

APPENDIX C

iPads in the Classroom Initiative

Executive Summary

This report provides an evaluation of the iPads in the Classroom Initiative conducted by the Office of Educational Technology (EdTech) for the 2016-2017 academic year.

Throughout the year, 18 course sections integrated iPads into their class materials; 6 sections participated in the Fall 2016 semester and 12 participated in the Spring 2017 semester. These sections were taught by a total of 7 unique faculty members. Of these professors, 4 participated during both semesters. Sections utilizing iPads came from the following courses: BUS 203, SOC 101, DD 107, BIO 230, OT 104, DD 107, VPA 121, DEN 223, EDU 104 and MUS 101.

Three studies were conducted to assess the progress of the initiative. First, EdTech collaborated with the Office of Institutional Research and Student Assessment (OIRSA) to perform a comparison analysis of academic outcomes between course sections that participated in the initiative and those that did not. In general, this comparison analysis indicated positive results. For the majority of courses, this comparison analysis indicated mixed results. Sections that participated in the initiative performed better on some measures of academic success than courses that did not participate. The two courses that indicated passing rates positive results were DEN 223, and VPA 121. Three courses showed all negative differences between iPad and non-iPad sections (BUS 203, EDU 104 and SOC 101), and the remaining courses demonstrated mixed results (MUS 101 and DD 107). Usage of apps designed for specific courses have made a difference in the outcomes.

Second, EdTech and OIRSA issued a survey at the end of the Fall 2016 and Spring 2017 semesters to students who were enrolled in courses involved in the initiative. This survey was designed to determine student responses to using the iPads. Answers from both semesters were combined and analyzed jointly.

Results from the student survey indicated the following:

- 80% of students said that they used the iPads regularly in the classroom.
- 76% of students found it was very easy to use the iPad. Only one person thought it was very difficult.
- Most students (73.2%) responded that they used the iPads to log on to Blackboard or CUNYfirst.

- 32.4% of students used apps designed for their course.
- 90% of students found EdTech staff to be somewhat helpful or very helpful with resolving technical issues.
- Over half of the students said that they had a good working knowledge of the iPad and had used it for a variety of tasks (66%).
- Only 21% of students said they had no prior experience using an iPad.

Sample comment from students: “iPad very helpful to study and learning process. Thank you very much for lending us these iPads very helpful.”

Third, EdTech conducted a qualitative evaluation of the iPad initiative by soliciting anecdotal reports from faculty members who used the iPads in their courses. An email was sent to professors involved in the initiative asking them to provide feedback regarding their experience. All of the reports gathered from faculty were positive.

Sample comment from faculty: “Using Nearpod, students benefit from the "Collaborate" activity, as it allows them to type their comments in an anonymous way. Every student has a "voice", without feeling intimidated. The music apps I use for practicing allows students to practice at their own pace, and for me to work with them in an individual basis.”

The iPads in the Classroom Initiative will continue during the 2017-2018 academic year. During the Fall 2017 semester, EdTech will work closely with Faculty who have participated previously in the exploring phase of the initiative. Faculty will familiarize with the iPads and continue investigating new apps in their specific fields. If valuable and stimulating apps are discovered, these apps will be downloaded onto the iPads and incorporated into the curriculum; so that students may benefit from integrating technology into the classroom.

EdTech will continue to make improvements to the student survey, comparison analysis, and faculty reports in order to increase the validity and reliability of these measures. EdTech will share the results with individual faculty and create a focus group to further analyze the findings, and use this information to improve the initiative.

Additionally, EdTech will continue sharing the benefits of the use of iPads in the classroom by showcasing best practices sessions for faculty.

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Introduction

During this academic year, EdTech reached out to faculty who have previously participated in the apps exploration phase of the initiative. From this group, two new faculty members have taken the iPads to the next phase, using the iPads in their classrooms.

EdTech has continued to partner with IT to manage and update the 60 iPads available for classroom use. IT changed the mobile device management system from the Apple Configurator to a more sophisticated one called AirWatch. This new system allows updates and installation of apps to be deployed over the air.

Faculty Participation

Fall 2016

In Fall 2016, 5 unique faculty members participated in the initiative and used iPOWs in a total of 6 sections. These instructors used iPads in courses from the following departments/programs:

Faculty Member	Course	Departments/Programs
Sandy Figueroa	BUS 203	Business
Andrew London	VPA 121	Digital Design
Sarah Hoiland	SOC 101 (2 sections)	Behavioral & Social Sciences
Andrew London	DD 107	Digital Design
Vyacheslav Dushenkov	BIO 230	Natural Sciences

Spring 2017

In Spring 2017, 6 unique faculty members participated in the initiative and used iPOWs in a total of 12 sections. These instructors used iPads in courses from the following departments/programs:

Faculty Member	Course	Departments/Programs
Sandy Figueroa	OT 104	Office Technology
Sandy Figueroa	BUS 203	Business
Andrew London	DD 107	Digital Design
Andrew London	VPA 121 (2 sections)	Digital Design
Diana Macri	DEN 120 (2 sections)	Dental Hygiene
Diana Macri	DEN 223	Dental Hygiene
Vyacheslav Dushenkov	BIO 230 (2 sections)	Natural Sciences
Denise Cummings-Clay	EDU 104	Education
Laura Andel	MUS 101	Humanities

Course Comparison Analysis

In order to assess the relationship between iPad usage and academic outcomes, EdTech partnered with the Office of Institutional Research and Student Assessment (OIRSA) to conduct a comparison analysis between course sections that participated in the initiative and those that did not. Academic success was measured by the percentage of passing, failing, and incomplete grades given in iPad and non-iPad sections.

Grade analysis using similar sections:

course	Grade	Percentages		Counts	
		No Ipad	Ipad	No Ipad	Ipad
BUS203	F	0.0%	20.8%	28	53
	Inc	7.1%	9.4%		
	P	92.9%	69.8%		
DD107	F	0.0%	12.5%	42	56
	Inc	9.5%	0.0%		
	P	90.5%	87.5%		
DEN223	F	0.0%	0.0%	20	22
	Inc	0.0%	0.0%		
	P	100.0%	100.0%		
EDU104	F	2.9%	8.0%	69	25
	Inc	14.5%	16.0%		
	P	82.6%	76.0%		
MUS101	F	8.6%	5.6%	70	18
	Inc	8.6%	44.4%		
	P	82.9%	50.0%		
SOC101	F	8.8%	14.5%	956	55
	Inc	17.9%	21.8%		
	P	73.3%	63.6%		
VPA121	F	4.1%	7.4%	193	54
	Inc	10.4%	5.6%		
	P	85.5%	87.0%		
Total	F	7.3%	11.7%	1378	283
	Inc	15.5%	11.3%		
	P	77.3%	77.0%		

Green highlights positive results and red highlights negative results.

Red = Higher fail and incomplete rates or lower pass rates in iPad courses

Green = Lower fail and incomplete rates or higher pass rates in iPad

The comparison analysis shows no significant difference in the Total passing metric between iPad and non-iPad sections. This year results show a slight improvement, as it showed a 3% difference in this metric. The number of students last year was 336 and this year is 283. The two courses that indicated positive results in the passing rate metric were DEN 223, and VPA 121.

Student Feedback Survey

EdTech and OIRSA collaborated on a survey that students were asked to fill out at the end of the Fall 2016 and Spring 2017 semesters. The survey was anonymous and survey responses

were kept confidential by OIRSA. Seventy-one students completed the survey, which had 14 questions. A list of these questions is provided below.

Questions

1. How often did you use the iPad in this class?
2. For which tasks did you mainly use the iPads in this class? Select all that apply.
3. How long did it take to distribute and set up the iPads before each class?
4. Did you experience any technical problems connecting to Wi-Fi?
5. How helpful was the EdTech staff with any technical issues you may have had?
6. Prior to taking this class, what was your level of experience using an iPad?
7. To what extent do you agree or disagree with the following statement, “The iPad helped me visualize the material used for this class better”?
8. To what extent do you agree or disagree with the following statement, “I was able to read articles, books and publications more effectively on the iPad”?
9. If you think an iPad can help you with your studies, in which classes specifically do you think an iPad could be useful?
10. Overall, how easy was it for you to use an iPad?
11. How often do you think you would use an iPad to do school work?
12. Do you have broadband internet and Wi-Fi at home?
13. Which of the following devices do you own? Select all that apply.
14. If you have any comments, please write them in the space below.

Results

Question 1: How often did you use the iPad in this class?

The first question assessed usage frequency of the iPads. 46% of students responded that they used the iPad in every class during the semester, while 34% said that they used the iPads in most classes. Almost all students used the iPad at least once throughout the academic year.

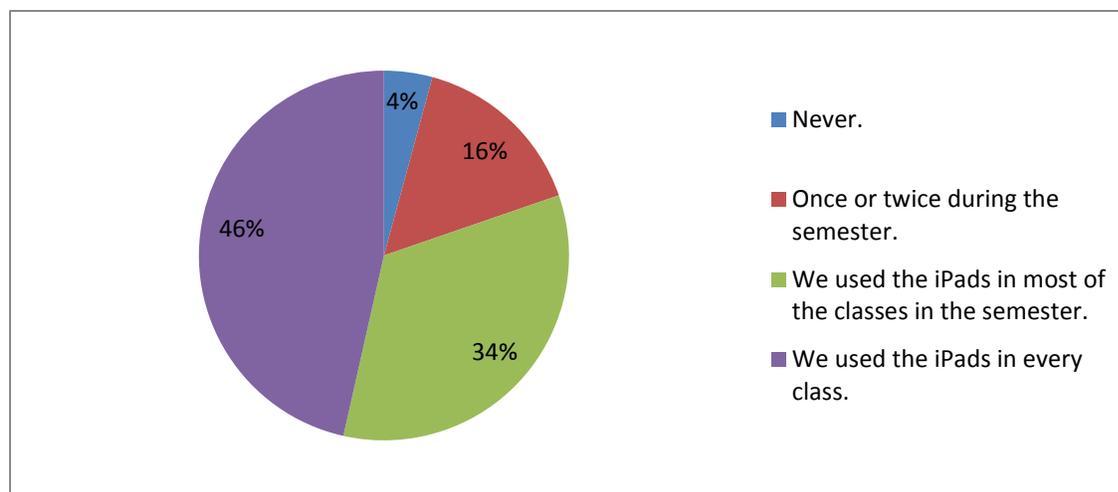


Figure 1: Classroom iPad Usage Frequency (N=71)

Question 2: For which tasks did you mainly use the iPads in this class? Select all that apply.

Most students (73.2%) responded that they used the iPads to log on to Blackboard or CUNYfirst. The task with the second highest response rate (33.8%) was searching the web for references or sources. In third place (32.4%) of students used apps designed for their course.

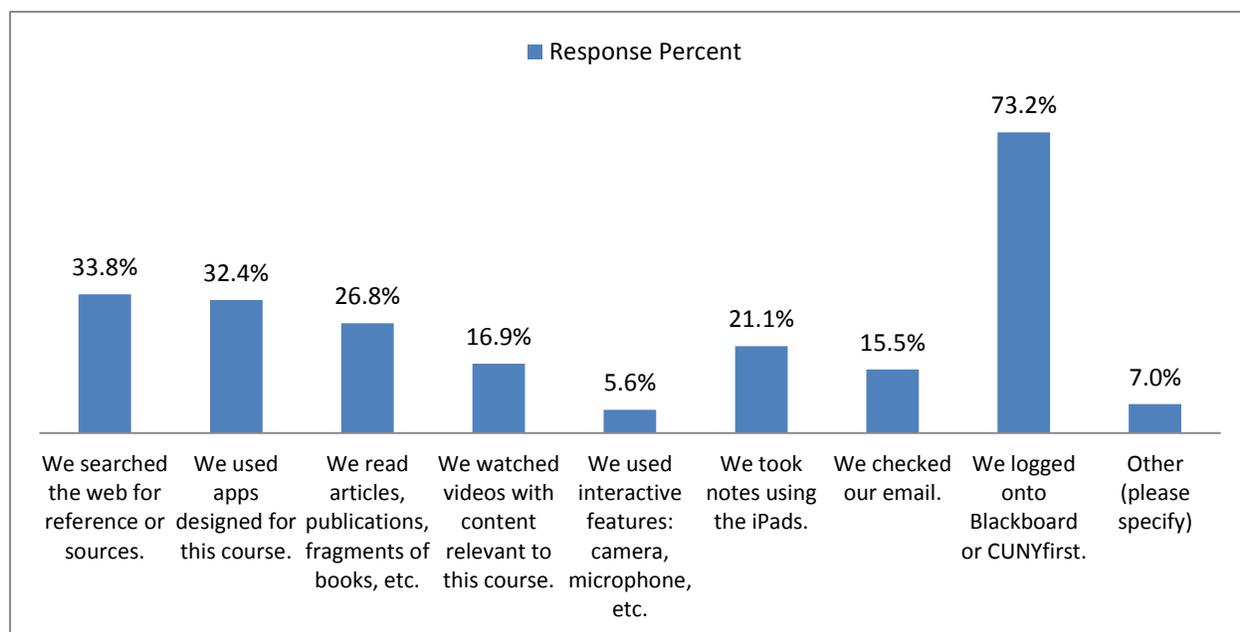


Figure 2: Usage Tasks (N=71)

Question 3: How long did it take to distribute and set up the iPads before each class?

Over half of the students said that it took them less than 5 minutes to set up; 91% of students were able to set up the iPads in less than 10 minutes. Only four students said that it took them close to or over 30 minutes to set up.

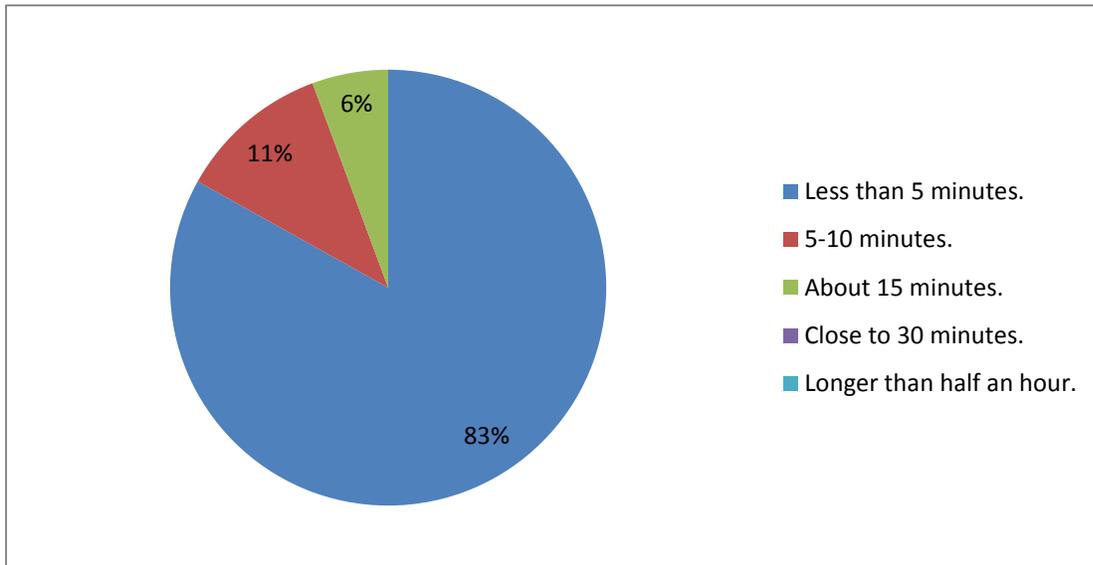


Figure 3: Distribution and Set Up Time (N=71)

Question 4: Did you experience any technical problems connecting to Wi-Fi?

61% of the students said that they never had any technical problems connecting to Wi-Fi while using the iPads. Therefore, 39% of students had this problem at least once throughout the term.

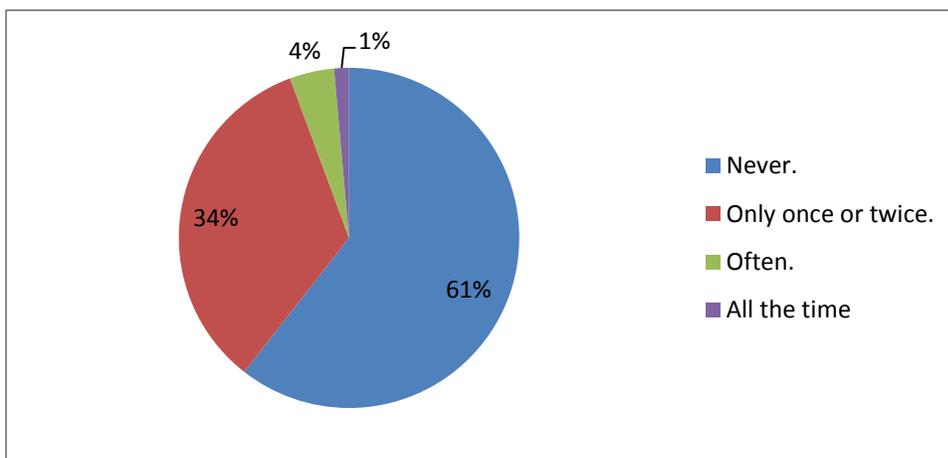


Figure 4: Technical Problems Connecting to Wi-Fi (N=71)

Question 5: How helpful was the EdTech staff with any technical issues you may have had?
90% of students found EdTech staff to be somewhat helpful or very helpful.

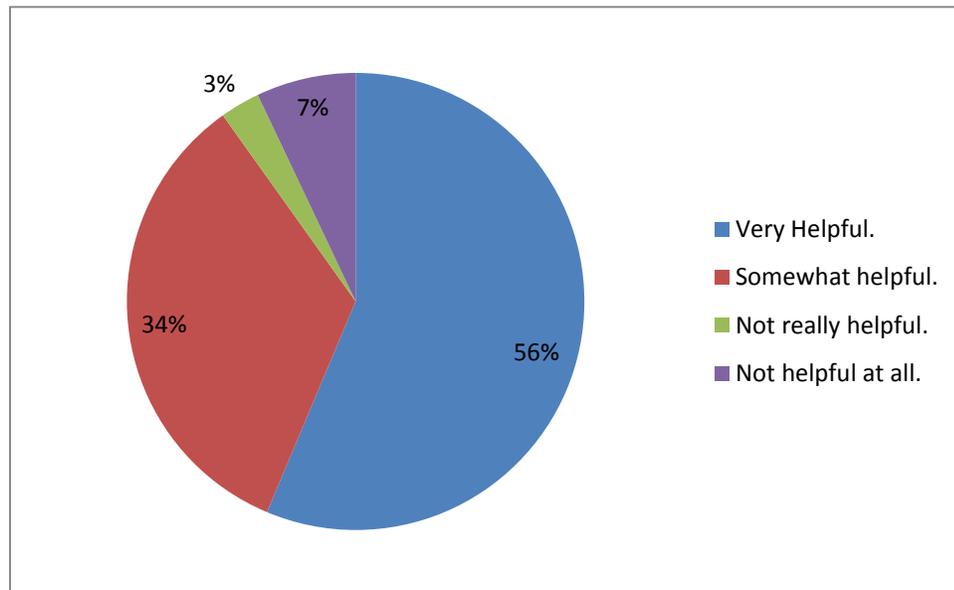


Figure 5: EdTech Helpfulness (N=71)

Question 6: Prior to taking this class, what was your level of experience using an iPad?

Over half of the students said that they had a good working knowledge of the iPad and had used it for a variety of tasks (66%). Only 21% of students said that they had no prior experience using an iPad.

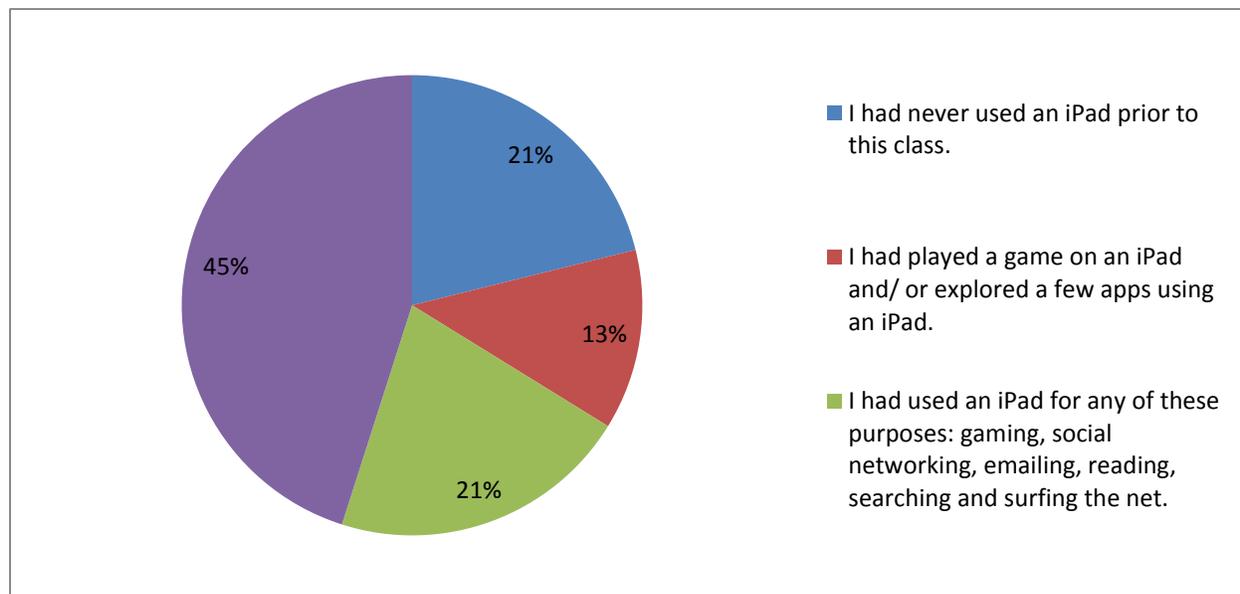


Figure 6: Prior Experience with iPad (N=71)

Questions 7: To what extent do you agree or disagree with the following statement, “The iPad helped me visualize the material used for this class better”?

The majority of students have chosen either “agree” or “strongly agree” (57%). 19% have chosen “disagree.”

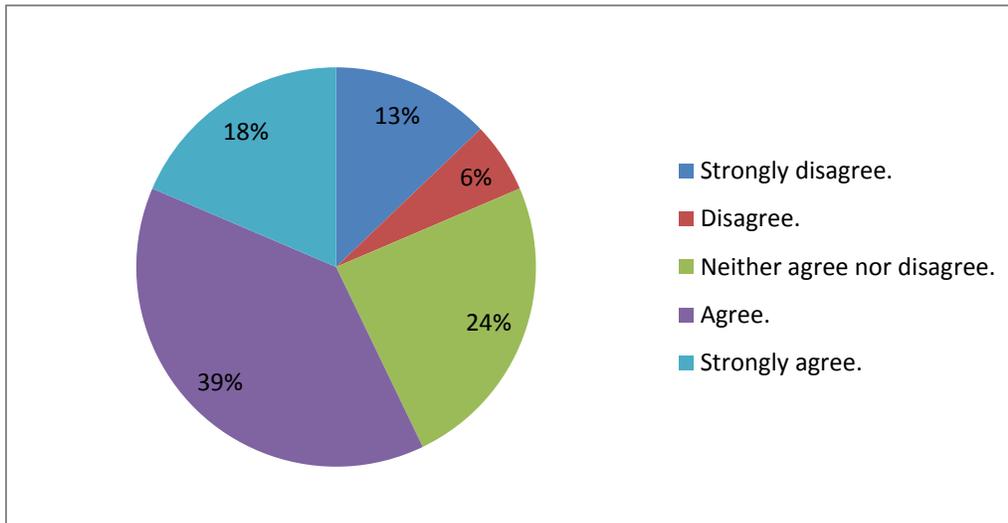


Figure 7: Visualizing Material (N=71)

Question 8: To what extent do you agree or disagree with the following statement, “I was able to read articles, books and publications more effectively on the iPad”?

As with question 7, the majority of students have chosen either “agree” or “strongly agree” (55%). However, more students chose “neither agree nor disagree” than in question 7 (27% vs. 24%).

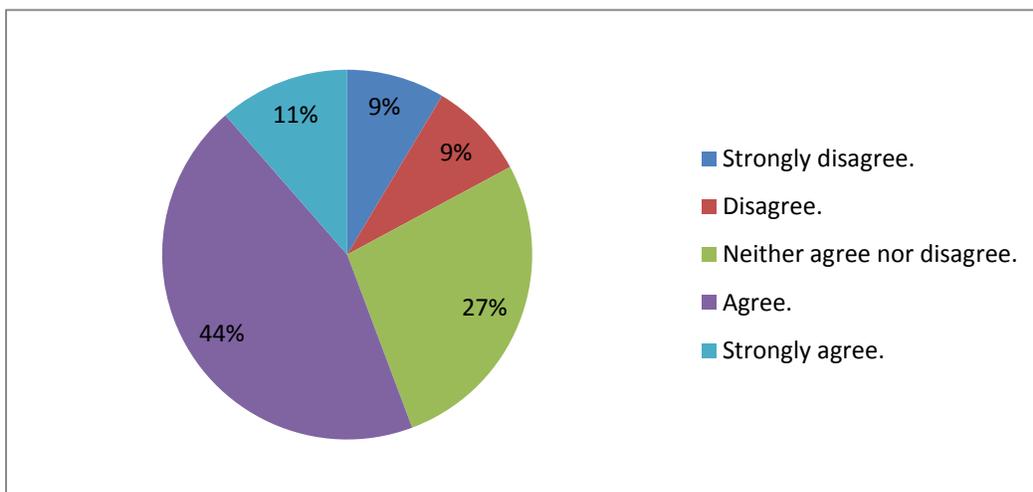


Figure 8: Reading on iPad (N=70)

Question 9: If you think an iPad could help you with your studies, in which classes specifically do you think an iPad would be useful?

This open-ended question assessed in which classes students thought iPads would be most useful. After coding the responses, these were the results:

Fall 2016 (N =22)

- The most popular individual subject mentioned was Business at 40%, followed by Biology at 20%.
- 15% of students listed English
- 15% of students said the iPad would be useful in any/all classes.
- 10% of students listed multiple classes.

Spring 2017 (N=48)

- 61.90% of students listed the iPad would be useful in any/all classes..
- The most popular individual subject mentioned was Education at 21.43%, followed by Business at 11.89%.
- 4.7% of students said the iPad would be useful in Biology and English.

Question 10: Overall, how easy was it for you to use an iPad?

76% of students found it was very easy to use the iPad. Only one person thought it was very difficult.

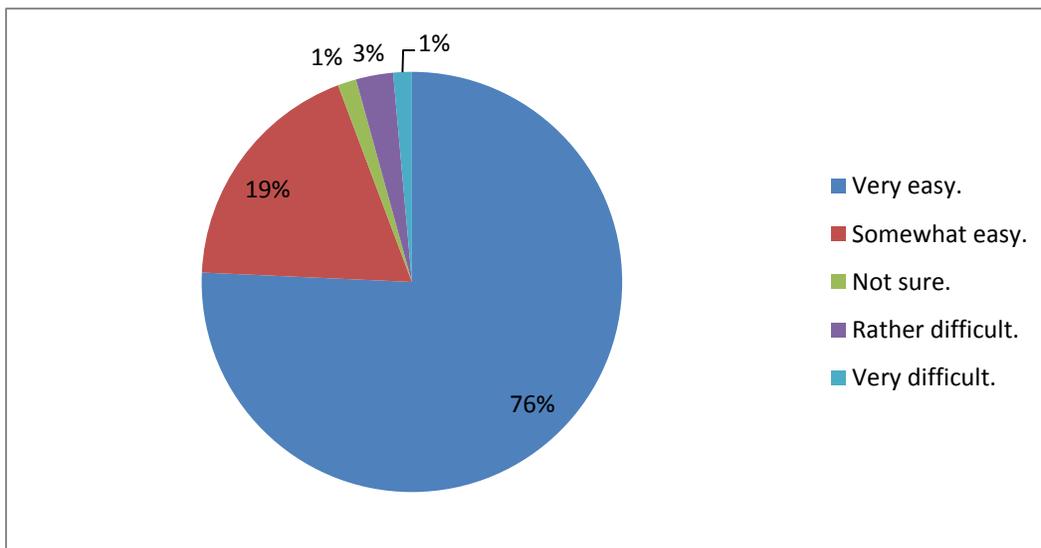


Figure 9: Overall Ease of Use (N=70)

Question 11: How often do you think you would use an iPad to do school work?

30% of students said they would use it every day. 37% said they would use it two or three times a week.

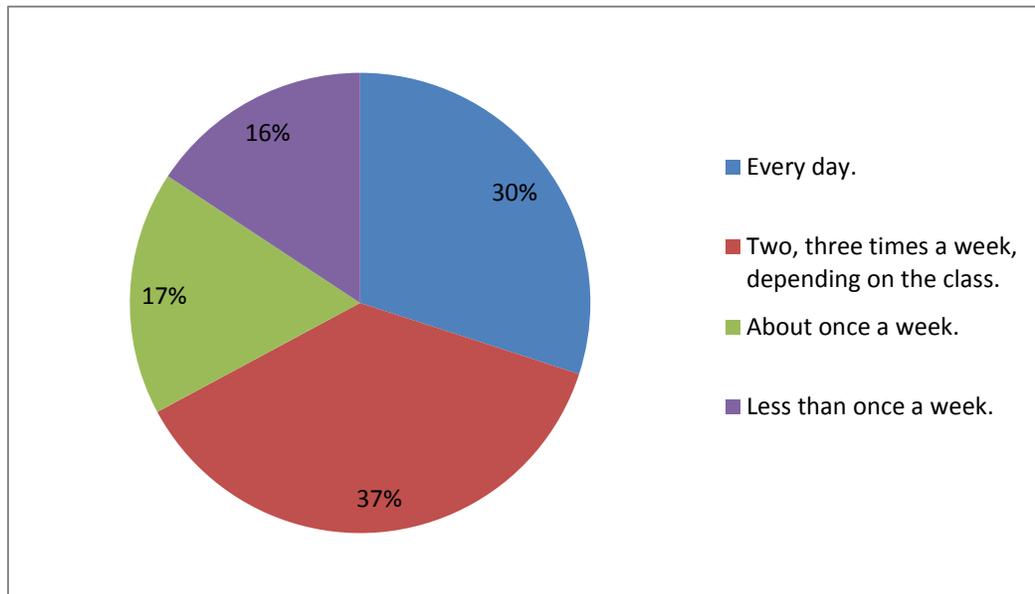


Figure 10: Frequency of Use for School Work (N=70)

Question 12: Do you have broadband internet and

Wi-Fi at home? 94% of students answered “yes.”

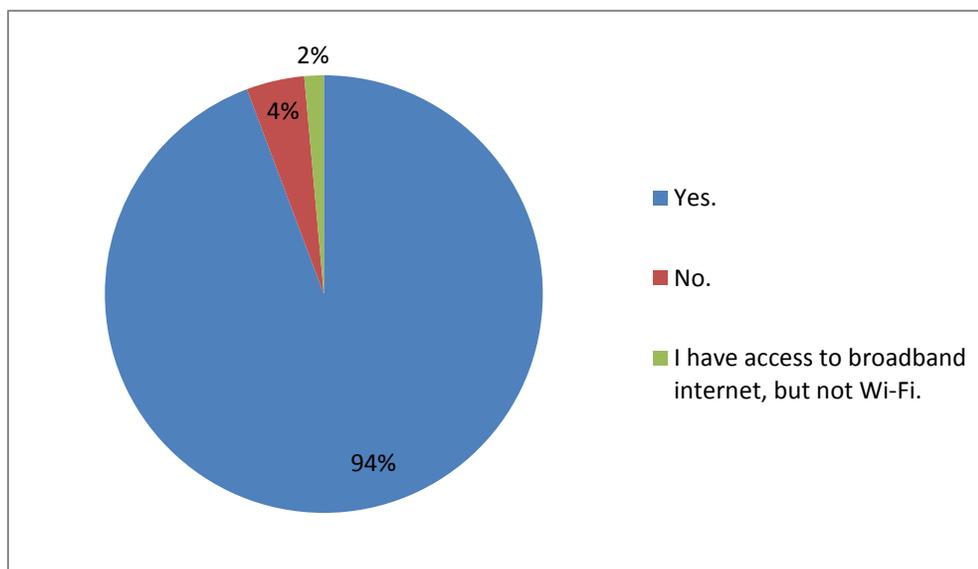


Figure 11: Broadband and Wi-Fi at home (N=70)

Question 13: Which of the following devices do you own? Select all that apply.

This question asked students which devices they own from a provided list. The majority of students said that they owned a laptop, a smartphone, and/or an iPad.

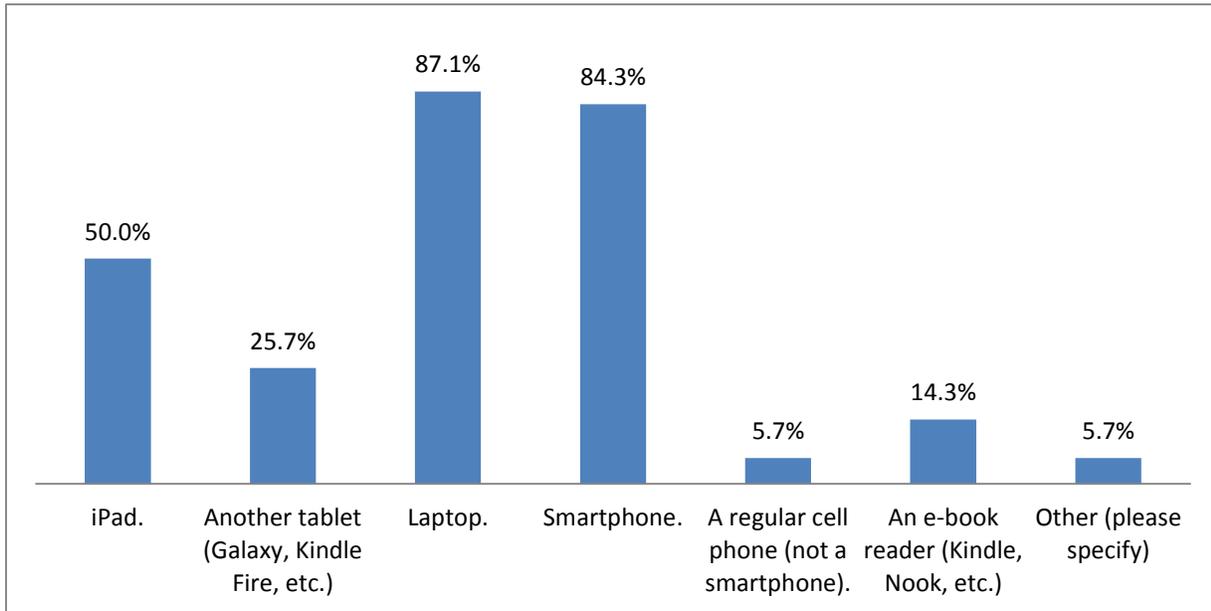


Figure 12: Devices Owned (N=70)

Question 14: If you have any comments, please write them in the space below.

This open-ended question provided students with an opportunity to make comments or suggestions regarding their experience with iPads in the classroom. In-depth analysis of the results is difficult due to the low response rate to this question. Only one student from the Fall 2016 semester gave comments, of which one was positive and one was negative. For the Spring 2017 semester, all three students who answered this question gave positive feedback. The responses from both semesters are listed below.

Table 1: Fall 2016 Comments (N=1)

Response Text	Category
I do not like the iPad to log in to blackboard or to do any school related stuff.	Negative

Table 2: Spring 2017 Comments (N=4)

Response Text	Category
The education apps did not work on an iPad outside of school so I was not able to use it in my classroom.	Negative
iPad very helpful to study and learning process.	Positive
Thank you very much for lending us these iPads very helpful	Positive
Give iPads for free to students to take classes or certain low income students.	Positive

Responses to the survey demonstrated that students who participated in the iPad initiative had a largely positive experience with the use of iPads in their class. The majority of students (80%) used iPads in most or all class sessions, a slight decrease from last year (86.6 %). This academic year, 32.4% more students used apps designed for their course (32.4%), compared to last year (14.9%). Last year, 97% of students have indicated they used iPads to log onto Blackboard and CUNYfirst; which is about 25 % less this year (73.2%); which shows that students are using more apps designed for their courses and less Internet browsing.

Qualitative Reports from Faculty

At the end of the academic year, EdTech conducted a qualitative evaluation of the iPad initiative by soliciting anecdotal reports from faculty members who used the tablets in their courses. An email was sent to professors involved in the initiative asking them to provide feedback regarding their experience. All of the reports gathered from faculty were positive. Below is a sampling of the responses.

- “Using Nearpod, students benefit from the "Collaborate" activity, as it allows them to type their comments in an anonymous way. Every student has a "voice", without feeling intimidated. The music apps I use for practicing allows students to practice at their own pace, and for me to work with them in an individual basis.”
- “Students learned how to search for Common Core State Standards using one of the software applications installed on the iPad. The activity helped them to develop strong lesson plans.”
- “Use of the iPads in class afforded students with the opportunity to learn how to use the iPad technology device as a tool to integrate with other methods of teaching in a safe learning environment prior to implementation of use in a job setting.”

Conclusion and Future Goals

The iPads in the Classroom Initiative will continue during the 2017-2018 academic year. During the Fall 2017 semester, EdTech will work closely with Faculty who have participated previously in the exploring phase of the initiative. Faculty will familiarize with the iPads and continue investigating new apps in their specific fields. If valuable and stimulating apps are discovered, these apps will be downloaded onto the iPads and incorporated into the curriculum; so that students may benefit from integrating technology into the classroom.

EdTech will continue to make improvements to the student survey, comparison analysis, and faculty reports in order to increase the validity and reliability of these measures. EdTech will share the results with individual faculty and create a focus group to further analyze the findings, and use this information to improve the initiative.

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