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Students' Attitudes Toward an iPad Program in Teacher Education

Tracy S. Charbonnier

Bridgewater State University

April 2017

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Abstract

A College of Education (CE) at a public university implemented an iPad policy four years ago requiring all juniors, seniors and graduate students to purchase an iPad. My focus was on students' attitudes toward the requirement that they purchase and use iPads for their education courses and during student teaching. The research also included the students' perception of any advantages and/or disadvantages the iPad offered in comparison to other technology. A qualitative survey and group interview were conducted to collect data from the students currently enrolled in their third and fourth year. The results showed students purchased the iPad to comply with the policy. Students reported the iPad was used in neither their courses nor the field but stated schools were using various other types of technology including tablets, laptops and smartboards. The university students also stated they used iPads for social networking, music and entertainment, and educational apps, and felt confident using technology going into the teaching field. Implications include a review of the policy, and continued professional development for faculty and students to develop technology skills.

Keywords: iPad, education ,tablet, field experience, student teaching

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CHAPTER I: Introduction

Importance of Study

A four-year public university implemented an iPad policy requiring all juniors, seniors and graduate students matriculated in the College of Education (CE) to purchase an iPad. The CE encouraged iPad use in the university students' courses, pre-practicum and practicum experiences. The CE created this policy to better prepare students for the technological requirements that it believed would be utilized when university students entered the teaching field. Research surveyed the university students' attitudes toward the iPad program in teacher education. My research explored students perceived advantages and/or disadvantages of the iPad requirement. The results from this research allowed the CE to conduct a thorough review of the iPad policy and to make adjustments as needed. It is also able to provide other universities with insight regarding a policy requiring students to purchase and utilize iPads.

Description of the Program

Prior to the implementation of the iPad policy, the dean verbally polled over 40 faculty in the CE to ask what the most important thing they believed was needed in the CE. Thirty-six faculty members mentioned adding technology and training, including the iPad. The dean also polled public school teachers and principals from the professional developments schools it worked with in the region, and the iPad was the most commonly requested device ([redacted], personal communication, October 14, 2016).

The dean worked with the vice president of finance and the chief information officer to discuss the various logistics of billing the students directly and having the technology support needed to assist students during implementation and during the school year. In fall 2013, the College of Education implemented an iPad policy through the university's governance

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committee. This policy required all juniors, seniors and graduate students to purchase an iPad. During the first year of the program, the cost of the iPad was included in the students' tuition. If a student could not afford the fee or had another extenuating circumstance, he/she could petition the dean for a waiver due to financial hardship.

The rollout took place a few days prior to the semester beginning. Students were given their iPad when they provided their student identification. On the date of distribution of the iPads, there were several Apple representatives and various IT staff from the university available to assist the students in setting up their iPads and to provide some short training sessions regarding how to use the iPad.

After the first year, the automatic billing was removed from the students' accounts. Students were then notified of the policy via email and were expected to purchase an iPad on their own. Because the iPad was a required piece of technology per the iPad policy, students could use financial aid to purchase their iPad at the bookstore. The bookstore at the university also began carrying iPads to make it more convenient for the students. Because the iPad fee was not included in the tuition, some students did not have an iPad when classes began. Although the policy is still in effect, many students wait to see what the requirements are for their classes prior to purchasing an iPad. This can become problematic as faculty have created iBooks, which are free for the students to use in their courses. Free iBooks save the students from having to purchase a textbook, which can be costly. Some classes require students to purchase apps that will be used in the classroom and to complete homework assignments.

The requirements for the iPad have not changed in the three years since the iPad has been implemented. All students and faculty use an iPad Air II. If students have an earlier version of an iPad, they are not required to upgrade their iPad unless it can no longer complete the

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assignments designated by faculty. Faculty may request an upgrade in gigabytes through the CE office. At the present time, there is not a systematic refresh process to provide all faculty an upgraded iPad. All new faculty members who are hired in the CE continue to be provided with an iPad Air II.

Statement of the Problem

As a large four-year public university producing a high volume of teachers, it is important for students matriculated in the College of Education to be well versed in technology. In Fall 2013, the College of Education implemented an iPad policy that required all juniors, seniors and graduate students matriculated in the CE to purchase an iPad. Prior to this implementation, faculty and students chose the mobile device that best suited their needs.

After polling various CE faculty, public school teachers, and professional development school partners in the region to find out which technology they believed would be the most useful in the classroom, it was decided the iPad was the technology the CE would promote to its faculty and students. It was felt the iPad would provide university students with cutting edge knowledge of technology that would be required and used in the teaching field. The CE also anticipated faculty would embrace the technology and infuse it into their teaching and coursework immediately.

All CE faculty were issued an iPad one month before the start of the semester. Based on the collective bargaining agreement, faculty are not required to use any specific type of technology in their courses. Faculty have the academic freedom to choose whichever technology works best for their courses.

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Research Question

The study investigates the following research question:

What are the university students' attitudes toward an iPad program in teacher education?

Definition of Terms

Qualtrics is a web-based data analysis service used to collect and analyze data used in surveys (University of New Hampshire, 2016).

Argos by Evisons is a reporting tool created for higher education. Argos uses fields from the student information system to create comprehensive reports.

The word *App(s)* refers to iPad programs on a variety of subjects that are available to download in the iTunes store.

Summary of Research Design

Students were given a mixed-method survey containing attitudinal scale and open-ended questions. The attitudinal scale had 39 questions. The survey was created and analyzed using Qualtrics. The survey was distributed to all juniors and seniors enrolled in the CE during the month of January. Data was analyzed during February and March to see how they compared with the findings included in the review of literature.

A group interview was conducted and recorded for accuracy. A group interview with two students from the CE departments of Movement Arts, Health Promotion and Leisure Studies and Elementary and Early Childhood Education were interviewed. The qualitative data from these interviews were to obtain personal experiences regarding the iPad.

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CHAPTER II: Review of Related Literature

Introduction

The use of technology is required in classrooms across America due to national and state standards, and district technology goals. A public four-year university in New England, after informally polling its faculty and polling various education partners in the region, decided to implement an iPad policy requiring all junior, senior, and graduate college of education students to purchase an iPad for their courses. In the preceding Chapter, a general overview was given regarding the background of how the iPad policy was introduced to both faculty and students. A review of journal articles, books, periodicals and other publications was conducted to investigate the successfulness of the implementation of iPads into the curriculum. The information is presented below.

Student Engagement and the iPad

A systematic literature review was conducted to find out what the current state of research was for exploring iPads in higher education (Nguyen, Barton, & Nguyen, 2015). Thirty articles were selected from EBSCOhost (Academic Search Complete, Communication & Mass Media Complete, e-Journal, Computers & Applied Sciences, Education Research Complete, Education Resources Information Center and Library, Information Science & Technology Abstracts), Scopus, Informit A+ Education, ProQuest Academic Research Library and Google Scholar and divided into two groups. Meta-analysis was used to interpret the results. Research showed students had a positive attitude regarding using the iPad. The study found the iPad was highly engaging and could potentially enhance the students' learning. The study also reported the mobile apps were not integrated strongly within the curriculum nor connected to learning outcomes (Nguyen, Barton, & Nguyen, 2015).

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Hargis, Cavanaugh, Kamali and Soto conducted a study across multiple campuses to determine if providing iPads to the teachers and students would transform the classroom experience (Hargis, Cavanaugh, Kamali, & Soto, 2014). The faculty and students of the foundations program were all issued iPads. Research was conducted through a survey, interviews and staff feedback. Results from this study were presented in a Strengths, Weaknesses, Opportunities, Threats (SWOT) Analysis format. The results from the Faculty Attitudes Toward Technology-Supported Learning Environments (FATSLE) survey found that 55% of staff agreed or strongly agreed they felt prepared to use iPads in the classrooms, and 95% of the staff agreed or strongly agreed that they felt administration actively encourages use of iPads in the classroom. The major strengths perceived were that informal learning increased when teachers engaged in their own research to implement the iPad. A survey was sent to students during the first week of the deployment. The strengths part of the SWOT analysis showed increased engagement and collaboration. Hargis, Cavanaugh, Kamili and Soto also stated, "Weaknesses listed were content management to distribute iBooks and limitations to PDF versions of books (Hargis, Cavanaugh, Kamali, & Soto, 2014)."

McClanahan is a professor at a small regional university in southeastern Oklahoma (McClanahan, Williams, Kennedy, & Tate, 2012). She teaches reading diagnosis and intervention to pre-service teachers. The students are required to complete an action research project for this course. Williams, a student of McClanahan's, worked with a student in the fourth grade with ADHD who read at a second-grade level. The student did not take any medication for his ADHD and had trouble focusing on his schoolwork. Paper and pen methods of learning did not appear to be working for the student. Williams worked with McClanahan to create a plan for using the iPad with the child. Following their investigation and use of educational applications

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for the iPad, the student's testing scores increased from a second grade level to a third grade level. The iPad's interactivity and reading comprehension applications downloaded to the iPad helped the student to engage and to be able to focus word recognition and comprehension (McClanahan, Williams, Kennedy, & Tate, 2012).

A study was conducted by Rossing, Miller, Cecil and Stamper to obtain the perceptions of students using mobile tablets (Rossing, Miller, Cecil, & Stamper, 2012). A convenience sample of 209 students was selected to participate. The students were enrolled in eight sections of the Faculty Learning Community (FLC), which received a grant to implement the iPad into their courses. A mixed-method survey that contained Likert-scale and open-ended questions was completed by the students. The results from the study were mixed. Student responses indicated they could solve real world problems, work collaboratively in a group, and the device was intuitive. Students liked the convenience of the iPad. They also stated there were limitations such as the technology distracts from learning, connectivity troubles and unreliable applications. (Rossing, Miller, Cecil, & Stamper, 2012).

A study was conducted by Gokcearslan to find out the perspectives of students' acceptance of tablets and self-directed learning with technology (Gokcearslan, 2017). The survey was conducted with three different high schools in which the FATIH (The Movement to Increase Opportunities and Technology) project in Turkey had been conducted. Android tablets were distributed to both teachers and students to use for access to: ebooks; videos, images, sounds, presentations, courses, exams, magazines, and news. Research found the tablets ended the need to carry textbooks and the tablet was both fun and practical. It is also slightly used more for entertainment than education purposes. Some students indicated they did not find the tablet useful, that restrictions were placed on the applications and the internet, and they preferred

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written resources. Students also cited they found the tablet to be a distraction (Gokcearslan, 2017).

A study was conducted with 135 freshmen enrolled in a Digital Media and Society course. Students were loaned an iPad, and also encouraged to use other mobile devices, in order to use the BlackBoard mobile app (Kinash, Brand, & Mathew, 2012). The research found that students were mostly neutral about the iPad's utility as a learning device. Additionally, although the students were encouraged to use Blackboard's mobile application, most of the students were neutral with regard to their preference for accessing Blackboard via the mobile application or via a personal computer. Fifty-one percent of students neither disagreed nor agreed the iPad enhanced their learning. Kinash, Brand and Mathew concluded students were neutral about mobile learning (Kinash, Brand, & Mathew, 2012) .

Pre-service Teachers' Perceptions of the iPad

Forty-eight pre-service students enrolled in two sections of intermediate literacy methods were required to use the Technology Integration Planning Cycle (TIPC) to create and execute a lesson plan (Hutchison & Colwell, 2016). Students were given a lesson planning project to complete. Students' lesson plans were scored using a rubric. Students had a difficult time infusing the iPad into the lesson plan without changing the instructional goal of the lesson that coincided with the Common Core State Standards. A few students felt the iPad was a distraction and two students felt it would take a lot of classroom management to use an iPad in instruction. The students also changed the goal to fit the iPad in the lesson. Hutchison and Colwell concluded pre-service teachers need more detailed guidance when using instructional planning models. Instructors should assist in developing the skills necessary to plan technology-rich instruction (Hutchison & Colwell, 2016).

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Mang and Wardley conducted a small pilot study to test the viability of tablets in post-secondary education (Mang & Wardley, 2012). Three summer courses consisting of 47 students were issued iPads. Two of the sections of the course knew the iPad would be part of the course. The third section did not know until the first night the course met. The researchers integrated the tablets into their classes by providing templates for students to take electronic notes, to provide multimedia to the students, electronic reading assignments and in-class research. The researchers discovered they needed to have detailed knowledge of how the iPad worked so they could troubleshoot issues. They also needed to work closely with their IT department so the IT department could assist with any operating system issues. The researchers needed to have a clear plan of how they wanted to use the iPad in their classes and fully integrate it into the teaching. Research needed to be conducted on which iPad apps to be used. There are iPad apps that are free and iPad apps that have to be purchased for a fee. The results of the study found 67 percent of students carried their laptop at the beginning of their courses and 13% of students still brought their laptops at the end of their courses. Seventy-eight percent of students used the tablet for taking lecture notes and 96% believed the tablet had enhanced their learning. The majority of the students indicated they would like to use a tablet in their future courses.

Pegrum, Howitt, and Striepe conducted a case survey using eight self-selected pre-service teachers enrolled in a Master's of Teacher program from The University of Western Australia. (Pegrum, Howitt, & Striepe, 2013). The students were provided with an iPad 2. All pre-service teachers participated in a two-hour workshop that demonstrated how to use the iPad. Data was collected through semi-structured interviews, a non-participant observation, and a focus group interview. Pre-service teachers used the iPads to develop an understanding of content, develop an understanding of pedagogy, and to stay connected with their personal learning networks.

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Students reported the iPad kept them organized by storing materials in virtual space which could be accessed from anywhere. It also helped the students to reflect on their understanding of pedagogy. Limitations were described as hardware, software, network, and Wi-Fi access.

A study by Kearney and Maher was conducted to gain an understanding on how mobile learning approaches can affect pre-service maths teacher education (Kearney & Maher, 2013). Sixteen fourth year bachelor of education students completing a Maths Education course were issued an iPad purchased by the university to use during their class. Students used the iPad to photograph and record images in the real world that related to maths concepts. Students annotated the images on the iPad to illustrate the maths concepts. Pre-service teachers videoed school children while the children performed maths concepts. The preservice teachers reviewed the video with the school children to discuss and clarify concepts. The iPad was used to capture evidence of the pre-service teachers' professional learning (Kearney & Maher, 2013).

Research conducted by Dr. Charles Kivunja investigated how technology tools affected his pre-service students enrolled in the course, Planning and Assessing for Active Learning (Kivunja, 2013). In a cohort of 160 students, Kivunja required the students to obtain gmail accounts and to create groups of ten Peer Learning Networks (PLN). The PLN was conducted outside of the university's learning management system, Moodle, and was conducted in Google+Discussion Circle (GDC). The study concluded that when students are given the opportunity to use and apply digital technologies in their learning and professional practice, they take initiative to learn more deeply, provide meaningful feedback to other classmates and share information with each other regarding teaching plans (Kivunja, 2013).

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Vaughn and Lawrence conducted a study at a four-year university in Calgary, Alberta Canada to investigate the role of mobile devices in a blended pre-service teacher degree education program (Vaughan & Lawrence, 2013). The purpose of the study was to investigate which mobile devices the students and faculty used and liked most. The students were provided a ViewSonic Dell ViewSonic tablet to use in their course. Data was collected through online surveys and a post-course focus group. A total of 14 students participated in the research. Students used the tablet to create a lesson plan, video-record a group teaching demo, provide audio assessment feedback to one of their peers, and develop an online tutorial. The students were asked to complete a post-online survey regarding their perceptions of how mobile devices assisted in their pre-service education degree. Eight students volunteered to be in the focus group which was recorded and transcribed. The findings showed while the students used the tablet to include technology in an authentic way. Students reported they preferred to use a laptop for lesson planning and that the computer was more efficient than a tablet due to the keyboard on a computer. Students expressed concern about digital feedback. They preferred to give oral or written feedback. Students believed that classroom management should be conducted by the teacher and not a device (Vaughan & Lawrence, 2013).

A study was conducted by Hussain and Aslam to investigate the role of technology in a campus environment. The study consisted of 83 Ph.D. scholars and ten faculty from the Department of Education International Islamic University Islamabad (Irshad & Adeeb, 2009). The participants completed a questionnaire developed on a five-point Likert scale and a semi-structured interview. The data was analyzed through qualitative and quantitative measures. The study investigated the following questions regarding mobile technology in teaching and learning--appropriateness; flexibility; interactivity; and availability and usefulness; The survey also

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contained questions regarding current practices of students using mobile technology and problems the students encountered using mobile technology. The results concluded that majority of faculty and students viewed the flexibility, interactivity, availability and usefulness as positive. A majority of responses also indicated they faced problems while using mobile technology (Irshad & Adeeb, 2009).

Conclusion

The current literature regarding students' attitudes toward iPads and tablets is varied. Participants in the above-mentioned studies found the iPad to be an engaging tool that promoted collaboration and on-the-spot information retrieval. They also found a tablet to be easy to carry and lighter than a traditional textbook. Students stated the iPad could also be a distraction to their learning and some students reported they did not find the tablet to be useful at all.

The pre-service teachers also found the tool to be engaging but felt there needed to be more instruction on how to infuse the iPad into their lesson plans and curriculum. Students found difficulty in adding meaningful technology into an already planned lesson. Pre-service teachers indicated tablets were a beneficial addition to the mobile technology they already had, such as mobile phones and laptops. The research also conveyed that iPad and tablet programs tend to be successful if the faculty have input on which device they would like to use. The faculty also seemed to use the iPad more frequently when they were given time to learn the device prior to implementing it in class. Many faculty are not comfortable with immersing technology into their courses, therefore, the students do not learn how to best incorporate technology into their lesson plans.

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The studies researched above provided students with iPads and tablets to use but did not require them to purchase an iPad. My research will focus on students' attitudes toward requiring them to purchase an iPad to use in teacher education courses and in the teaching field.

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Chapter III: Research Design and Methodology

The purpose of this study was to obtain students' attitudes toward an iPad program in teacher education. A mixed method survey was conducted. The survey results provided me with information regarding the students' thoughts regarding the use of the iPad and preparedness of going into the teaching field. The results of this study will be shared with the dean of CE. The data will be used to review the current policy and to make revisions or amendments as necessary.

Sample

Participants in this study were students at a public university offering bachelor and master degrees for education who were enrolled in the College of Education. A sample of 1,364 participants selected were undergraduates who have completed 54 or more credits (juniors and seniors). This population was chosen based on the iPad policy which required all juniors, seniors and graduate students to have an iPad.

Materials

- Recording software with microphone
- Batteries

Data Collection

Timeline

- November 2016 – survey questions were developed and a Qualtrics survey (Appendix B) was created. Interview group prompts (Appendix C) were developed.
- December 2016 - Application was submitted for approval to Institutional Review Board.
- January 9, 2017 – An Argos report was created to obtain names and email addresses of all current students in the CE who have completed 54 or more credits (juniors and seniors)

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- January 23, 2017 to February 3, 2017 – The Qualtrics survey was sent to juniors and seniors enrolled in the college of education. The survey was open for two weeks.
- January 27 and January 31, 2017 – Two reminder emails were sent to students asking them to complete the survey
- February 28, 2017 – A focus group interview was conducted
- March 2017 – The results of survey were analyzed using Qualtrics. The group interview recording was transcribed and analyzed by the researcher
- April 2017 – The report was updated to include the findings of the survey; the conclusion was written and the final report was submitted

A confidential survey was sent to all participants. The survey was comprised of attitudinal scale and open-ended questions. There was one semi-structured group interview conducted with two students. Participants in the group interview were provided with informed consent forms (Appendix D). The researcher had four prompts formulated for discussion purposes (Appendix C).

The data from the online survey was compared to the group interview responses. The group interview served to provide further information regarding the students' attitudes toward an iPad program in teacher education.

Analysis of Data

I used Qualtrics to analyze the attitudinal scale responses. I analyzed all open-ended questions and group interviews by sorting the responses into categories and subcategories and reported on trends and frequency of responses. The responses fell into the categories of: student engagement using the iPad; concerns regarding the required purchase of the iPad; and the attitudes of pre-service teachers regarding the use of the iPad.

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Chapter IV: Results and Conclusions

Survey Results

An email was sent to 1,364 juniors and seniors enrolled in the college of education to request they answer a survey pertaining to their attitudes regarding the iPad policy. The survey had a response rate of 19%. Of the 258 recorded responses, 56% were elementary and early childhood majors, 21% were movement arts, health promotion and leisure studies students, 13% were special education students, 7% were communications sciences and disorders students and 3% were secondary education students.

Of the 256 responses received, 129 juniors (50%) and 127 (50%) seniors replied. Table 1 displays the response rates for each department and the breakdown of student classification.

Table 1. Department and Classification of Students Who Participated in the iPad Survey

Department	**Total Emails Sent to students**	**Total Responses to the Survey (n=258)**	**Percent of Responses by Department**
Communication Sciences and Disorders	72	19	26%
Elementary and Early Childhood Education	611	145	24%
Movement Arts, Health Promotion and Leisure Studies	526	53	10%
Secondary Education and Professional Programs	4	8	200%*
Special Education	255	33	21%
Classification		**Total Responses (N=256)**	**Percent of Responses by Classification**
Junior		129	50.39%
Senior		127	49.61%

**Note: There were eight responses but only four of the students had officially declared their secondary education minor.*

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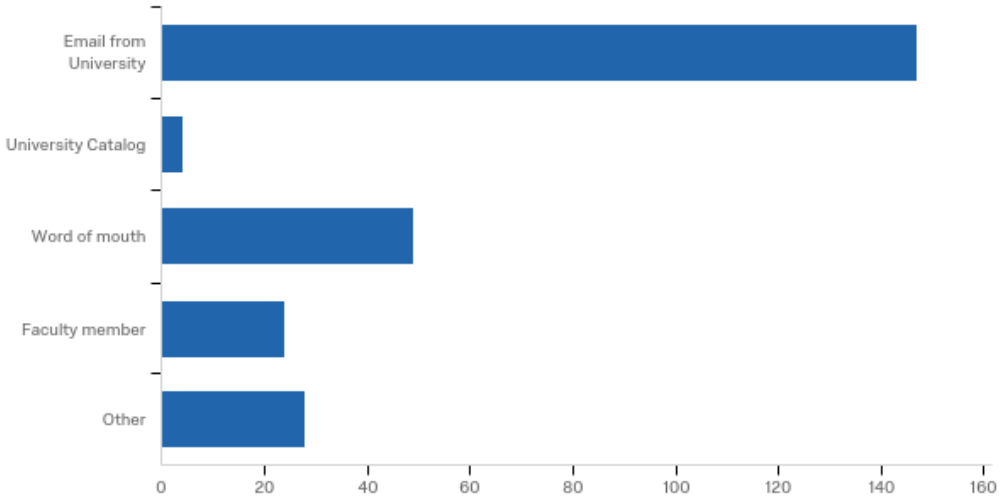
When surveyed about owning an iPad, 61% of students stated they owned an iPad (n=256). One hundred twelve students indicated they purchased the iPad because of the policy (n=155) and 43 students stated they already owned an iPad.

Table 2 displays the responses from students regarding how they were informed about the iPad policy. According to the results, 59% learned about the iPad policy from an email sent from the university. The second highest percentage was through word of mouth at 19%. Eleven percent of students replied other and provided the following responses:

- Orientation;
- Completing this survey
- Was unaware of policy
- Family/friends

Table 2. Notification about iPad Policy (n=252)



When asked about their attitude toward purchasing and iPad, 38 individuals stated they were either extremely pleased or somewhat pleased; 40 students answered they were neither please nor displeased; and 77 students stated they were either somewhat displeased or extremely displeased. Table 3 below illustrates the responses towards students' attitudes regarding purchasing an iPad.

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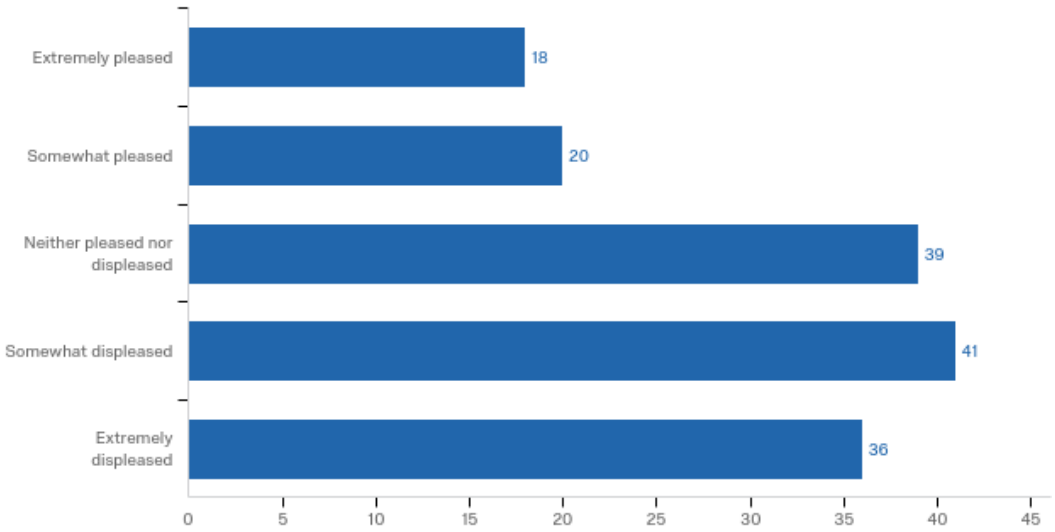
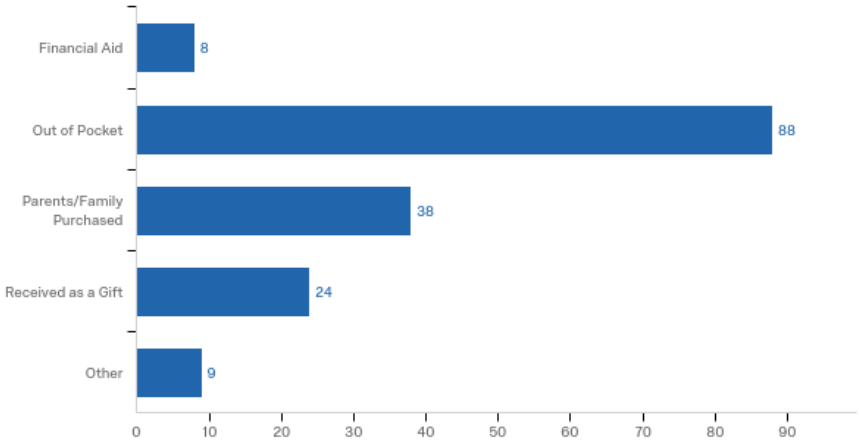
Table 3. Attitude Toward Purchasing an iPad (n=155)



When surveyed how the students paid for the iPad, 88 students (56.77%) stated they paid for the iPad out of their pocket. Thirty-nine students reported their parents or family paid for the iPad, twenty-four individuals received it as a gift, eight used financial aid and nine reported other. The other responses were:

- Traded in their old iPad
- Received iPad when they purchased a laptop
- Given a used iPad

Table 4. How did you pay for the iPad (n=154)



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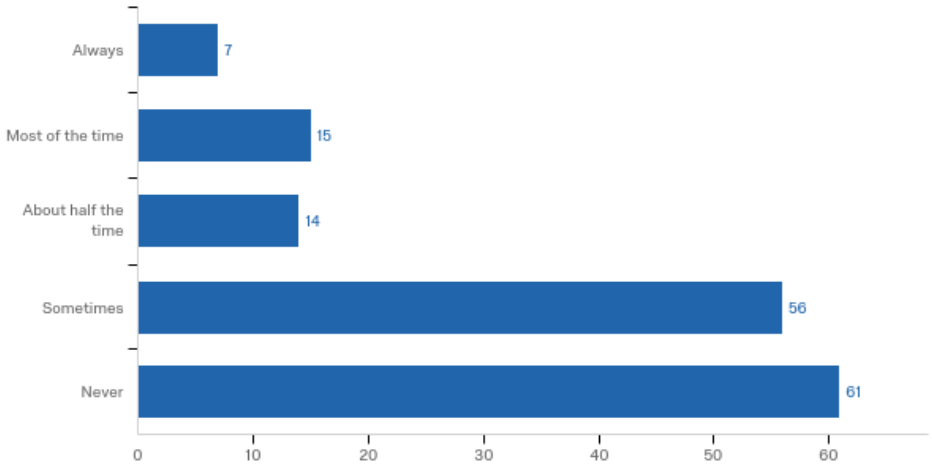
iPad Use in Courses

Seven students reported they always used the iPad in their courses, 15 students stated they used the iPad most of the time, 15 students stated they used it half of the time, 56 students reported they used the iPad sometimes and 61 students reported they never used their iPad in their courses.

Table 5. Please indicate how often you use the iPad in your courses (n=154)



The survey asked students to select the activities their faculty member used the iPad for in their courses. Of the 219 responses, 26% reported they used their iPads for individual projects, 31% used it for group projects in class, 31% stated homework assignments and 53% selected other. The responses to other are listed below:

- 47 students stated none of their courses used the iPad
- Textbooks
- For apps
- Teaching purposes
- To show slideshows of notes
- To look something up
- Check syllabus

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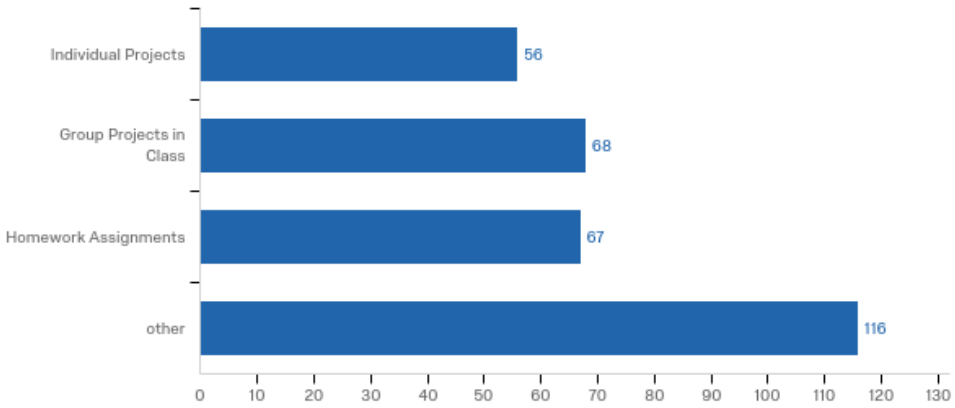
Table 6. Please select the activities your faculty used the iPad for in your courses (select all that apply) (N=219)



Pre-practica/field Experience Observation Hours

One hundred eighty-six students of the 247 students who responded stated they completed pre-practica/field experience observation hours. Of the 241 responses to the question regarding using their iPad during pre-practica/field experience observation hours, 206 students reported they did not use their iPad.

Using a Likert scale of one to five with one being not at all useful and five being extremely useful, 69% of students indicated they did not find the iPad useful (n=218), and 13% stated they found the iPad moderately useful when completing pre-practica/field experience observation hours. Table 7 indicates how useful the students found the iPad when completing their pre-practica/field experience observation hours.

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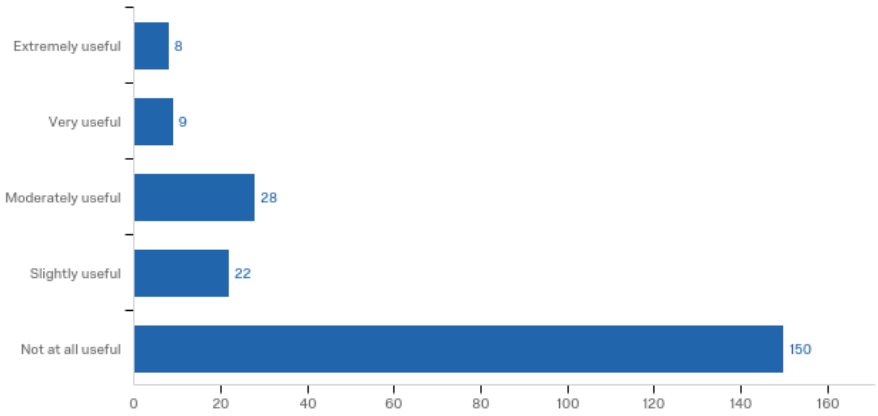
Table 7. How useful did you find your iPad when completing your pre-practica/field experience observation hours (n=218)



When asked to describe how they used their iPad during pre-practica/field experience observation hours, 74 students stated they did not use their iPad, and 15 students noted they did not have an iPad. Seventeen students indicated the iPad was extremely useful or very useful during pre-practica/field experience observation hours. These students stated they used the iPad to take notes during their observation hours, view a lesson plan, and use a math app to assist a student in a special education setting.

iPad Use During Student Teaching

Twenty-one students classified as seniors were currently student teaching at the time of this survey (n=228). When asked how often the students used their iPad during student teaching, 63% stated they never used it, 18% indicated they used it sometimes and 14% indicated they used the iPad half the time. No one answered they always used their iPad. Table eight illustrates the responses regarding how often the students used their iPads during student teaching.

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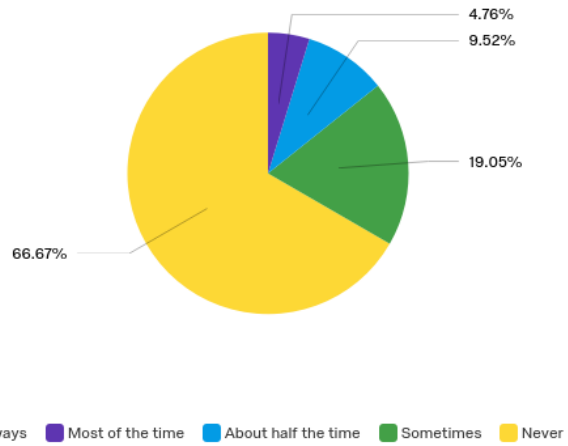
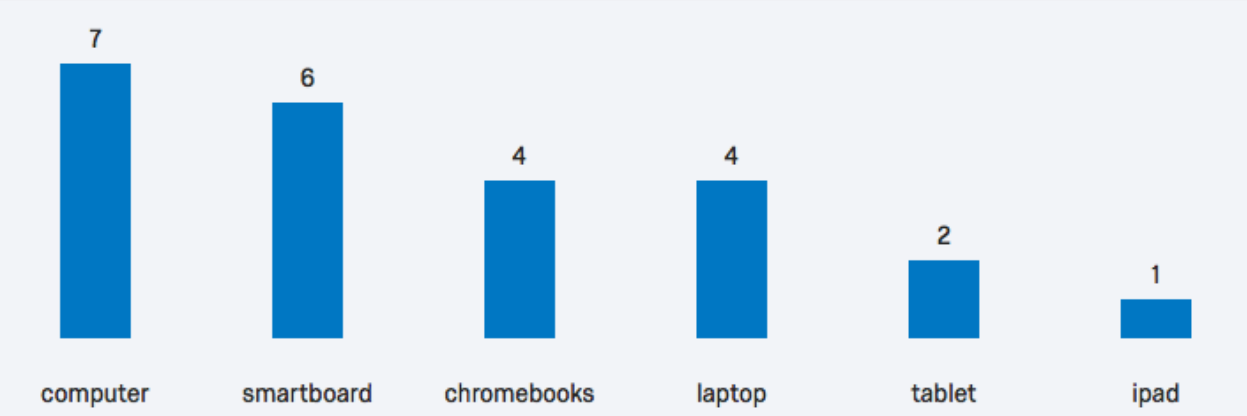
Table 8. Please indicate how often you use(d) your iPad during student teaching (n=22)



Of the 21 responses from students who were students teaching, five schools were reported to use iPads and six students reported their schools used tablets that were not iPads. Students listed the types of technology their district/school purchased for the teachers to use in the classroom. Computers were listed as the top type of technology along with smartboards and Chromebooks/laptops. Four students indicated both Chromebooks and laptops were used. Only one student indicated an iPad was used in the district/school. Table 9 illustrates the types of technology the district/school purchased for their teachers to use in the classroom.

Table 9. List the types of technology the district/school purchased for their teachers to use in the classroom (n=20)



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Of the 20 recorded responses, 70% of students selected they felt somewhat comfortable or extremely comfortable using their iPad in the teaching field. Table 10 displays how comfortable student teachers feel using their iPad as a teacher in the field.

Table 10. Please indicate how comfortable you feel using your iPad as a teacher in the field

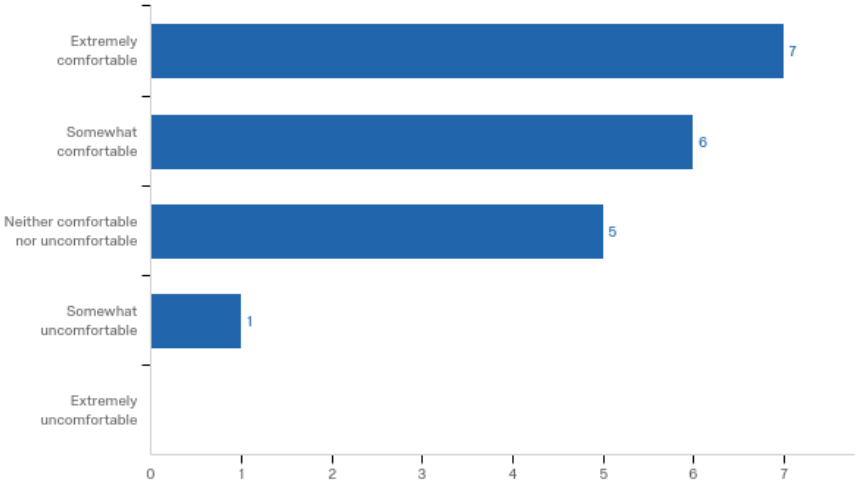

Table 11 illustrates the applications (apps) students used for teaching. Four students indicated they do not use their iPad.

Table 11. Please share the names of the applications (apps) you use for teaching

Productivity	**Education**	**Media**	**Social Networking**
Google Drive	***Math***	YouTube	MarcoPolo
Google Docs	LiteBot	(2) iMovie	Owl Pro Touch Chat
PowerPoint	Pattern Blocks	iBooks	
Google Slides	Base Ten Blocks		
	Geoboard		
	Literacy		
	Abby Phonics		
	Word sort		
	Book Creator		
	Science		
	(2) BrainPop		
	(2) iBiome		
	DNAplay		
	Classroom Management		
	Class Dojo		

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Table 12. Please share the names of the applications (apps) you use for learning.

Productivity	**Education**	**Media**	**Informational**
(2) Google Drive	***Math***	Slide Show Maker	Spanish Dictionary
Google Docs	Venn Diagrams	iMovie	Word Reference
PowerPoint	Pattern Blocks	(2) iBooks	Dictionary
Google Slides	Base Ten Blocks	Camera	NGSS (Next Generation Science Standard)
Explain Everything	Geoboard		
Notes	***Literacy***		
Reminders	Grammar		
Microsoft Word	Word sort		
Mail	Book Creator		
IEP Objectives	***Science***		
	My Incredible Body		
	National Geographic		
	iBiome		
	Geogard		
	World Maps		
	Classroom Management		
	Class Dojo		

Of fifteen responses regarding the types of activities for which the students used an iPad in the classroom, 53% stated they did not use their iPad. Twenty-seven percent of the students indicated they used it for watching or recording videos.

Technical Issues

Of 211 responses regarding how often students had technology issues that prevented them from using the iPad, 49% stated never. Eight percent of students indicated they had technology issues most of the time or always.

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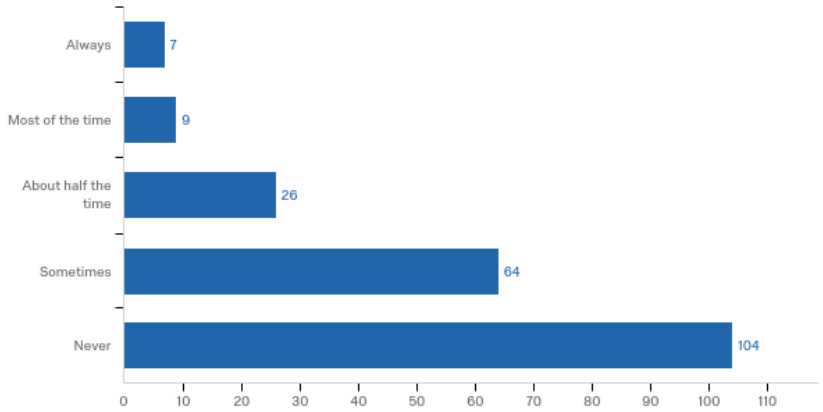
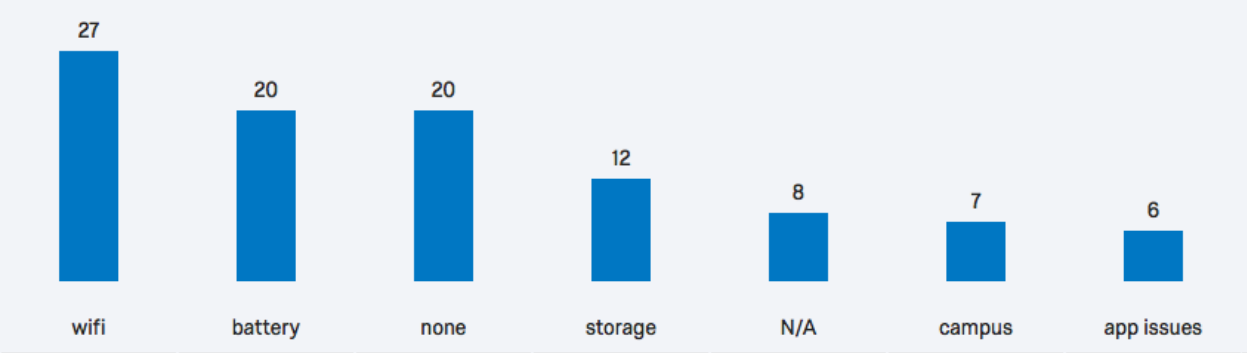
Table 13. Please indicate how often you have technology issues that has prevented you from using your iPad (i.e. connection issues, hardware, battery, storage, etc.) (n=211)



Of the 105 responses regarding the types of issues students had with their iPad, 27 students indicated they had Wi-Fi connection issues, seven of those students indicated the Wi-Fi issue was at the university. Twenty students indicated issues with the battery and 12 students stated they did not have enough storage. Table 14 illustrates the types of issues students reported having with their iPad.

Table 14. Please list the types of issues you have had with your iPad (n=105)



Forty-seven percent of students reported they had an extremely easy or somewhat easy level of difficulty connecting to Wi-Fi on campus or in the field. Twenty-two percent found connecting to Wi-Fi somewhat difficult. Twenty-five percent found it neither easy nor difficult. Table 15 below illustrates the level of difficulty students had connecting to Wi-Fi on campus or in the field.

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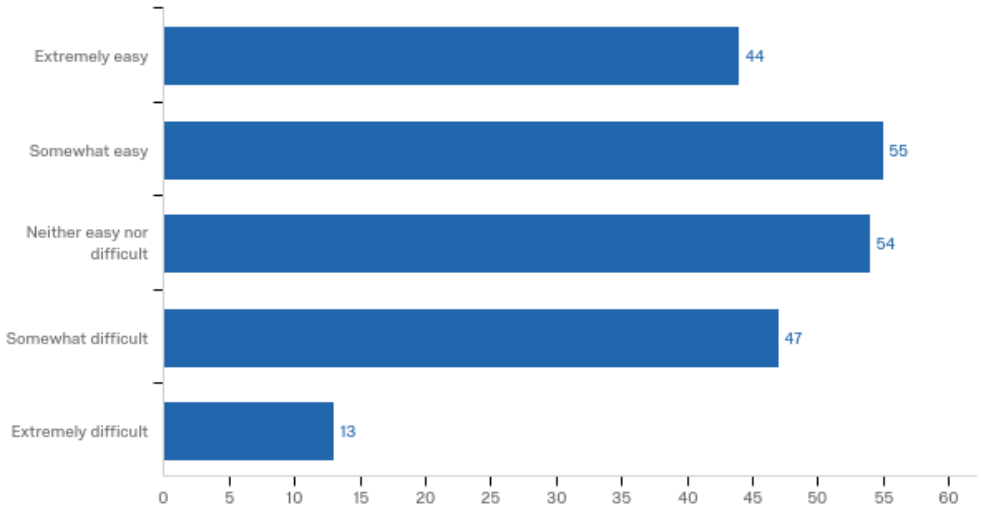
Table 15. Please indicate the level of difficulty you have connecting to Wi-Fi on campus or in the field (n=214)



Professional Development

Ninety-nine percent of respondents (n=217) reported they have never attended an iPad workshop that has been offered by the university. One student indicated they attended a workshop at the SEAM (Student Education Association) conference in 2016.

Of the 211 students who responded to what technology training they would like to see pertaining to the iPad, 36% stated they would like discipline-specific workshops, 23% would like word processing, and 44% indicated they did not want to see any technology training. Table 16 illustrates the technology training students would like to see pertaining to the iPad.

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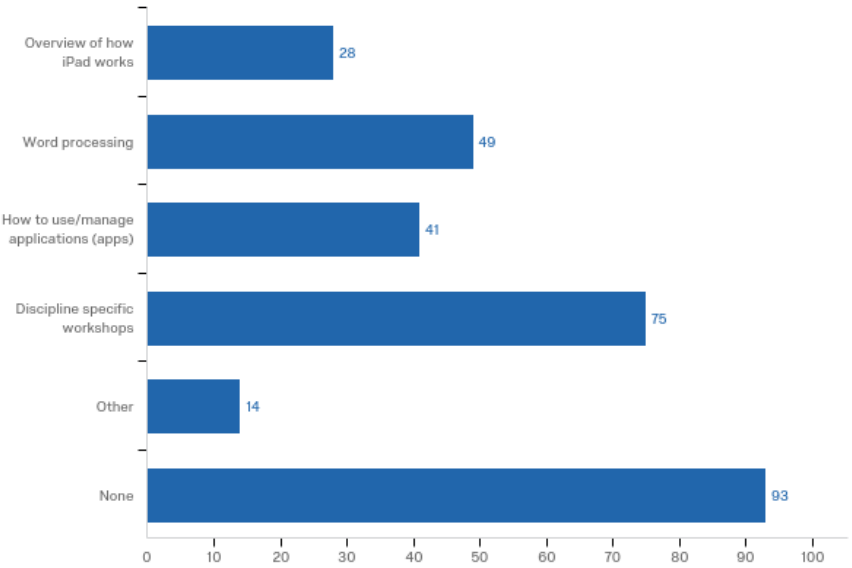
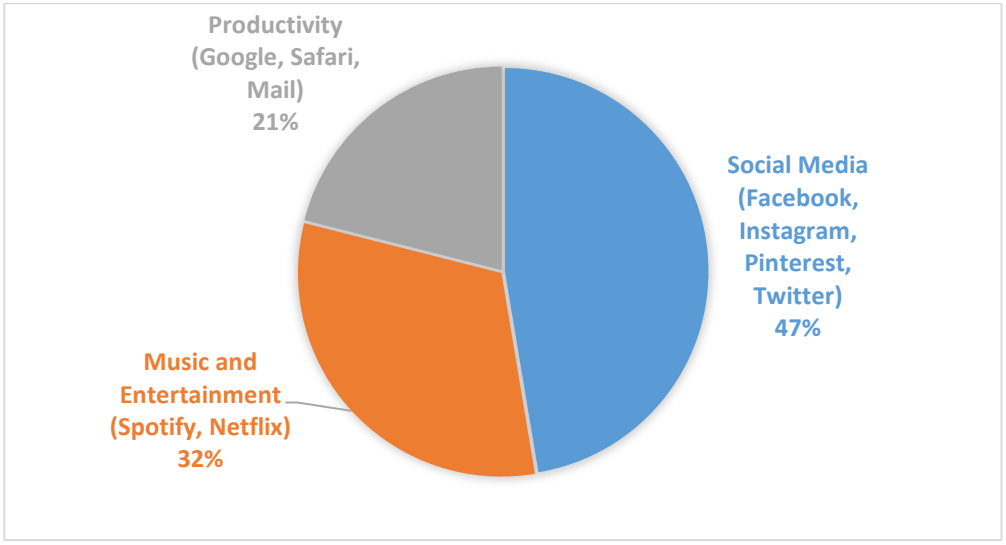
Table 16. What technology training would you like to see pertaining to the iPad (select all that apply) (n=211)



Personal Use of the iPad

This series of data contains the students' personal use of the iPad and various other technology. Table 17 below displays the applications students indicated they used personally. Social media was the most popular answer followed by music and entertainment.

Table 17. Please share the names of the applications (apps) you use personally.



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Data from the 215 responses were disaggregated to find out what number of students have access to multiple technologies, and the data showed 108 students indicated they had access to a mobile phone, laptop/desktop and iPad/tablet, 58 students stated they had access to both mobile phone and laptop/desktop computer, 37 had access to a laptop/desktop computer, six students had access to a phone and one stated they had access to an iPad. Table 18 below illustrates the technology students have available to them and table 19 below shows that 83% percent of students stated they preferred to use a laptop/desktop computer.

Table 18. Please indicated which technology you have access to for your coursework (Please check all that apply) (n=215)

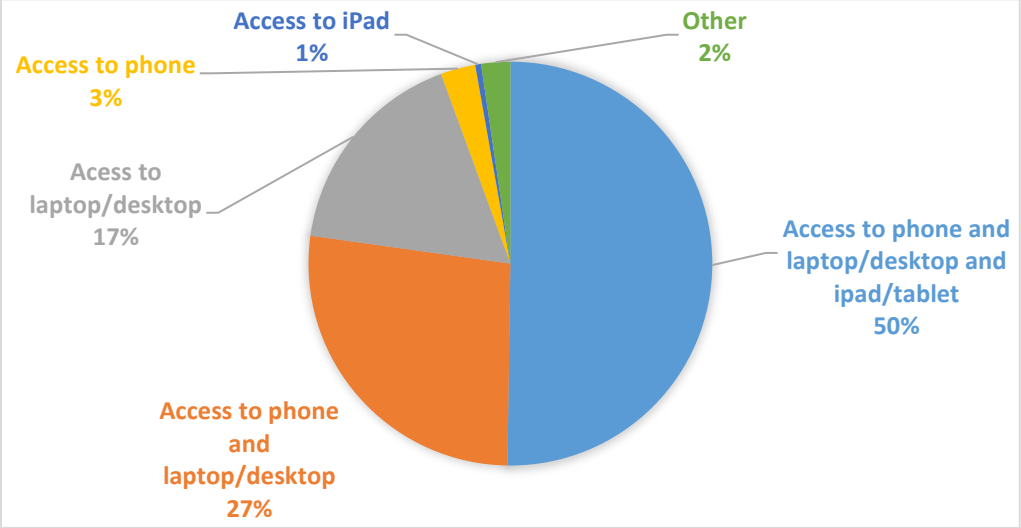

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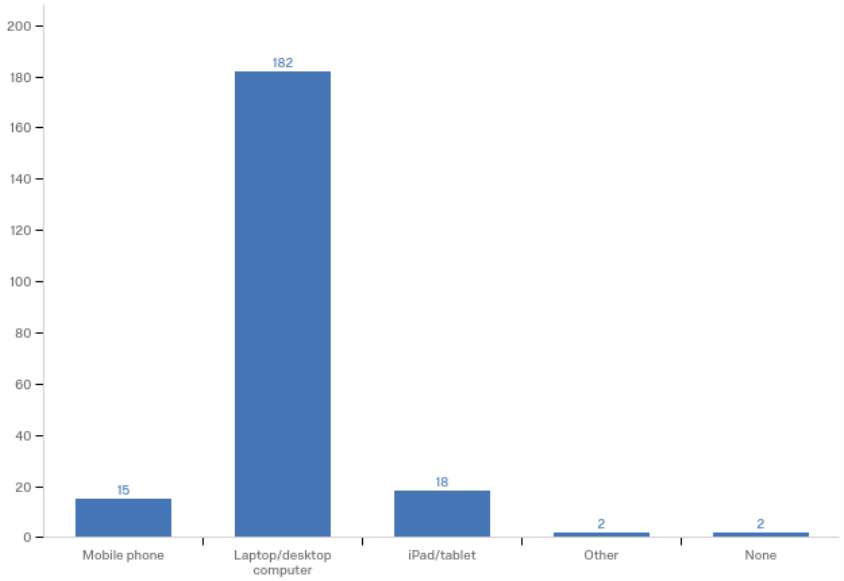
Table 19. What is your preferred technology to use overall (n=220)



When asked to describe their overall experience with the iPad, students stated the following:

- They liked it (i.e. small and portable, easy to use)
- Had never used it
- It was an unnecessary extraneous purchase
- Frustration from requiring them to purchase an iPad, then not use in classes
- They used it personally but not in school

Interview Findings

Of the 258 students who completed the survey, 28 expressed interest in participating in a group interview. However only two students were available to participate. I attempted to conduct phone interviews with the other students, however, a mutual time could not be reached. The interview was conducted on February 28, 2017 at 4PM. The two students were provided with a group interview consent form prior to the recording beginning. The interview lasted approximately ten minutes. One student was a physical education major and the other was an elementary education major. The students have been identified as A and R to protect their identity.

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A small group interview of two students was conducted to ascertain more information regarding the iPad. Both purchased the iPad because it was required, but stated they did not use it in their classes. Student R felt the assignments that did use the iPad were created to incorporate the iPad instead of incorporating the iPad into the assignments. Student A had not used the iPad in any courses as of yet. Student A believed the iPad began to be used during the practicum. Student A also stated that non-college of education faculty did not want any technology in their classes which prevented A from using it more frequently.

Both students used the iPad personally. Student R owns a gym and used the iPad to assist with clients. Because student A owned the iPad, it was incorporated into student A's learning. If the CE had not required students to own an iPad, this student would not have purchased one. Student A participated in iPad workshops that were offered by the Massachusetts Teacher's Association conferences. Student A was concerned the apps would be obsolete since technology changes so quickly.

When asked to tell me about their experiences using the iPad, R stated it was used for business, showing clients videos and connecting with people on MyFitnessPal. A used the Blackboard app to follow along with presentations, when allowed.

When asked what their biggest issues or concerns were regarding the iPad, both students stated they felt the iPad was expensive. R felt it was an unnecessary purchase that caused additional debt for already poor students who attend the university. Student A inquired if the college of education could offer some funding or grants to assist students with paying for the iPad. Student R stated the mobile phone technology has caught up to the iPad and that they "can do everything on their phone as well."

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Discussion and Conclusions

The results of this study indicated the students' attitudes toward an iPad program in teacher education were mixed. Throughout the survey, students consistently indicated the iPad was not used in their courses. My research found students who purchased the iPad did so to comply with the CE iPad policy. They indicated they were angry with being required to purchase the iPad. The majority of respondents stated they purchased an iPad using their own money, and only a small percentage indicated they had used financial aid funds to purchase the device. One student stated the financial aid came in after the semester, so they were not able to use their financial aid to purchase the iPad.

The majority of students who conducted their pre-practica/field experience observation hours did not use their iPad at all. One student stated, "Our class was told it would be seen as disrespectful and unprofessional." The students who were doing their student teaching experience indicated the schools they were placed in used tablets other than iPads, but mostly they used computers, smartboards and laptops. Students who reported they used their iPad during their student teaching experience stated they used the video recording feature. This is consistent with the research conducted by Kearney and Maher (2013) which had pre-service teachers use the iPad to video concepts. These concepts were then played back and discussed with the class.

Students who liked their iPads for learning indicated they used it for information retrieval, social media, music and entertainment, and educational apps. This research data corresponds with Pegrum, Howeitt and Striep's (2013) research that states, "Students like to stay connected with their personal learning networks." Students also liked the iPad because it was smaller and lighter to carry in their bags.

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The majority of students said they never had any issues with their iPad. Of the students who did have issues with their iPad, connecting to Wi-Fi was one of the top responses followed by battery issues. This information corroborates Kearney and Maher's (2013) research that described limitations such at network and Wi-Fi access.

The students who responded to the survey stated they had access to multiple devices such as a laptop/desktop computer, mobile phone or iPad/tablet. The preferred device was a laptop/desktop computer (83%) or iPad/tablet (8%).

The results from this research is mixed. Students attitudes and perceptions of the iPad policy were that iPads were an expensive piece of technology to purchase, and they were not being utilized in the classroom or out in the field often. Students repeatedly mentioned they did not purchase an iPad and used their laptops and mobile phones to complete assignments. Students who used the iPads liked the convenience, ease of use, and lack of technical problems. It was used by them to connect with their social network, music and entertainment, and productivity apps.

Implications for the University

The results point to the need for the CE to reevaluate the iPad policy and the expense for students. Should the CE decide to keep the policy, it may want to investigate scholarships or grants that could reduce the costs of the iPad for the students.

The CE should consider a revision to the policy encouraging students to infuse various types of mobile technology into their learning and practice, while continuing to offer workshops for the students to attend so they may build their knowledge and skills but not necessarily require an iPad be purchased. The CE should also investigate why the iPad is not being used more widely in courses. The CE should work with faculty to continue to encourage use of technology in the

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classroom. A survey should be sent to the CE faculty to obtain their attitudes and perspectives regarding the iPad policy. The responses could provide the CE with information that may be helpful to move forward with additional changes that may be necessary to continue with the iPad policy.

Although the research did not show all positive perceptions and attitudes throughout the survey, the CE should continue to promote technology infusion into the courses. There are district, state and national technology standards that are required to be followed, and students who leave the CE should be prepared and ready to use technology in their daily practice. This policy should also be reviewed regularly to ensure it is meeting the needs of students.

Implications for Further Research

As a result of this study, I recommend further research be conducted on the following:

- What are faculty members' perceptions and attitudes toward the iPad?
- Are students who graduated from the university using their iPads in the field and if not, what technology are they using?
- Replicate study in CE graduate programs

Limitations of Study

The potential limitations for this study include participant self-selection due to the nature of the topic being researched. When the survey was conducted, student teachers had just begun doing their field experience. The data may have been different had the students been in the middle or toward the end of their student teaching experience.

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APPENDIX A

Letter of Permission to Conduct Survey

December 11, 2016

To Whom It May Concern,

This letter is to provide permission for Ms. Tracy Charbonnier to conduct research at [redacted]. As part of this project she will send out an online survey to all juniors and seniors to collect data regarding their attitudes toward the [redacted] Tablet Policy, as well as conducting group interviews to learn more about student opinions and experiences regarding the Tablet Policy. This information will be used to make data driven decisions regarding the tablet initiative in the [redacted].

Sincerely,

[redacted]

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APPENDIX B

Survey Questions

Attitudes Toward iPad Program in Teacher Education

Dear Student,

You are being invited to participate in a research study titled Attitudes Toward an iPad Program. This study is being done by Tracy Charbonnier, a M.Ed. student in the Instructional Technology Program from Bridgewater State University as part of her final project. The data collected will be used to give administration feedback regarding the iPad program so they may make adjustments to the program if necessary.

Your participation is completely voluntary and your responses will remain confidential. The survey will take approximately 10 minutes to complete.

If you have questions about this project or if you have a research-related problem, you may contact the researcher(s), Tracy Charbonnier, tcharbonnier@bridgew.edu; or 617-347-5501. If you have any questions concerning your rights as a research subject, you may contact the Institutional Review Board at 508-531-1242.

By clicking "I agree" below you are indicating that you are at least 18 years old, have read and understood this consent form and agree to participate in this research study.

Thank you,

Tracy Charbonnier
Instructional Technology Master's Degree program candidate

❍ I agree

Please select your major
Communication Sciences and Disorders
Elementary and Early Childhood Education
Movement Arts, Health Promotion and Leisure Studies
Secondary Education and Professional Programs
Special Education

Please indicate what classification you currently are
Junior
Senior

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Are you aware of the iPad policy?
Yes
No

Do you own an iPad?
Yes
No

How did you find out about the iPad policy?
Email from University
University Catalog
Word of mouth
Faculty member
Other _____

When did you find out about the iPad policy?
Prior to admission
After admission but prior to admission into the professional education program
After admission into the professional education program

Did the iPad policy affect your decision to enter the professional education program?
Absolutely-absolutely not

Did you purchase an iPad because of the iPad policy?
Yes
No

Describe your attitude toward being required to purchase an iPad
Extremely pleased
Somewhat pleased
Neither pleased nor displeased
Somewhat displeased
Extremely displeased

How did you pay for the iPad
Financial Aid
Cash
Credit Card
Other installment plan
Parents/Family Purchased
Received as a Gift
Other _____

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Please indicate how often you use the iPad in class
Always
Most of the time
About half the time
Sometimes
Never

Please indicate how often you use the iPad outside of class
Always
Most of the time
About half the time
Sometimes
Never

Please select the activities your faculty used the iPad for in your courses
Individual Projects
Group Projects in Class
Homework Assignments
Information resource
In-class or online tests and quizzes
Other _____

Have you completed any pre-practica/field experience observation hours?
Yes
No

How often during your pre-practica/field experience observation hours did you use your iPad?
Always
Most of the time
About half the time
Sometimes
Never

How useful did you find your iPad when completing your pre-practica/field experience observation hours?
Extremely useful
Very useful
Moderately useful
Slightly useful
Not at all useful

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Please describe how you used your iPad during your pre-practica/field experience observation hours

Are you currently or have you completed student teaching?
Yes
No (If no, student will be directed to question 27)

Please indicate how often you use(d) your iPad during student teaching
Always
Most of the time
About half the time
Sometimes
Never

Does the school you are doing your student teaching at use iPads?
Yes
No

Does the school use tablets that are not iPads?
Yes
No

How does the use of other tablets affect you using the iPad
Extremely easy
Somewhat easy
Neither easy nor difficult
Somewhat difficult
Extremely difficult

Please list the types of technology the district/school purchased for their teachers to use in the classroom

Please indicate how comfortable you feel using your iPad as a teacher in the field
Extremely comfortable
Somewhat comfortable
Neither comfortable nor uncomfortable
Somewhat uncomfortable
Extremely uncomfortable

Please share the names of the applications (apps) you use for teaching

Please share the applications (apps) you use for learning

Please share the names of the applications (apps) you use personally

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What activities do you use your iPad in the classroom for?

Please indicate how often you have technology issues that has prevented you from using your iPad (i.e. Wi-Fi connection issues, hardware, battery, storage, etc.)
Always
Most of the time
About half the time
Sometimes
Never

When your iPad needs to be serviced, where do you take it?
University IT desk
Apple Store
Computer repair store
Other

How often has your iPad required maintenance/repairs?
0-5
6-10
11-15
16 or more

How much money per year have you spent on maintain/repairing your iPad?
$0-25
$26-50
$51-74
$75 or more

Please list the types of issues you have had with your iPad

Please indicate the level of difficulty you have connecting to Wi-Fi on campus or at your pre-practica/field work and/or practica/student teaching site
Extremely easy
Somewhat easy
Neither easy nor difficult
Somewhat difficult
Extremely difficult

Have you attended any iPad workshops that have been offered by the university?
Yes
No

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What technology training would you like to see pertaining to the iPad
Overview of how iPad works
Word processing
Best apps for educators
Using iPads for assessment
Managing students using iPads in the classroom
Other
None

Please indicate which technology you have access to for your coursework? (Please check all that apply)
Mobile phone
Laptop/desktop computer
iPad/tablet
Other _____
None

What is your preferred technology to use?
Mobile phone
Laptop/desktop computer
iPad/tablet
Other (list and/or explain) _____

Please describe your overall experience with the iPad

Thank you for participating in this survey.

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APPENDIX C

Interview Prompts

1. Tell me about the iPad policy?
2. Tell me about your experiences using the iPad?
3. How do you see the iPad being used when you are teaching?
4. What are your biggest issues or concerns regarding the iPad?

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APPENDIX D
Informed Consent Form for Group Interview

Dear Student,

You are being invited to participate in a research study titled Attitudes Toward the iPad Program. This study is being done by Tracy Charbonnier, a M.Ed. student in the Instructional Technology Program from Bridgewater State University. You were selected to participate in this group interview because you are a junior or senior enrolled in the College of Education [redacted]. The purpose of this group interview is to gather information regarding students' attitudes toward an iPad program in teacher education. If you agree to take part in this group interview, you will be asked answer several questions regarding the iPad policy and your attitudes regarding the iPad.

The group interview will take you approximately 45 minutes. You may not directly benefit from this research; however, we hope that your participation in the study may provide the College of Education [redacted] and other universities insight into the effectiveness of requiring iPads as the specific method of technology for students going into the teaching field. We believe there are no known risks associated with this research study; To the best of our ability your answers in this study will remain confidential. I will minimize any risks by maintaining the data on a secure server with firewall and antivirus protection. The researcher will be the only person with direct access to your interview responses. Your participation in this interview is completely voluntary and you can stop participating at any time.

If you have questions about this project or if you have a research-related problem, you may contact the researcher(s), Tracy Charbonnier, tcharbonnier@bridgew.edu; or 617-347-5501. If you have any questions concerning your rights as a research subject, you may contact the Institutional Review Board at 508-531-1242.

By signing below, you are indicating that you are at least 18 years old, have read and understood this consent form and agree to participate in this group interview.

Thank you,

Tracy Charbonnier
Instructional Technology Master's Degree program candidate

I agree to participate in this group interview

_____
Printed Name Date

_____
Signature

_____
Email address

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