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# A Report on the use of iPads in the University Classroom

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## Abstract

This paper gives a report on changes in university students' attitudes toward technology as an English teaching tool due to the experience of using iPads in class. Eight students were provided iPads for one university semester, and required to use them as part of their model lessons and class presentations. Students' feelings towards using such instruments for educational purposes were measured using a 15-item questionnaire, as well as open-ended questions to gain qualitative data. Results show that after one semester, even though the students could see the benefits of using such an instrument for educational purposes, preparing for classes using the iPad was in fact time consuming. Therefore, it was deemed that one semester is not long enough for students to feel confident to use the iPad as a teaching tool, and that they should be provided with such tablet computers earlier in their tertiary education.

**Key words :** CALL (コンピュータ支援の外国語学習)  
Tablet computers (タブレット コンピュータ)  
University students (大学生)  
English pedagogy (英語教授法)

## 1. Introduction

The use of devices to assist teachers in an English as a foreign language (EFL) classroom is not a recent trend. In the past, items such as blackboards, whiteboards, televisions, and language laboratories have been introduced to give students more opportunities to improve the quality of their learning. In more recent years, items that can be connected to the Internet, such as electronic white boards, computers and tablet computers have been gaining popularity as tools for teaching and learning EFL. Since the iPad was introduced in May 2010, tablet computers have especially been gaining a lot of attention from teachers around the globe.

The use of such touch-screen devices seems to

have brought a lot of advantages to the classroom. Simpson (2012) explains that the introduction of iPads for students at an American elementary school resulted in an increase in enthusiasm to learn among the students that did not wane, even months after they had been lent to the students. Titlow (2012) suggests that because of the vast range and high number of applications available to be downloaded to tablet computers, they promote autonomy in those using the devices. In a paper based on the actual use of an iPad as a teaching tool in Foreign Language Activities class in a Japanese elementary school, Sakari, Leis and Suzuki (2012) reported that students' enjoyment of English increased due to the use of iPads in class. Students showed their increased enthusiasm through comments such as: *I understand*

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*how to use English a little better now; Classes seem to be easier to understand when the teacher uses the iPad rather than a computer; and At first, I didn't understand what was being said, but when I saw the pictures on the screen, I could understand it a little more easily* (p. 38).

Although many people claim that iPads increase the enthusiasm for students to learn, there seem to be few studies based on the effect tablet computers have on students' proficiency in various fields. In one small-scale study, however, McPhail (2012) claims that the use of iPads has in fact resulted in higher test results compared with both previous test scores and other students who used more traditional methods.

Regardless, however, of the advantages such technology seem to bring to education, unless teachers see these devices as much more than simply toys, but as effective teaching tools, they will become paper weights or dust collectors that sit in the corner of the classroom, never to be used in a beneficial way for students. In this paper, I report on how iPads were introduced into a university English pedagogy course with the goal of giving students an opportunity to experience using them as an EFL teacher and learner, and whether this was successful in encouraging students to consider ways to use them effectively as teachers in the future.

## 2. This research

### 2.1 Background

In a previous research project investigating elementary school teachers' attitudes toward technology (Leis, 2011), it was suggested that young teachers (i.e., those less than thirty years of age) seem to have less confidence in using technology for educational purposes. Their lack of confidence in teaching, combined with little training in using technology in the classroom may be seen as one of the reasons for this. Therefore, in order to increase prospective teachers' awareness of the benefits of using technology in the classroom, eight fourth-year students taking the subject *Eigo comyunikeshon kenkyuu*

*enshuu* (English Communication Research Seminar) (ECRS) were each lent an iPad, and instructed to use it in this subject, as well as in their everyday studies. In ECRS, students were required to give a 40-minute presentation/discussion based on one chapter of the textbook, as well as do a 25-minute model lesson, practicing an actual EFL class they may teach at a junior or senior high school. Students were required to use their iPad for both the presentation and model lesson.

### 2.2 Applications

In addition to the pre-installed applications, several more were downloaded before giving the iPads to students. These applications were: Keynote, GoodReader, Twitter, SyncSpace, Dictionary, Conference, iBooks, iTunes U, and Google Earth.

#### 2.2.1 Keynote

This application was probably the one most used by students in class. Students were required to create their model lesson plans and presentations using Keynote, which were projected onto the main screen in the classroom.

#### 2.2.2 GoodReader

Students were encouraged to download PDF copies of research papers from the Internet to further their knowledge of the subject that was being presented each week, in particular their presentation. GoodReader allowed the students to do this easily, while also being able to highlight and underline important places in the paper, not usually able to be done on a PDF. GoodReader was also used to allow students to take notes about the content of other students' presentations.

#### 2.2.3 Twitter

This class had its own Twitter chat space, allowing students to share their ideas about teaching, even while outside the classroom at anytime of the day. With the Twitter application being installed in the iPad, students

were not required to sign in or type in their password, making the process of tweeting simpler.

#### 2.2.4 SyncSpace

The SyncSpace application gave students a portable whiteboard on their iPad, allowing them to take memos, or draw figures at anytime. With a connection to Twitter, students were able to easily share their figures and ideas with other members of the class.

#### 2.2.5 Dictionary

Dictionary is a free English-English dictionary that can be installed into the iPad. This saved students carrying around a book dictionary, making it easy for them to look up words they need to know at anytime, whether they were on-line or not.

#### 2.2.6 Conference

This application allowed students to share their Keynote presentations and lessons plans with other students without using a projector. Unfortunately, due to the relatively long time it takes to download other people's presentations, this application was not used effectively in class.

#### 2.2.7 iBooks

Students were able to download any books available on iBooks. Although this application was not used in class, it provided the students with an opportunity to enjoy reading English books in their free time.

#### 2.2.8 iTunes U

This application gave students further opportunities to access other materials related to the topic of their presentation each week. As students were able to view lectures from universities around the world, it also provided them with the opportunity to develop their English skills as well as their knowledge of the topic being presented about.

#### 2.2.9 Google Earth

Google Earth was not directly used in class, but was available for students to use in their model lessons. When topics related to foreign countries and cultures were raised in the model lesson, students had access to view real pictures of the places that were being talked about.

#### 2.2.10 Others

During the semester, students also downloaded other applications (e.g., TED, Tell Time Game, Dropbox) to increase their opportunities for learning, as well as create livelier and motivating model lessons.

### 2.3 The questionnaire

Through using the iPads in this course, it was hoped that a clearer understanding of the effect using an iPad in a university classroom would have on the attitudes of students towards technology as a beneficial tool for teaching and learning EFL would be achieved. A combination of quantitative and qualitative research methods were used, with a 15-item questionnaire being conducted five times during the semester and, in order to gain a further understanding of what students found difficult or beneficial when using the iPads, qualitative items asking for students' more detailed opinions were also added to each questionnaire. Each individual's change in attitude being observed during the weekly lessons. The 15-item questionnaire (see Appendix A) aimed to gain an understanding of students' enjoyment of using an iPad (items 1, 13, 14, 15), their beliefs in the iPad being a beneficial tool for teaching (items 3, 4, 5, 8, 9, 10) and as a tool for learning (items 2, 6, 7, 11, 12). The participants expressed their opinion to each statement in the questionnaire using a six-point Likert scale with six being *strongly agree* and one being *strongly disagree*. In addition to these items, questions (See Appendix B) were added to gain a closer understanding of the students' confidence in the iPad as a teaching and learning tool, as well as express any other comments that had not been covered in the questionnaire's

statements. The questionnaire's reliability was tested using Cronbach's Alpha Coefficient, with results ( $\alpha = .928$ ) indicating that the data was appropriate for analysis. Note that the results for item 14 were recoded, as this item measured a negative attitude to the use of tablet computers.

## 2.4 Participants

Eight fourth-year university students (i.e., three female, five male) majoring in English education took part in this research project. The students were aged either 21 or 22 (av. = 21.5) at the beginning of the research project. Six students indicated that they owned their own iPad or iPod. When asked to describe their proficiency at using an iPad or an iPod on a scale from five (advanced – able to create applications) to 1 (i.e., none – no experience), the average score was 2.63 (SD = 1.06), suggesting the students perceived themselves to be between beginner and intermediate users of iPads or iPods.

## 3. Utilization of iPads in the classroom

In the first lesson of the course, students were asked to sign an agreement form asking them not to download any applications requiring payment without permission from the lecturer. Upon receiving their iPads, students were given minimal instruction on how to use the applications. Students were encouraged to use the iPad in their free time, giving them an opportunity to discover the benefits of such a tool for themselves.

In the first six weeks of the course, students shared their presentation files and model lessons using Google Documents, after changing the files into PDF format. However, to upload and download PDF files into GoodReader proved to be quite a complex process for many students. Therefore from the seventh week of the course, a Dropbox application was added to the iPads. With the class sharing one Dropbox file, students were easily able to share their presentation files and lesson plans without having to use paper

copies.

With the dramatic global increase in popularity of social media networks, a class Twitter was created for students to share their ideas and opinions concerning model lessons and the topic of each week's chapter. With the Twitter application being installed in the iPads, students were able to easily access their account without having to go to the Twitter website or sign-in each time. The Twitter account also enabled quick and simple sharing of images created using the SyncSpace application during class as well as outside of class time.

As part of the evaluation criteria for ECRS, students are required to do a 40-minute presentation and discussion based on one chapter in the textbook. In addition to this, students must also conduct a 25-minute model lesson. As part of this research, it was compulsory for students to use the Keynote application, as well as any other application they wished to use, in their presentation and model lesson. The iPad was connected to the projector in the classroom, and displayed on a large screen with the student controlling the presentation from his/her iPad.

## 4. Results and Discussion

The results of this research and discussion will be divided into three sections: quantitative data based on the initial and final questionnaires; a discussion of findings from qualitative items asked for regularly throughout the research; a report on the change in one student's feelings toward using iPads in the classroom throughout the course of this project.

### 4.1 Quantitative results

Table 1 shows statistical changes in students' attitudes towards technology between the first lesson and final lesson of the semester. The results show that although students' feelings of an iPad as a tool for teaching had been lowest of the three sectors at the beginning of the semester, it showed a statistically significant improvement to be the highest at the

**Table 1** *Change in attitudes toward technology due to using an iPad in a university class*

	Enjoyment	Teaching	Learning
1st time	4.00	3.88	4.38
5th time	4.44	4.81*	4.78

Note. Maximum score is 6; \*p < .05.

end. This suggests that having experience using the iPad in model lessons and presentations allowed the students to see the benefits it brings to teachers. Even though the sectors of learning and enjoyment also saw an increase, neither of these changed significantly. This may be due to the relatively high scores at the beginning of the semester. Also, as this course focused on teaching EFL, students most likely concentrated on the device as a teaching tool, with less focus on improving their own language skills. According to these results, therefore, it can be concluded that introducing the iPads as part of this pedagogical course has helped students understand the benefits of this tool for teaching. To increase their awareness of the benefits for learning EFL, more comments and advice will be required from the instructor to help students use the tablet in their own language study in future courses.

## 4.2 Qualitative results

In order to gain a deeper understanding of students' feeling toward using an iPad in the classroom, open questions were added at the end of each questionnaire. Here, I will discuss students' responses to one of the questions from the second to the final questionnaire.

### 4.2.1 Second time *What difficulties have you had using your iPad this week?*

1. It was a little bit difficult to remember all the functions that I want to use.
2. I didn't have enough time to use it because I can't surf the Internet in my room.
3. I want to know how to use it effectively.

One week after using the iPad, students seem

to be having difficulty understanding how to use it. However, these responses suggest that student can already see the benefits and are eager to learn how to use it well.

### 4.2.2 Third time *What advantages have you discovered about your iPad this week?*

1. To create presentations with iPad helps me make them fun.
2. iPad's Keynote is very useful to make a presentation.

Approximately one month after starting to use the iPads in class, students' enjoyment and confidence is starting to rise. The portability of the iPad allows students to create their presentations wherever they go, while the variety the iPad brings allows students to create attractive presentations and lessons for their students.

### 4.2.3 Fourth time *What was difficult when preparing for your presentation or model lesson?*

1. I am sometimes confused about which button I should press.
2. I couldn't type well with the iPad. It took time to create my presentation.
3. It took me longer to make it.

Closer to the end of the course, more than two months after the initial questionnaire, students indicate that they find it easier and quicker to use a computer than it does using an iPad. To overcome this difficulty in the future, it would be necessary for the instructor to give more specialized training early

in the course. This may help students become used to using their iPad, and in turn resulting in them being able to use it more smoothly with confidence.

4.2.4 Fifth time *Has your attitude towards the iPad changed?*

1. Yes. If I use it effectively in the class, it will be amazing for students. They can enjoy the classes more than without an iPad. It is easy to gather students' attention.
2. Yes. At the beginning, I thought iPads would be distracting for students, but now I realize that using it is useful to learn language.
3. Yes. I have come to think that an iPad is useful to attract students' attention.
4. No. I couldn't find any distinctive strong points in using an iPad. This means points that exceeded my expectations.

Students' responses indicate a strong understanding of the benefits of using an iPad to make teaching more effective and as an important tool for grabbing students' attention. These responses support the

statistical results discussed in Table 1, that students have come to realize the benefits an iPad brings to the classroom as a teaching tool. Although one student indicated that a change hadn't been felt, the response suggests that there had already been a high expectation of the benefits an iPad brings to the classroom at the beginning of the course.

4.3 Change in one student's attitudes

Two of the eight students participating in this class indicated that they did not own an iPad or iPod prior to the beginning of this course. Here, I will look at changes in attitude towards using an iPad in the English classroom of one of these students due to this experience. The student is a 22-year-old female who marked her own proficiency at using such technology as one, the lowest proficiency level. Figure 1 shows the changes this student's attitude towards the iPad as a teaching tool according to the data collected in the questionnaires.

The results show that one week after receiving the iPad, in the 2<sup>nd</sup> questionnaire, the student had a very negative attitude towards using it. All items

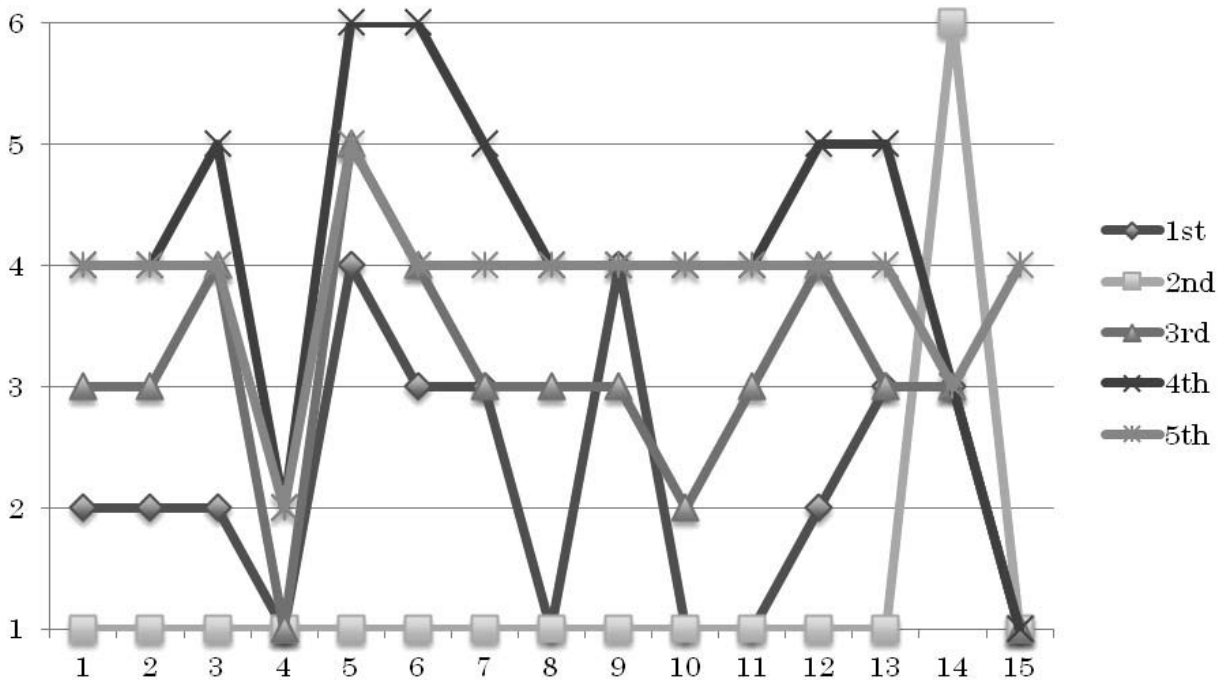


Figure 1. Changes in one student's data over the course of this semester.

were answered as one, except for item 14, which was answered as six. At this stage, the student had no confidence with using the iPad, and in fact saw it as a distraction for both teacher and students, bringing no benefit to the English classroom. This attitude is supported by her answers to the open questions, where she answered, *Everything*, when asked what was difficult about using the iPad. Furthermore, the only benefits that could be seen in using the iPad is to use the Internet and download PDF versions of thesis to help her study.

However, with experience of actually conducting a model lesson and presentation using the iPad, over the next few weeks this attitude changed to become very positive by the time of the fourth questionnaire, two months after initially receiving the iPad. Again, these reactions are supported in the open questions where she indicated that *I am sometimes confused as to which button I should press* as the difficulty she is having using the iPad. However, her attitude toward the iPad has changed as *I can use it a little better now*. The biggest benefit, she indicated, is that *we can use pictures to enhance students' curiosity*.

In the final questionnaire, approximately three months after receiving the iPad, this student still shows a positive attitude toward the iPad. Perhaps due to her not using it for model lesson or presentation, which had been completed prior to the fourth questionnaire, the results are not as high as the previous questionnaire, but still show that she has understood the benefits this tool brings to teaching and learning. Her confidence in creating applications for educational purposes has increased to *four*, where it had been *one* in the previous questionnaires. This is likely to be the result of a special lesson by a visiting lecturer in the previous week to instruct students on the benefits of using an iPad. Despite this confidence, however, this student has indicated that she did not plan to use the iPad during her upcoming teaching practice, indicating time and opportunity as the main reasons: *No. Maybe I won't have a chance to use it during teaching practice*.

Both the quantitative and qualitative data gathered in this study have indicated that introducing the iPads into a university course seems to result in a positive change in students' attitudes towards using it as a teaching tool in the classroom. However, it has also been understood that the three months of this study was not long enough for students to gain sufficient confidence to use it effectively, especially for those with low confidence and proficiency using tablet computers. Introducing the iPads earlier in students' university life to allow them more time to get used to using them both for learning and teaching may bring even more positive results for students with both high and limited proficiency in using these tools.

## 5. Limitations

The results of this paper have indicated that with experience using and technology such as an iPad in model lessons, presentations, or even in their free time, students may gain an understanding of the potential such a device has for improving their own English ability, as well as making their classes more interesting, increasing the motivation and English ability of their students when they lead English lessons. The same could be assumed for teachers already in the classroom. However, this research is limited by factors such as a low number of students, limited authenticity, and lack of classroom reactions.

With only eight students participating in this research, it could be said that the number is too small for the results to be considered significant, despite the researcher referring to both qualitative and quantitative data, as well as observations in class when reaching a result. With further funding, it will be beneficial to conduct a similar research project with larger groups. Such a research, may give a stronger base to make a resolution on the effect using iPads in class has.

Second, students' opinions and answers to items in the questionnaires are purely based on their experience doing presentations and model



lessons in class. Although it could be argued that the presentations are authentic, these were in fact simply to give the participants more experience using the iPad in front of an audience, while of course confirming the content of each unit being studied in the text. The goal of this research was to gain a deeper understanding of the benefits iPads bring to education, and whether they make teaching easier for the instructor and lessons more motivating for students. For a further understanding of the realistic influence using an iPad in class has, it would be necessary in future projects for the researcher to include students' reactions to using the iPad during their teaching practice at local junior or senior high schools, or conducting similar research with classroom teachers.

Related to this limitation is a lack of understanding of how junior high school students feel when a teacher uses the iPad in a lesson. Gaining an understanding of whether using such a tool in the classroom makes learning more interesting, the content more memorable and results in students becoming more highly motivated and perhaps autonomous is an important factor lacking from the current research.

Despite these limitations, I am confident that the findings of this research has provided evidence of the necessity to give access to tools such as iPads for prospective teachers to use regularly in their pedagogical studies. In future projects, with the above limitations taken into consideration, I believe that even more evidence can be reported to display the benefits these tools bring to learning for both the teacher and the student.

## 6. Conclusion

Without doubt, the main focus of education should be on students and learning, not on electronic devices that, regardless of how advanced they may be, can never replace the teacher. However, the benefits tablet computers bring to the classroom are also clear. Despite this, in an age where more

and more people are turning to smart-phones (i.e., cellular phones that can easily access the Internet at almost anytime) and tablet computers, there seems to still be some tension when it comes to using such technology in an educational setting. Now, with the popularity of such instruments increasing world-wide for use in educational institutions, it cannot be denied that becoming familiar and confident with using this technology is vital for current teachers and teachers of the future. In order to increase confidence and proficiency in using technology, fourth-year university students were lent iPads as part of their English pedagogy class. Over the three-month semester, positive changes were seen in the students' proficiency and confidence in using the iPad, but this period did not seem to be long enough. Students need to be supported and educated about using this technology earlier in their tertiary education. If this can be done, it may help prepare those students to be able to use iPads and other technology designed for educational purposes with confidence, bringing benefits for both them in their own learning and their students' learning when they become teachers in the future.

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## Appendices

### Appendix A

Items used in the questionnaire for this study.

Item	Statement
1	Using an iPod/iPad is fun.
2	Using an iPod/iPad can be educational.
3	Using an iPod/iPad in class can really improve my teaching.
4	Using an iPod/iPad in class can save me a lot of time.
5	I would be a better teacher if I knew how to use an iPod/iPad well.
6	Using an iPod/iPad in class improves the motivation of my students.
7	Using an iPod/iPad in class improves the academic ability of my students.
8	I am very confident that I can use an iPod/iPad effectively in the classroom.
9	I want to learn more about using an iPod/iPad in class.
10	I am very confident when it comes to using an iPod/iPad in the classroom.
11	Using an iPod/iPad improves my English ability.
12	Using an iPod/iPad in class improves my students' English ability.
13	Using an iPod/iPad allows my students to experience foreign cultures.
14	Using an iPod/iPad in class would be too distracting for students.
15	I am confident that I could create applications on my iPod/iPad based on the English textbook.

Sex:  Male  Female

Age:  18  19  20  21  22  23

24  25

Do you have your own iPod or iPad?  No  Yes

Describe your proficiency at using an iPod/iPad.

- Advanced Able to create applications.
- Intermediate Able to create and do presentations.
- Beginner Able to download applications.
- Basic Able to play games and listen to music.
- None No experience.

### Appendix B

*Qualitative items used in questionnaires.*

Questionnaire	Item
2 <sup>nd</sup> time	What difficulties have you had using your iPad this week? What advantages have you discovered about your iPad this week? What do you hope to be able to do with your iPad in the next two weeks?
3 <sup>rd</sup> time	What difficulties have you had using your iPad this week? What advantages have you discovered about your iPad this week?
4 <sup>th</sup> time	You have now done at least one presentation or model lesson using your iPad. What did you find difficult when preparing for this? What advantages have you found when using an iPad in our classes? Do you feel your attitude towards using an iPad for educational purposes has changed compared to what it was at the beginning of the semester? Why, or why not?
5 <sup>th</sup> time	Do you plan to use your iPad during teaching practice in the second semester? Why, or why not? What advantages have you found when using an iPad in our classes? Do you feel your attitude towards using an iPad for educational purposes has changed compared to what it was at the beginning of the semester? Why, or why not?

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