of the participants, 80% ( $n=4$ ) stated that they paid for the repairs themselves, which proved very costly. One student stated, “The tablet was really helpful during the first half of the semester but later on due to technical issues (such as the fragile screen and it getting cracked); I had to get it repaired at my own cost by paying \$40. After a few months, the device started to malfunction as it would shut down automatically”. Other technical issues highlighted were not being able to access Moodle (50%) and, no or poor Internet connectivity (25%), while slow processing speed was highlighted by 80% of the students.

## Results: Round 2 Data

### Demographic Data

The second round of data collection saw 234 students taking part in the survey. In this round, responses were received from a wider range of campuses including Lautoka, Alafua, Emalus, Labasa, Kiribati and

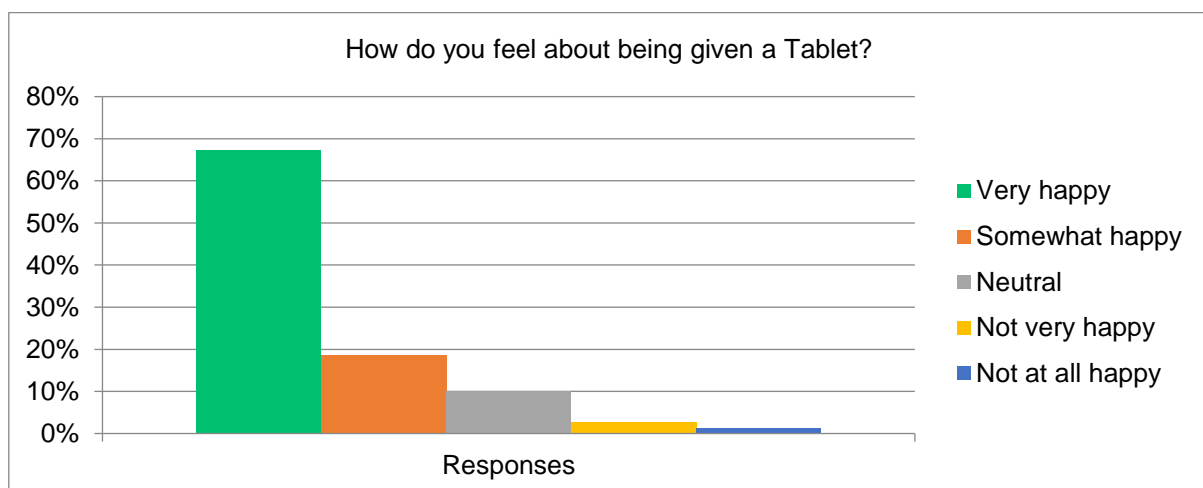
the Solomon Islands. The demographic data below shows those students who responded to the survey were from Bachelor of Arts, Science, Commerce, Education, Laws, Agriculture and Unclassified Undergraduate Programs.

**Table 2.** Demographics – Survey Respondents

		Number of students	Percentage of students	Total
<b>Campus</b>	Laucala	187	81.30	230
	Emalus	14	6.09	
	Lautoka	11	4.78	
	Solomon Islands	6	2.61	
	Kiribati	5	2.17	
	Labasa	3	1.30	
	Alafua	4	1.74	
<b>Program of study</b>	Bachelor of Commerce	97	42.36	229
	Bachelor of Science	59	25.76	
	Bachelor of Arts	29	12.66	
	Other disciplines	44	19.22	

### Feelings toward Tablets

The next question explored the feelings of the students about being given a tablet, using a 5-point Likert scale, where 1 indicated *not very happy at all* whereas 5 indicated *very happy*. Two hundred and thirty four students (*Figure 9*) responded to this question, out of which 67.25% stated that they were very happy about being given tablets compared to 1.31% of students who were not happy with their devices. Compared with data from round 1, this group of students exhibited greater satisfaction toward their device.



**Figure 9.** Feelings toward Tablets

### Frequency of Usage

When asked about how often they used the tablets, 110 out of 228 students stated that they used it most of the time, while 15 students indicated that they hardly ever used their tablets (*see Figure 10*). Round 1 data indicated that out of 114 students, 77 used their tablets most of the time indicating an overall increase in the usage of this device compared to the first round of data collection.

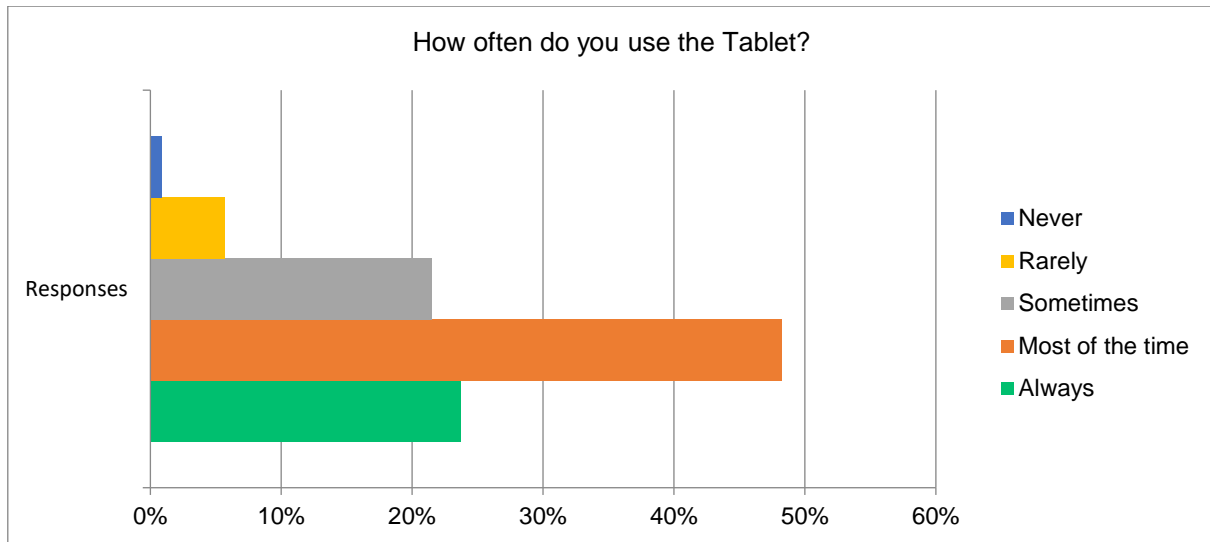


Figure 10. Frequency of use of Tablets

**Ease of Use**

The respondents were further asked how comfortable they were about using tablets, and their responses were recorded on a 5-point Likert scale, where 1 indicated *not comfortable* and 5 indicated *very comfortable*. As shown in *Figure 11* given below, the results indicated that 47% of students were very comfortable with using the tablets while slightly less than 5% indicated that they were not comfortable using tablets. Compared with round 1 data, it seems that students became more comfortable with their tablets, and developed more positive views of this device.

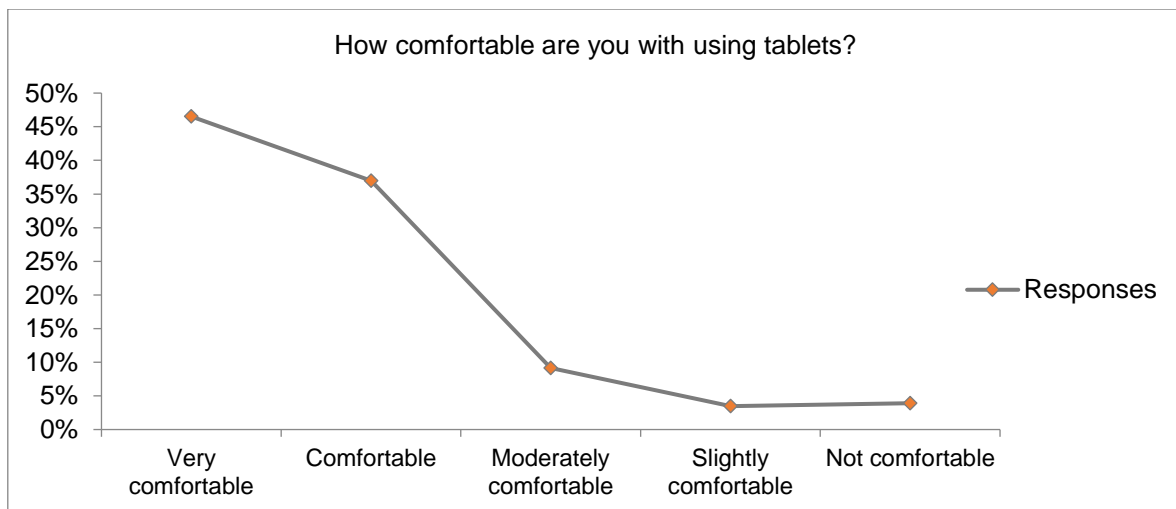


Figure 11. Ease of usage of tablets

**Usage of Tablets for learning**

In order to understand how the students used their tablets for their learning, questions were asked using a 5-point Likert scale where 1 indicated *never* and 5 indicated *almost always*. The results (see *Figure 12*) indicated that more than 90% of the respondents used their tablets to access their course-related information. The tablets were also widely used for searching for information related to their studies (83%), which was followed by reading prescribed course materials (71%) and participating in discussion forums (54%). Apart from these, 46% of students used their tablets to complete their assignments while 41% used it for notetaking. Compared with the first round of data collection, it can be seen that, overall, the students still maintained positive views of tablets toward their learning. Most students continued to strongly agree that the tablets helped them engage more with their studies.

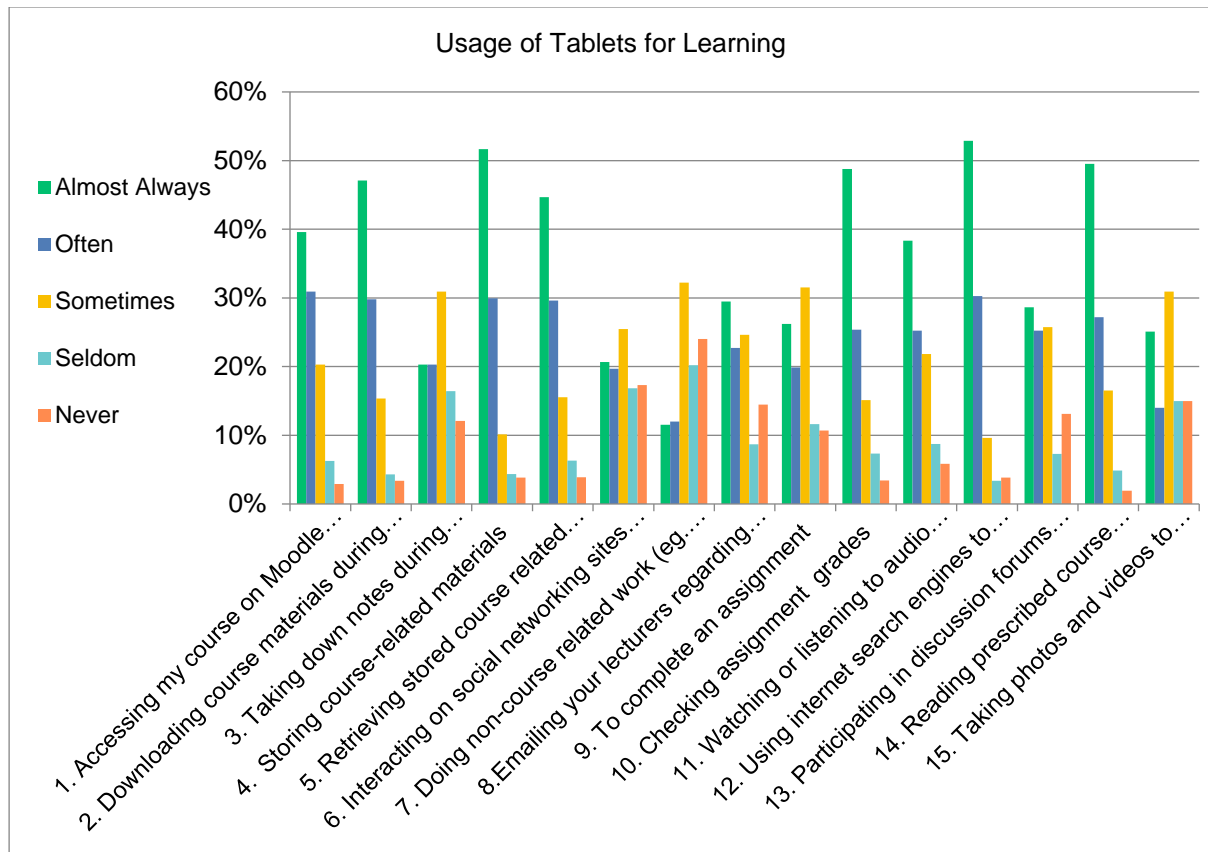
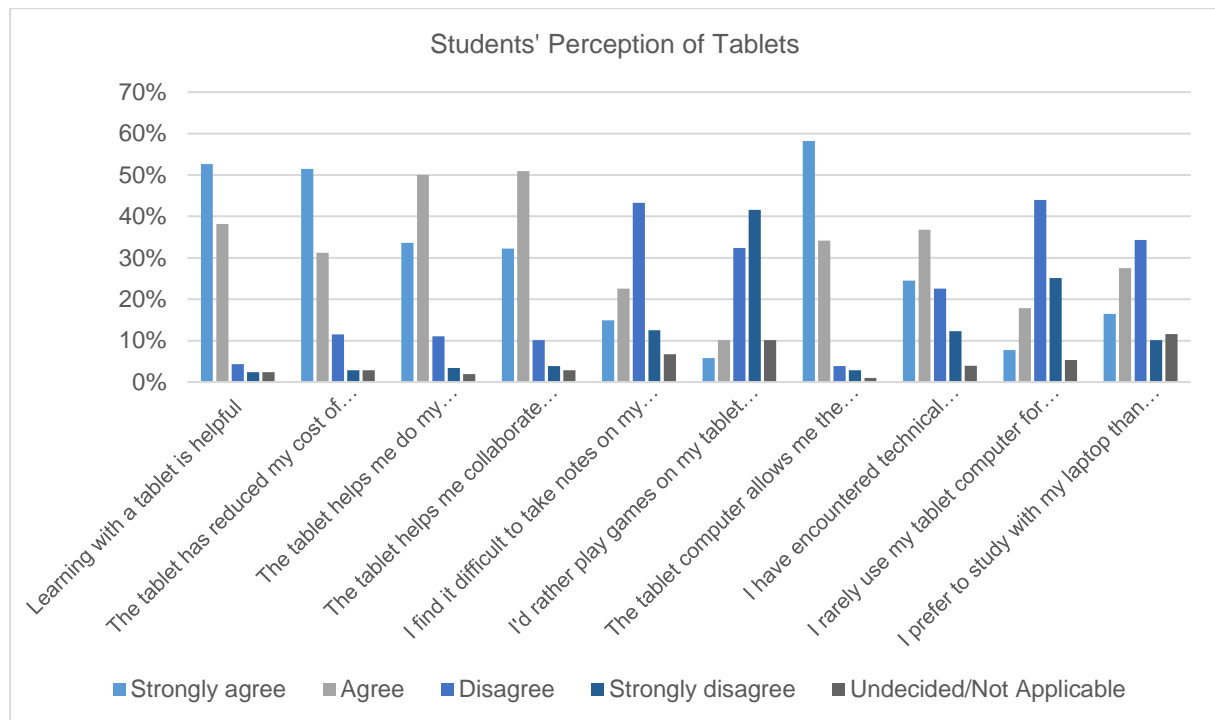


Figure 12. Students' use of Tablets for Learning

### Perceptions towards Tablets

Questions on this sought to explore students' perceptions using a 5-point Likert scale where 1 indicated *undecided* and 5 indicated *strongly agree*.

As seen in *Figure 13* given below, 91% of the students agreed that the tablets were useful towards their learning with more than 80% of them indicating it reduced their cost of printing course materials, helped them in completing their assignments (84%), increased their collaboration with their peers and academics (83%), and provided them with the flexibility of studying anytime anywhere (92%). On the other hand, many students (62%) claimed that they could not make maximum use of their tablets due to the technical issues, whereas 44% of the respondents indicated that they preferred using laptops to tablets for studying. When comparing the two rounds of data collection, it can be seen that most students continued to believe that the tablets assisted them in their learning contributing to their overall positive perceptions toward this device. Conversely, more than 60% of the students still stated that they were not able to make optimum use of their devices due to technical malfunctions. The number of students who preferred to use laptops for notetaking and other course-related work remained large.



**Figure 13.** Students' Perceptions of Tablets

### Open-ended Responses

Students were further asked about the activities they were able to carry out with their tablets that they could not do before. Out of the 177 students who responded to this question, 23 of them stated that they were able to do all Moodle-related activities using their tablets and it gave them the flexibility to study anywhere and anytime. Students also noted making use of the tablets to do their assignments and download lecture notes ( $n=18$ ). However, there were some students who stated that they did not make any use of their tablets ( $n=18$ ). The rest of the students reported using their tablets for conducting research, watching course related videos, typing, reading, attempting quizzes and playing games.

### Challenges with the Tablets

When asked to make final comments about the use of tablets, the students responded with a variety of ideas and suggestions that the university could consider so that they could make optimum use of this device in their learning. Out of 149 students who responded to this question, 44% of them expressed their concerns about the technical issues they faced with their devices. The main issues faced were the same reported during the first round of data collection, which were as follows:

- The quality of the device in general.
- Issues related to charging the device as the charging port plays up.
- Difficulty in connecting to the USP Wi-Fi and accessing Moodle.
- Paying the cost of repairing the tablets.
- Fragile screen and the need to provide screen protectors.
- Insufficient battery life.
- Keyboard malfunctions.

### Discussion

The perception of students towards technology in teaching and learning is crucial as it plays an important role in the adoption of any such intervention. As such, one of the main purposes of this study was to evaluate undergraduate students' perceptions and their usage of tablets in their learning. We were particularly interested in exploring how the tablets engaged the students academically and non-academically.

The results of the study indicate that the majority of students held favorable perceptions about the educational use of tablets. Moreover, an overwhelming majority of students (82.4%) agreed that the tablets helped their engagement with their studies. This could be due to the novelty of the device as well as its ability to enable study anytime, and anywhere. The students also agreed that the tablets helped increase their collaboration with peers and lecturers. This outcome is supported by other studies conducted by researchers who emphasized that mobile technologies helped create interactive learning environments (Chan, 2010; Sha, Looi, Chen, & Zhang, 2012; Terras & Ramsay, 2012; Wong, 2012), encourages collaboration and enables independent learning.

The study also sought to highlight the current usage of the tablets by the students at the University of the South Pacific. The findings of the study indicate that the students used the device for a number of activities, which is consistent with the findings of Shonola, Joy, Oyelere, and Suhonen (2016). Our study revealed that the students mostly used their tablets for accessing course materials in relation to their studies. More than half of the students (51.40%) used various search engines to conduct research related to their coursework. A number of students (46.30%) indicated that they used their tablets to read the required texts. This observation was confirmed in the face-to-face interviews where the students stated that accessing lecture notes from their tablets enabled greater access to information.

Data from both rounds of data revealed that students used their tablets in a variety of ways. The most popular usage was for course-related activities, collaborating with their peers and academics, completing assignments, researching and watching course-related videos. Moreover, the students held favorable perceptions about using tablets for their studies. Many students (88%) agreed that their tablets helped them engage with their learning and more than 60% of the students expressed gratitude to the university for this initiative. Nevertheless, several (68%) expressed some dissatisfaction with the quality of the tablets reporting technical issues related to the devices.

### Conclusion and Suggestions

The purpose of this study was to investigate the use of tablets among undergraduate students at the USP. Its particular focus was on students' use of tablets in their learning. A mixed-methods approach was used to carry out this investigation into students' perceptions and usage of tablets. The survey was conducted in two rounds to improve the reliability of the data.

Overall, students viewed this initiative positively suggesting that the tablets helped their engagement with their studies. This supports the view that when given an opportunity, contemporary students are capable of using tablets in support of their learning. It is arguable though that, for optimum benefit, the adoption of such a device should be accompanied by capacity building of staff and students in its adoption, as opposed to leaving them to their own agency.

Findings of this study also suggest that students faced many practical issues with the tablets, which prevented them from deriving maximum advantage of this technology. This finding raises questions about the quality of the device that the students received and what could be done in subsequent rollout of any such initiative.

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## Appendix A: Survey Instrument

### Evaluating Undergraduate Students' Perceptions about the use of Tablet Computers at the University of the South Pacific

#### Purpose of the survey

The purpose of this survey is to explore all undergraduate students' perceptions of and engagement with USP tablet computers. The findings of this study will offer suggestions for possible research in the future that may positively influence how students make use of tablet computers in higher education. The results of this study will also offer useful insights in supporting and guiding the directions for the instructional use of this technology.

This survey contains 41 questions. There are no right or wrong answers. Please answer each question as honestly as possible. Participation in this survey is voluntary and you can exit the survey at any point. Please be assured that your responses and identity will be kept anonymous. Should data be published, no individual information will be disclosed. This survey may take approximately 30 minutes to complete.

1. Have you been issued a tablet computer by USP?

- Yes
- No

2. If your answer is **No** then why did you not receive a tablet computer?

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- If you answered “No” for the above question, please stop here.
- If you answered “Yes” for the above question, please complete the following survey.

#### Section 1: About You

2. What is your age?

- 18-24
- 25-34
- 35-44
- 45-54
- 55+

3. Your campus

- Laucala
- Lautoka
- Alafua
- Emalus
- Labasa
- Cook Islands
- Kiribati
- Tonga
- Tokelau
- Solomon Islands
- Samoa
- Niue
- Nauru
- Marshall Islands

4. Are you a part-time or full-time student?

- Full-time
- Part-time

5. In what programme of study are you currently enrolled?

- Bachelor of Arts
- Bachelor of Science



- Bachelor of Commerce
  - Bachelor of Education
  - Bachelor of Laws
  - Bachelor of Agriculture
  - Unclassified Undergraduate Programme
6. For how long have you had access to the tablet computer?
- Half a semester
  - One Semester
  - More than a semester
7. How do you feel about being given an Android Tablet Computer?
- Very happy
  - Somewhat happy
  - Neutral
  - Not very happy
  - Not at all happy
8. How often do you use the tablet computer?
- Always
  - Most of the time
  - Sometimes
  - Rarely
  - Never
9. How comfortable are you with using tablet computers?
- Very comfortable
  - Comfortable
  - Moderately comfortable
  - Slightly comfortable
  - Not comfortable

**Construct- Usage/Practice**

How often do you use your tablet computer for the following activities?

Please select an option for each row.

Activity	Almost Always	Often	Sometimes	Seldom	Never
1. Accessing my course on Moodle during lectures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Downloading course materials during lectures and tutorials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Taking down notes during lectures/tutorials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Storing course-related materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Retrieving stored course related information from the tablet computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Interacting on social networking sites with other students in your courses (e.g. Facebook)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Doing non-course related work (eg. Playing games)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Emailing your lecturers regarding studies/assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. To complete an assignment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Checking assignment grades	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Watching or listening to audio recordings or videos in relation to your courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Using internet search engines to find information relating to your courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Participating in discussion forums on Moodle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Reading prescribed course materials (such as course outlines, e-textbooks, unit readings, OER, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Taking photos and videos to support learning related tasks (eg. ePortfolio evidence/field research/presentations)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Construct- Perception towards tablet computers**

Reflecting on your experience with tablet computers, to what extent do you agree with the following statements.

Please select an option for each row.

Items	Strongly agree	Agree	Disagree	Strongly disagree	Undecided/Not Applicable
16. I find learning with a tablet computer very helpful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. The use of a tablet computer has reduced my cost of printing course materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. The tablet computer helps me do my assignments effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. The tablet computer has increased my collaboration with my peers and lecturers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. I find it difficult to take notes on my tablet computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. I'd rather play games on my tablet computer than study	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. I have grown accustomed to using the tablet computer for my studies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. I am able to complete my assignments quickly and efficiently using the tablet computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. I am able to better meet my course related deadlines with my tablet computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. The tablet computer helps me in my research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. My tablet computer helps me study independently	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. The tablet computer allows for flexible access to online resources for my assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. With a tablet computer I do not need to go to the computer labs to do my research/assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. The tablet computer allows me the flexibility to learn anytime, anywhere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. I find it easy to take notes during lectures with my tablet computer as it allows flexible annotation of lecture notes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. I find the tablet computer cumbersome to use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<b>32.</b> I have encountered technical issues when using my tablet computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>33.</b> I rarely use my tablet computer for my studies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>34.</b> I am enthusiastic about learning with tablet computers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>35.</b> I prefer to study with my laptop than my tablet computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>36.</b> I am not convinced about the usefulness of tablet computers in my studies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**37.** What Apps do you frequently use on your tablet computer?

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**38.** List the most constructive uses of your tablet computer towards your learning process.

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**39.** What activities are you able to do with your tablet computer that you were not able to do before?

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**40.** With the tablet computer, do you think that you able to engage more with your studies than before? Yes/No? Give a reason.

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**41.** Do you have any comments or suggestions you would like to share concerning your experience with the USP tablet computers?

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## Appendix B: Interview Protocol

### Purpose of the study

The purpose of this survey is to explore the first year undergraduate students' perception of and engagement with tablet computers. The findings of this study will offer suggestions for possible research in the future that may positively influence how students make use of tablet computers in higher education. The results of this study will also offer useful insight in supporting and guiding the directions for the instructional use of this technology.

### Academic Ethics

The data collected in this study will be completely anonymous. Your name will not be shared with any other party. There are no right or wrong answers, so please be open and honest in your responses.

### Demographic Information Questions

Age: \_\_\_\_\_  
 Programme of study: \_\_\_\_\_  
 Campus: \_\_\_\_\_  
 Mode of Study: \_\_\_\_\_

### Interview Questions

1. **When and why** were you issued with a tablet computer?

\_\_\_\_\_

2. Do you use tablet computers anywhere else apart from within USP campus?

\_\_\_\_\_

3. Is there any App ( ) that should be loaded onto the tablet computer to make learning more engaging and meaningful? Give reasons

\_\_\_\_\_  
 \_\_\_\_\_

4. Explain how you use the tablet computer to assist you in your learning.  
 For example, does it help you to complete assignments more efficiently?

\_\_\_\_\_

5. What features of the tablet computer engages you the most? Give reasons.

\_\_\_\_\_

6. Have you encountered any problems that has affected the usage of the tablet computer?

a. Issues related to hardware \_\_\_\_\_

b. Issues related to software \_\_\_\_\_

c. Breakages

\_\_\_\_\_

d. Theft \_\_\_\_\_

7. What are the challenges faced in using the tablet computer on and off campus?

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8. Did you receive any training in the use of tablet computers? Yes/No. If yes why? If no, why?

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9. In what ways do you use your tablet computer off-campus?

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10. What can the institution do to help you use the tablet better?

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Thank you.

## Appendix C: Agreement



The University of the South Pacific  
Private Mail Bag, Laucala Campus  
Suva, Fiji

### AGREEMENT FOR PROVISION OF ELECTRONIC TABLETS TO SUPPORT LEARNING AT USP

1. This is an agreement between The University of the South Pacific ('the University') and the Student identified in Item 1 a person admitted to the University for a programme of study ('**Student**') for the provision of an electronic tablet device further described in Item 2 (**Device**) to support and enhance the Student's learning at the University.
2. By signing this Agreement, the parties agree to the terms and conditions stipulated in 3 and 4 below.
3. The University agrees:
  - (i) to provide the Student, the Device, at the beginning of the semester described in Item 3
  - (ii) and the Student acknowledges receiving a configured Device including a leather case, a power adaptor, a USB to micro USB cable, a USB to micro USB extension cable and a keyboard with case
  - (iii) to provide the Student with relevant instructions and support for the use of the tablet during the semester
  - (iv) to procure servicing, maintenance as required or determined by the University
4. The Student agrees:
  - (i) to return the Device to the University at the earlier of, the Student's withdrawal, suspension from the University or upon deregistration
  - (ii) that it is the Student's responsibility to understand the proper use and care of the Device.
  - (iii) the Student must, at his/her own expense, protect and keep in good state of condition and repair, the Device; and must not use or operate the Device other than in a manner and for the use contemplated by the manufacturer thereof.
  - (iv) that the University shall have the sole discretion to determine if, and to what extent, the Device has been damaged.
  - (v) That the Student will reimburse the University for the full cost of repairs of the Device that is returned damaged or broken by any cause whatsoever, whether due to the Student's fault or not. For any Device that is lost, stolen, or damaged beyond reasonable repair, the Student must reimburse the University for the depreciated value of the Device (and corresponding accessories).
  - (vi) That the title and ownership of all Device(s) remains with the University at all times.
  - (vii) That the Student may not remove the Device from the jurisdiction of their countries without prior written permission from University management, and agreement to any special terms set out by the University.
  - (viii) Upon graduation the student may keep the Device

The Student further acknowledges that the failure to return a Device within these stipulated timeframes without reasonable excuse may result in a hold on the Student's account and grades until such time the Device is returned to the University or payment made of the Device's replacement value as advised by the University.

- (i) not to make any alterations, additions or improvements including any software upgrades to the tablet hardware and software including the operating system.
- (ii) that the University is authorized to delete any Student information retained on the Device upon its return to the University.

#### 5. Indemnification

- (a) The University is not responsible for any injury, loss or damage, directly or consequently, arising out of the Student's use or inability to use the Device, whether used singularly or in connection with any other equipment.
- (b) The University is not liable for any loss of revenue, or any other inconvenience, which results from any defective Device provided to the Student.
- (c) The Student shall indemnify the University against, and hold University and University's employees harmless from, any and all claims, actions, suits, proceedings, costs, expenses, damages and liabilities, including reasonable attorney's fees and costs, arising out of, connected with, or resulting from Student's use of the Device, including without limitation the delivery, possession, use, operation, or return of the Device.



**Schedule**

**Item 1**

Student Name: \_\_\_\_\_

Student ID: \_\_\_\_\_

Student Address: \_\_\_\_\_

**Item 2**

Model: .....

Make: .....

Serial Number: .....

**Item 3**

Date of Issue:

**Item 4**

Expected Date of Return:

For The University of the South Pacific

Name: .....

Position: .....

Date: .....

**USP Stamp**

The Student (*to be provided a copy of this Agreement after signing*)

Name: .....

Student ID: .....

Programme: .....

Year & Semester: .....