

Tablets in Second Language Learning: Learners' and Teachers' Perceptions

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Abstract

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This study explored the perceptions of ESL learners and teachers on using tablets in their language classrooms, focusing on the device's four inherent affordances: *learnability*, *usability*, *motivation*, and *willingness to use tablets*. Although previous research has investigated the pedagogical use of tablets in the domain of higher education, elementary and secondary education, and teacher training, there is little research exploring the perceptions of ESL students and even less involving their teachers. The themes that guided the study are commonly found in Mobile Assisted Language Learning (MALL) perception studies. What is known about users' perceptions of MALL-based pedagogy (including tablets) is that students and their instructors view the use of these platforms positively. For instance, it has been acknowledged that the use of MALL-based pedagogy has the potential to enhance learning by: (1) improving the learning experience – *learnability* (Obari & Lambacher, 2015), (2) increasing learners' level of comfort – *usability* (Altena, 2015), (3) boosting *motivation* (Cardoso, 2011), and (4) increasing students' *willingness to use the technology* (Cumming & Rodriguez, 2013).

This study examined the perceptions of 45 young adult ESL learners and 11 teachers on their use of tablets (Apple iPads) in their classrooms. A mixed-method approach was adopted to collect and analyze the data. Learners' and teachers' surveys used a 5-point Likert scale to probe the participants' perceptions of the four themes: (1) *learnability* (e.g., using iPads helps me improve my listening skills in English), (2) *usability* (e.g., I find it is easy for my students to use iPads in reading activities), (3) *motivation* (e.g., using iPads motivates me to read English texts), and (4) *willingness to use tablets* (e.g., I will use the iPad for teaching my classes in the future). To measure the four key themes quantitatively, the survey results were analyzed via descriptive statistics. Qualitative data were obtained through face-to-face interviews, which were subjected to a thematic analysis. Findings reveal positive perceptions from both ESL learners and their teachers on all four measures adopted, which were also corroborated by the thematic analysis of the interviews.

Keywords: tablets, MALL, ESL learners, ESL teachers

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Table of Contents

LIST OF FIGURES	vii
LIST OF TABLES	vii
CHAPTER 1	1
Introduction.....	1
Literature Review	3
This Study	5
Conclusion	6
CHAPTER 2	7
INTRODUCTION	7
LITERATURE REVIEW	8
Perception Studies on Tablets.....	9
Tablets in General Education.....	11
Tablets in Special Education: Students with Learning Disabilities	12
Tablets in Higher Education	12
Tablets in Teacher Training.....	13
Tablets in Language Acquisition	13
Four Themes in MALL Perception Studies	14
Learnability.....	14
Usability	15
Motivation.....	15
Willingness to use the technology	16
METHOD	20
Participants.....	21
ESL learners.....	21
ESL teachers	22
Location	22
Material and Procedure	22
Surveys.....	22
Learner survey	23
Teacher survey	23
Interview	24
RESULTS	24
Learners' Perceptions	24
Quantitative analysis: Surveys.....	24

Qualitative analysis: Interviews	25
Teachers' Perceptions	27
Quantitative analysis: Surveys	27
Qualitative analysis: Interviews	28
DISCUSSION	29
Learners' Perceptions	30
Teachers' Perceptions	32
CONCLUSION	33
Limitations	34
Implications	34
Future Directions	35
CHAPTER 3.....	37
Pedagogical Implications	38
Future Research	38
REFERENCES.....	41
APPENDICES.....	50
APPENDIX A.....	50
APPENDIX B.....	52
APPENDIX C.....	53
APPENDIX D.....	61
APPENDIX E.....	69
APPENDIX F.....	72
APPENDIX G.....	75
APPENDIX H.....	76
APPENDIX I.....	77
APPENDIX J.....	78
APPENDIX K.....	79
APPENDIX L.....	80
APPENDIX M.....	81
APPENDIX N.....	82
APPENDIX O.....	83
APPENDIX P.....	84
APPENDIX Q.....	85
APPENDIX R.....	86

LIST OF FIGURES

<i>Figure 1. General design of the study</i>	20
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LIST OF TABLES

Table 1. <i>Students' and teachers' perceptions of using iPads: a selection of previous studies and results</i>	18
Table 2. <i>Learners' Perceptions on Learnability, Usability, Motivation, Willingness to Use Tablets</i>	25
Table 3. <i>Teachers' Perceptions on Learnability, Usability, Motivation, Willingness to Use Tablets</i>	28

Chapter One

Introduction

As a mother of two young children, with one admitted to a high school in the Quebec French system, I became interested in the effects of technology on children and how this knowledge could affect their development as students and individuals. As an experienced English as a second language (ESL) teacher, my interest in the subject is also professional; having taught ESL to elementary school children for the last two years in a private school with full access to an increasing amount of technology, I began to wonder about the pedagogical effectiveness of tablet-based teaching and learning.

My interest in tablets and their pedagogical potentials for second or foreign language (L2) education peaked after reading an article on the CBC News (2015) entitled: “*iPads, Tablets Enhance Classroom Learning, School Administrators Say*”. The article asked whether tablets, which are considered pedagogically beneficial by teachers and administrators, should be incorporated into all Canadian classrooms, following the example of Ontario, which announced in 2013 that \$150 million would be invested in the purchasing of iPads for schools. Approximately a year later, after attending a workshop entitled “*Appy Hour: iPad Apps for Teaching and Learning*” (about using iPads in classes with adults), I realized that tablets had the potential to enhance adult learning and, at the same time, help teachers in their classroom instruction. That was the beginning of a journey that is seeing its “preliminary end” with this MA thesis.

As my personal ESL career moved away from elementary schools and toward the teaching of adults, I became more interested in tablet-based education for this age group. I wondered how effective these devices were for adult learning. This began my query into the

literature surrounding mobile assisted learning (MALL) and language education for adults. I discovered that very little research had been conducted on the pedagogical use of tablets in ESL adult education (Ahmed & Nasser, 2015).

According to Chaka (2009), mobile learning (m-learning) is the outcome of the evolutionary development from distance learning (d-learning) to electronic learning (e-learning). The term Mobile Assisted Language Learning (MALL) has also emerged as a form of m-learning that has a chief function in language learning. M-learning is defined as “any educational provision where the sole or dominant technologies are handheld or palmtop devices” (Traxler, 2005, p. 262); this includes different platforms such as mobile phones, iPods, personal digital assistants (PDAs), and game consoles (Chaka, 2009; Traxler, 2005). In addition, m-learning enables an “emotional” relationship with mobile devices because of its customized features (Obari & Lambacher, 2015). M-learning is, therefore, characterized by the mobility of the learning environment, i.e., to learn anywhere and anytime (Wilson, 2003).

As early mentioned in the CBC News article and some anecdotal evidence, many schools are purchasing tablets for their classrooms expecting that more enhanced learning will be the result. Fortunately, the literature does provide evidence that the pedagogical use of tablets enhances learning in various fields (Al-Mashaqbeh, 2016; Taylor & Procter, 2015; Yang & Xie, 2013). I then wondered if educational institutions for adults were also investing time and funds in purchasing tablets, and what the current research had to say about that. When I thought about how learners and teachers would view such potentialities, I looked for perception studies on ESL adult learners’ and teachers’ views on the use of tablets in language education. To my surprise, I found very few studies on the subject! Coincidentally, at the same time, I found an adult education institution in Montreal which had invested a considerable amount of funds to purchase iPads for

their adult ESL learners. I was thrilled when they agreed to let me examine their learners' and teachers' perceptions of using iPads during their English classes. With the guidance of my supervisor, I created a study which investigated these adult learners' and teachers' perceptions of the pedagogical affordances of tablets (iPads) in their ESL classes.

Literature Review

Researchers such as Diemer, Fernandez, and Streepey (2013) as well as Kim, Rueckert, Kim, and Seo (2013) have examined the perceptions of students' iPad use. Most perception studies, however, focused on learners (e.g., Huang, 2013; Mango, 2015; Rossing, Miller, Cecil, & Stamper, 2012), and only a handful addressed the same topic from the teacher's perspective. For teachers, the findings of Jahnke and Kumar (2014) and Young (2016) show that learners and teachers positively perceive the use of tablets in classes. Both learners and teachers have experienced the pedagogical benefits of using tablets whether in elementary and secondary level education (Berson, Berson, & Manfra, 2012), in higher education (Welsh, Mauchline, Powell, France, Park, & Whalley, 2015), among students with learning disabilities (Altena, 2015), or in teacher training programs (Kearney & Maher, 2013).

In the context of higher education, it has been shown that using iPads in classrooms enables students to collaborate, become motivated, create knowledge, and interact with a larger range of content (Mango, 2015; Rossing, et al., 2012; Welsh et al., 2015). In the field of teacher training, in particular, integrating tablets has enhanced student-teachers' skills, supported student-teachers' pedagogies, and increased student-teachers' confidence (Backhouse, Wilson, & Mackley, 2015; Hopkins & Burden, 2015; Pegrum, Howitt, & Striepe, 2013) in such a marked manner that they sought out using the platform for pedagogical purposes (Kearney & Maher, 2013).

As for special needs learners, research has revealed significant results when tablets were used (e.g., Cumming & Rodriguez, 2013; Twining & Evans, 2005). Beaton's (2006) study, for example, examined the usefulness of integrating tablet PCs for hearing-impaired students into the curriculum. He highlighted that the functional aspects of the tablets, which enabled learners with disabilities to collaboratively work on team projects. Moreover, Cumming and Rodriguez (2013) reported that when students with language-based disabilities use iPads, their academic engagement increases.

In the context of the language classroom, research has revealed that learners benefit from tablet use as it improves motivation and engagement (Albadry, 2015; Huang, 2013; Kirsch & Bes Izuel, 2016; Mango, 2015) and supports language learners' academic learning, participation, and interaction in class (Jahnke & Kumar, 2014; Lys, 2013; Marés, 2012). Overall, the current research shows language learners' strong willingness to use and continue using tablets in L2 learning (Ahmed & Nasser, 2015; Gabarre, Gabarre, Din, Shah, & Karim, 2014; Itayem, 2014). In the context of English as a foreign (EFL) (Huang, 2013) or second language (ESL) (Itayem, 2014), there have only been a handful of studies that examine teachers' perception of the use of tablets.

In L2 education, research shows that learners' and teachers' perceptions have been investigated via a set of four themes: 1) *learnability* (Diemer et al., 2013), 2) *usability* (Eyal, 2015), 3) *motivation* (Itayem, 2014), and 4) *willingness to use tablets* (Young, 2016). Although these themes have not been defined with precision in the literature, they have been described and analyzed using the following descriptors:

- (1) *Learnability* improves learning skills, enhances subject content, fosters engagement, supports communication, and develops confidence (Al-Mashaqbeh, 2016; Berson et al., 2012; Cumming & Rodriguez, 2013; Diemer et al., 2013).
- (2) *Usability* enhances workload with effectiveness, and relates to the device's user-friendliness and ease of use (Backhouse et al., 2015; Gabarre et al., 2014; Itayem, 2014; Lawrence, 2016).
- (3) *Motivation* generates enthusiasm, encouragement toward learning via the use of the platform (Albadry, 2015; Taylor & Procter, 2015).
- (4) *Willingness to use tablets* is the positive perceptions that students and teachers have toward their desire to use tablets (Cumming & Rodriguez, 2013; Young, 2016; Zou & Yan, 2014).

This Study

As previously outlined, I was motivated to explore the perceptions of both ESL learners and teachers when using tablets in the classroom. Thus, the current study has been designed to answer the following two questions:

- 1- What are the perceptions of adult ESL *students* on using tablets (iPads) as *learning* tools regarding *learnability, usability, motivation, and willingness to use tablets*?
- 2- What are the perceptions of ESL *teachers* on using tablets (iPads) as *teaching* tools as far as *learnability, usability, motivation, and willingness to use tablets* are concerned?

To answer these two research questions, 45 young adult ESL learners and 11 ESL teachers participated in the study. They were from a center of continuing education affiliated with a reputable Canadian university in Montreal. Following earlier perception studies (e.g., Diemer et al., 2013; Kim et al., 2013; Welsh et al., 2015), this research constituted a mixed-

method study that was conducted using qualitative and quantitative research paradigms. Two research tools were used to collect data: surveys (quantitative method, analyzed via a computation of means and standard deviations), and semi-structured open-ended interview questions (qualitative method, examined via a thematic analysis). There were two sets of surveys and interview questions: one set was designed for learners and the other set was for teachers. While the learner survey was adapted from Rossing et al.'s (2012) questionnaire, the one utilized by the teachers was adapted from Young's (2016). To measure the four key themes quantitatively, the survey results were analyzed via descriptive statistics using a 5-point Likert scale, and the qualitative data, which was obtained through the interviews, was subjected to a thematic analysis following Braun and Clarke (2006) and Saldaña (2009) – see Chapter 2 for details.

Conclusion

To conclude, the main goal of this study is to investigate ESL learners' and teachers' perceptions of the pedagogical use of tablets through the use of surveys and interviews. To examine the perceptions of students and teachers, four key themes were adopted, based on the literature: *learnability*, *usability*, *motivation* and *willingness to use tablets*. The results of this study aim to contribute to the field of second language (L2) education and computer-assisted language learning, and to add to the debate on how tablet-based technologies can enhance learning and support the teaching of languages in a classroom environment.

This is a manuscript-based MA thesis. Following the guidelines for a manuscript-based MA thesis, the next section constitutes “a full submittable draft of a manuscript” in which more details about the literature review, methodology, results and discussion are presented.

Chapter Two

Introduction

Research has demonstrated the effectiveness of technology in some fields of education (e.g., Joo, Bong, & Choi, 2000; Laouris & Eteokleous, 2005; Thompson & Lynch, 2003). When moving classrooms into a “wireless” education environment, both teachers and students have observed some benefits to their respective teaching and learning (Roschelle, Tatar, Chaudhury, Dimitriadis, Patton, & DiGiano, 2007). These benefits underline the need for teachers to keep their information technology knowledge up to date, so that they become, at the very least, as familiar as their ‘digital native’ students (Prensky, 2001).

Using tablets as a platform in the context of m-learning began after the birth of mobile tablets in 2010, when the first iPad (the most popular tablet) was introduced by Apple. The iPad was the answer to a need for a new category between laptops and smartphones (Jobs, 2013). Tablets have proven their pedagogical effectiveness within various learning contexts, including general education, higher education (e.g., Morrison, Leah, Harvey, & Masters, 2015; Welsh et al., 2015), language education (e.g., Huang, 2013; Itayem, 2014), education for learners with disabilities (e.g., Chai, Ayres, & Vail, 2016; Cumming & Rodriguez, 2013), and teacher training (e.g., Hopkins & Burden, 2015; Kearney & Maher, 2013).

Researchers have focused their efforts on the use of tablets in general education, particularly among students with disabilities (e.g., Beaton, 2006; Cumming & Rodriguez, 2013). Regarding the pedagogical use of these devices, there is a gap in the research, especially among adult learners in English as Second Language (ESL) contexts. Little research has explored the perceptions of ESL students and even less has been done with ESL teachers (e.g., Cifuentes, Maxwell, & Bulu, 2011; Rossing et al., 2012). Moreover, because of the prevalence of m-

technology, the constant update of tablet apps, and the affordances of the platform, it has become necessary to study the attitudes of both teachers and learners regarding the pedagogical use of tablets in the ESL context.

The main goal of this study is to address this gap and investigate ESL learners' and teachers' perceptions of the pedagogical use of tablets via the use of surveys and interviews. To examine their perceptions, four key measurements are used: *learnability*, *usability*, *motivation* and *willingness to use tablets*. From this perspective, it can be hypothesized that both students and teachers will positively perceive device use in ESL classrooms. As such, the results of this study aim to contribute to this (still) under-investigated area of second language (L2) education, and to explore how the affordances of tablet technology can enhance learning and support teaching in ESL classrooms.

Literature Review

Research has demonstrated that m-technology has had an important role in shaping and transforming education (Schnackenberg & Vega, 2013). Recently, both teachers (e.g., Cifuentes et al., 2011; Young, 2016) and students (e.g., Diemer et al., 2013; Welsh et al., 2015) have chosen some of these mobile devices as their preferred tool in the classroom. Educational researchers have also strived to interpret the impact of integrating tablets in education. Today, international conferences are held to explore the uses of iPads in a variety of educational settings (e.g., iPads in Higher Education), confirming their potentialities and usefulness in education (Burnett, Merchant, Simpson, & Walsh, 2017).

With respect to the potentialities, researchers seem interested in exploring the ubiquity nature of tablets (e.g., Eyal, 2015; Gabarre et al., 2014; Pegrum et al., 2013). According to Tohill (2015), for instance, the most powerful affordances provided by iPads are their ubiquity, which

is associated with convenience, and personalization. It is evident that such potentiality of iPads allows for the mobility and flexibility of learning to occur anytime and anywhere (Eyal, 2015).

In this way, the idea of Bring Your Own Devices/Technology (BYOD)/(BYOT) has caught the attention of researchers, particularly with tablets (e.g., Welsh et al., 2015). Ubiquity, affordances, and personalized apps of mobile platforms (e.g., tablets, laptops, and smart phones) are aspects that support establishing the movement of BYOD in education. Doug Johnson, a BYOD advocate, calls for implementing BYOD plans in educational institutions, so that students and teachers can benefit from using the technology (Johnson, 2012). He contends that implementing BYOD generated motivation, increased engagement, enhanced collaboration, and supported differentiated instruction. Educational policy makers in Alberta (Canada) have encouraged students to bring their own devices since 2014 (Burnett et al., 2017).

Considerable research in education has been devoted to study the perceptions of using tablets in the learning and teaching environments (e.g., Diemer et al., 2013; Huang, 2013; Zou & Yan, 2014). A handful of studies have also been conducted on the relationship between tablets, learners and potential learning outcomes (e.g., Burnett et al., 2017). As will be discussed and motivated later, the current study aims to investigate such relationships in terms of four key themes: *learnability, usability, motivation, and willingness to use tablets*.

Perception Studies on Tablets

Educational researchers have worked on learners' and educators' perceptions in order to understand and weigh the pedagogical usefulness of the platform in education. Examining the perceptions of students and teachers is a way to make sound pedagogical decisions. According to Nation and Macalister (2010), it is necessary to consider the outer circles of the curriculum

design process (i.e., principles, environment, and needs) in order to design a curriculum product that best fits learners and teachers.

Researchers have investigated learners' and teachers' perceptions of using tablets in classrooms in the fields of higher, general, and language education. These studies have shown that students, particularly L2 students, positively perceive the use of tablets in collaborative work (e.g., Diemer et al., 2013). Rossing et al. (2012) examined the perceptions of university students and concluded that they also positively perceived the use of iPads for learning, which were deemed to increase their level of engagement, and were found to be easy to use (*usability*). Similarly, the findings of Mango's (2015) study reiterated the effectiveness of using tablets in language learning, particularly with respect to active learning and engagement. Similar findings were observed in Itayem (2014), in the context of L2 students, showing their *willingness to use the platform* for learning.

In terms of teachers' perceptions, the pedagogical use of tablets has been considered effective (e.g., Jahnke & Kumar, 2014; Morrison et al., 2015; Young, 2016). For instance, in their research on teachers' perceptions of using iPads in Danish L2 classes, Jahnke and Kumar (2014) concluded that the technology improved learners' creativity, production, and collaboration. Similar findings were observed in Young (2016), who highlighted teachers' positive perceptions of using iPads in various secondary-level courses. He demonstrated that the *usability* of the platform made it an effective teaching tool, and the teachers expressed their *willingness to increase their pedagogical use* (see also Morrison et al., 2015 for similar findings among graduate-level students). In sum, the two groups of users targeted by this study, teachers and students, positively perceive their pedagogical use of tablets.

Tablets in General Education

Researchers investigating the pedagogical use of tablets have claimed their efficacy for “general” elementary and secondary education (Roschelle et al., 2007) and higher education (Taylor & Procter, 2015). Nevertheless, tablets are still most commonly used in primary and secondary education (Morrison et al., 2015).

The vast majority of the available studies in general education have shown that the use of tablets is beneficial for learning in different fields (e.g., math, music), as they foster participation and interaction (Roschelle et al., 2007), increase willingness to learn (Marés, 2012), and improve engagement (Stacy, Cartwright, Arwood, Canfield, & Kloos, 2017). For example, when 6- to 7-year-old students used an iPad app to learn German and French, Kirsch and Bes Izuel (2016) found that the children’s collaboration, autonomy, and language skills improved. In a recent study in music classes, Riley (2016) concluded that, when integrated into individual and group work, the platform is a dynamic tool for music creation.

Classroom research has also provided evidence that using iPads in math education leads to positive learning outcomes. Al-Mashaqbeh (2016) examined the effects of integrating iPads into teaching math for elementary level students, obtaining significant scores in the post-test for the experimental group. The author claimed that these positive results were due to some of the features afforded by tablets, particularly their ability to address students’ learning style (e.g., using sounds, pictures, videos). A related study by Stacy et al. (2017) investigated the feasibility of using tablets for practicing math skills among elementary school students. They found that although some students had overall negative attitudes regarding math-practice exercises, they practiced more when the devices were integrated into the classroom. Increasing students’

collaboration, autonomy, and learning achievements are common benefits in integrating tablets at the elementary and secondary general education level.

Tablets in Special Education: Students with Learning Disabilities

There has been great interest in examining the effects of using tablets among students with learning disabilities, particularly because they afford accessibility features (e.g., vBook PDF app, which allows visually impaired students to listen to PDF files; Altena, 2015). Cumming and Rodriguez (2013) conducted a study to explore the effect of integrating iPads for elementary school students with language-based disabilities. The results revealed high levels of students' academic engagement and teachers' satisfaction when iPad apps were used in language arts lessons.

Researchers have considered incidental learning as another educational asset when using tablets. When Chai et al. (2016) examined the use of iPads to teach primary-level English language students with speech and language impairments, they found that the learners incidentally learned new English vocabulary while improving their phonological awareness. To conclude, research has shown pedagogical benefits when tablets are used in educating special needs students, particularly in terms of learner's engagement and overall learning.

Tablets in Higher Education

As is the case with general education and special needs students, research on the pedagogical use of tablets has also been popular in higher education. For example, Morrison et al. (2015) found positive feedback in students' responses to questionnaires and interviews administered on the benefits of using iPads as tools for assessment, learning, and self-teaching in a management school.

The literature abounds with similar findings in as diverse fields as medical education (Mitchell, 2015), biology (Taylor & Procter, 2015), planning studies and graphic communication (Cidre, 2015), and fieldwork education (Whalley, France, Park, Mauchline, Powell, & Welsh, 2015), confirming the tablets' positive impact in fostering students' engagement, motivation, creativity and quality of reflection, and in promoting learning (see also Mitchell, 2015 for similar observations).

Tablets in Teacher Training

Studies involving pre-service in-training educators have shown an increase in comprehension, motivation, and productivity when applying m-technology in teacher training programs (e.g., Connor & Beard, 2015; Eyal, 2015; Geist, 2011). For instance, in the context of math pre-service teachers, Kearney and Maher (2013) investigated their training experience with tablets. They found that the use of iPads enhanced the in-training teachers' productivity and overall learning, and they became more productive (e.g., they took more notes, employed multimodal types of reflections) and consequently more comfortable using iPads to improve their learning.

Tablets in Language Acquisition

Recent perception studies have shown the efficacy of integrating tablets in language education. While learning Arabic as a foreign language, for example, college students perceived iPads as useful tools and as sources of enjoyment (Mango, 2015). Similar findings were observed in Lawrence (2016), where he investigated the use of tablets among EFL students and found that the ease of use of iPads was positively perceived by the EFL learners. In a similar study, Itayem (2014) found that ESL college-level students positively perceived the iPad's in terms of *usability* and *willingness to use the platform* in their language courses. In a qualitative study, Gabarre et

al. (2014) highlighted the benefits of integrating tablets in the instruction of French as a foreign language. Their classroom observations and interviews showed that iPad use increased learners' interest and motivation in individual and collaborative interactions. Similarly, undergraduate L2 learners positively rated their level of comfort when using iPads in German conversation classes (Lys, 2013), where she also found that learners improved their oral production skills.

Four Themes in MALL Perception Studies

This literature review suggests four general themes shared among most studies consulted, from both learners' and teachers' perspectives. Based on their perceptions, L2 educators and learners perceive the pedagogical use of tablets positively, and it has been established that it has the potential to improve their (1) overall learning (*learnability*), (2) level of comfort (*usability*), (3) *motivation*, and (4) *the willingness to use* the technology.

Learnability. Research has shown the effectiveness of integrating m-technology in the teaching and learning of languages. These studies suggest that MALL has provided language learners with benefits by creating a motivating and cheerful learning context (Abdous, Camarena, & Facer, 2009; Kennedy & Levy, 2008; Obari & Lambacher, 2015). Abdous et al. (2009), for example, concluded that students acquired different language skills (e.g., vocabulary and grammar) and enjoyed the experience when a podcast was integrated as a m-learning tool with 113 university students enrolled in eight language classes. Similarly, Kennedy and Levy (2008) found a significant boost in Italian language learning via Short Message Service (SMS) among university students in an Australian institution. Students not only enjoyed the learning experience, but they also perceived it to contribute positively to building their vocabulary in the L2.

According to Diemer et al. (2013), the factors of age, gender and use of English as a first language has no effect on undergraduate university students' learning perceptions. In their study, Diemer et al. (2013) found that students who described themselves as more comfortable with e-learning modes had more positive attitudes about their learning than their counterparts who rated themselves as less comfortable with mobile technology. Moreover, learners' level of engagement positively correlated with the use of mobile technologies as learning tools.

Usability. Research on the *usability* of tablets is concerned with practicality, ease of use, and convenience. For example, Altena (2015) investigated the usability with postgraduate students using iPads in a project about changing an Executive MBA program from a paper-centered learning environment to a fully paperless environment. She concluded that the iPad was an effective, personalizable, and multifunctional learning device, "the Swiss army knife of learning". Whalley et al. (2015) described usability as how practical and easy to use the platform was with respect to its size, weight, consumed energy, and other technical potentials.

In the field of education, screen size matters. When comparing iPads with smaller devices such as smartphones, Whalley et al. (2015) noted that one advantage of the larger iPad screen was how it benefitted users' writing and viewing. Analyzing the effect of screen size in two platforms, mobile phones vs. desktop or laptop computers, Stockwell (2010) noted that small screen devices such as smart phones are inconvenient for learners when typing a text or scrolling a page. In addition to the convenience of a larger screen size in the iPad, the relationship between the user and the touchscreen devices is also more "intimate", due to the touch-sensitive interface of these platforms (Godwin-Jones, 2011).

Motivation. Not surprisingly, research on student and teacher perceptions of MALL has shown that, when m-technology is integrated into language learning, motivation (Albadry, 2015;

Başaran & Cabaroğlu, 2014; Cardoso, 2011; Obari & Lambacher, 2015), participation (Cardoso, 2011), and creativity (Ahmed & Nasser, 2015) improved. Overall, these researchers have noted that university-level students became more motivated when they used mobile devices for learning English. For instance, Başaran and Cabaroğlu's (2014) study on university students who used podcasts in a language learning program found a remarkable improvement in students' motivation and consequently willingness to learn English. Similar findings have been observed in the MALL literature, particularly for the development of reading skills (Huang, 2013), vocabulary (Cardoso, 2011), and general English learning inside and outside of the classroom environment (Zou & Yan, 2014; Albadry, 2015).

Willingness to use the technology. According to MALL research, the *willingness to use new technology* is another important factor that can influence language learning and teaching. Studies such as those by Kim et al. (2013) and Cardoso and Collins (2016), for example, suggest that students are enthusiastic for adopting new technologies such as smartphones and clickers, particularly when they complement their in-class experience. Focusing on *willingness to use tablets*, perception research has demonstrated that educators and students have positive attitudes toward increasing their usage of iPads (Huang, 2013; Young, 2016; Zou & Yan, 2014). They remark that the ease of use of the platform, the diversity of the available apps, and their level of familiarity with the device are the reasons why they view the pedagogical use of tablets positively (e.g., Itayem, 2014; Morrison et al., 2015).

Although these themes do not have precise definitions in the CALL/MALL literature (see Dörnyei, 2009 for a comprehensive discussion of motivation), they are often addressed under the following descriptors:

- (1) *Learnability*: improving learning skills, enhancing subject content, fostering engagement, supporting communication, and developing confidence (Al-Mashaqbeh, 2016; Berson et al., 2012; Cumming & Rodriguez, 2013; Diemer et al., 2013).
- (2) *Usability*: increasing effectiveness of workload, and enjoying device's user-friendliness and ease of use (Backhouse et al., 2015; Gabarre et al., 2014; Itayem, 2014; Lawrence, 2016).
- (3) *Motivation*: generating enthusiasm, encouragement, and motivation toward learning via the platform (Albadry, 2015; Taylor & Procter, 2015).
- (4) Willingness to use tablets: finally, it is believed that students and teachers positively perceive their willingness to use or to adopt tablets (Cumming & Rodriguez, 2013; Young, 2016; Zou & Yan, 2014).

To conclude, Table 1 summarizes the studies conducted on students' and teachers' perceptions of using tablets, illustrating studies pertaining to the four themes addressed by the current study: *learnability*, *usability*, *motivation*, and *willingness to use tablets*. What is evident is that there are only a handful of studies that have examined students' and teachers' willingness to use tablets, in combination. In addition, most studies deal with undergraduate students. Finally, there are very few studies that investigated the use of the platform in learning ESL, and when they do exist, they involve students' perceptions of its *learnability* and *usability*.

Table 1

Students' and teachers' perceptions of using iPads: a selection of previous studies and results

Author	T / S	Level	Number of Participants	Subject	Learnability	Usability	Motivation	Willingness to Use Tablets
Albadry (2015)	S	Undergrad	21	EFL	+		+	
Al-Mashaqbeh (2016)	S	Elementary	80	Math	+	+		
Altena (2105)	S	Graduate	6	MBA		+		
Backhouse et al. (2015)	S	Undergrad	140	Pre-service teacher training	+	+		
Berson et al. (2012)	S	Elementary	15	Social studies	+			
Chai et al. (2016)	S	Elementary (disabilities)	3	ELL	+			
Cumming & Rodriguez (2013)	S	Elementary (disabilities)	4	Language art	+	+	+	+
Diemer et al. (2013)	S	Undergrad	209	Various	+		+	+
Eyal (2015)	S	Undergrad	18	Pre-service teacher training		+		
Gabarre et al. (2014)	S	Undergrad	1	FFL		+	+	+
Geist (2011)	S	College	N/A	Teacher education	+	+		
Hopkins & Burden (2015)	S	Undergrad	135	Pre-service teacher training	+	+		
Huang (2013)	S	Undergrad	67	EFL	+	+	+	+
Itayem (2014)	S	Undergrad	25	ESL	+	+		+
Jahnke & Kumar (2014)	T	Elementary	15	Danish (L1)	+	+		
Lawrence (2016)	S	College	199	EFL		+		
Keane et al. (2012)	T/S	Elementary	14/51	Various	+	+	+	
Kearney & Maher (2013)	S	Elementary	16	Pre-service teacher training (Math)	+	+	+	
Kirsch & Bes Izuel (2016)	S	Elementary	4	German, French, & Luxembourgish	+	+		
Lys (2013)	S	College	13	German conv.	+			
Mang & Wardley (2012)	S	Undergrad	49	Various	+	+		+

Author	T / S	Level	Number of Participants	Subject	Learnability	Usability	Motivation	Willingness to Use Tablets
Mango (2015)	S	College	35	AFL	+	+		
Morrison et al. (2015)	T/S	Graduate	20/17	MBA	+	+		
Pegrum et al. (2013)	S	Graduate	8	Pre-service teacher training	+	+		
Rivera et al. (2014)	S	Elementary (disabilities)	1	English & Spanish	+	+		
Rossing et al. (2012)	S	College	209	Various	+	+	+	
Stacy et al. (2017)	S	Elementary	191	Math	+		+	
Taylor & Procter (2015)	S	Undergrad	12	Biology	+		+	
Welsh et al. (2015)	S	Undergrad	173	Fieldwork (e.g. biology, geography)	+	+	+	+
Whalley et al. (2015)	T/S	Undergrad	N/A	Fieldwork	+	+		
Yang & Xie (2013)	S	University (self-generated)	12	Chinese idioms (heritage learning)	+	+		
Young (2016)	T	Secondary	259	Various	+	+	+	+
Zou & Yan (2014)	S	Undergrad	101	English	+	+	+	+

Notes: * The last four columns correspond to the four key themes discussed earlier. The column “T/S” refers to whether the study investigates the perceptions of teachers (T) or students (S); “Level” indicates the academic level of the participants; “Undergrad” = undergraduate students; “EFL” = English as a foreign language; “MBA” = Management Business Administration; “ELL” = English Language Learners; “ESL” = English as a Second Language; “L1” = First Language; “conv.” = conversation; “AFL” = Arabic as a Foreign Language; “N/A” = unidentified number of participants; “+” indicates that the topic is covered by the study. Blank cells indicate items that were not included in the study.

The current study examines the perceptions of both ESL learners and teachers on the pedagogical use of iPads, focusing on their inherent affordances such as *learnability*, *usability*, *motivation*, and *willingness to use the technology*. To fill this gap in the literature and contribute to the debate in the field, the following research questions are addressed:

- 1- What are the perceptions of adult English L2 *students* on using iPads as *learning* tools regarding *learnability*, *usability*, *motivation*, and *willingness to use tablets*?
- 2- What are the perceptions of English L2 *teachers* on using iPads as *teaching* tools regarding *learnability*, *usability*, *motivation*, and *willingness to use tablets*?

Method

Following earlier perception studies (e.g., Diemer et al., 2013; Kim et al., 2013; Welsh et al., 2015), this research employed both qualitative and quantitative research methods. Although these two research paradigms differ in design and approach, they complement one another (Dikilitaş & Griffiths, 2017). Data were collected via two research tools: surveys (quantitative method, analyzed via a computation of means and standard deviations), and semi-structured open-ended interview questions (qualitative method). Figure 1 provides a diagram of the research design adopted.

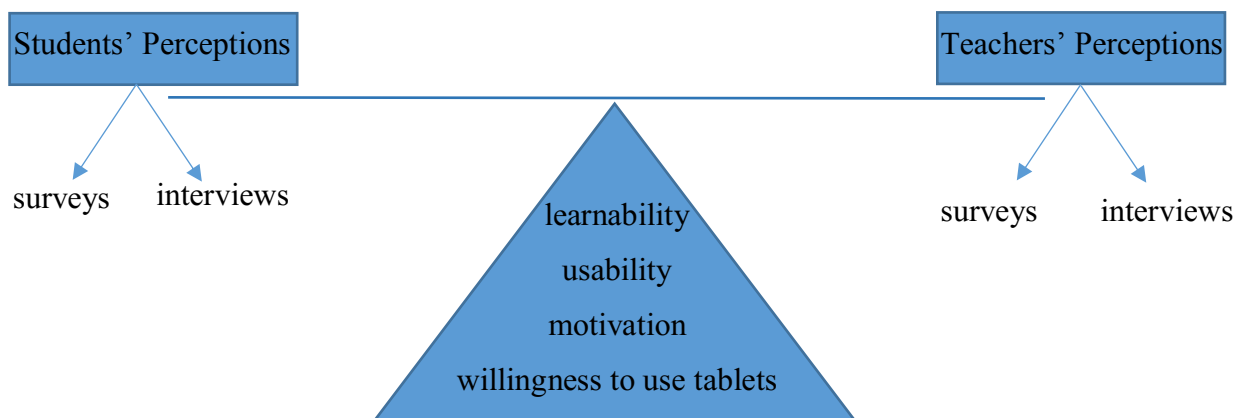


Figure1. General design and focus of the study

Participants

The participants were ESL learners and their teachers in a continuing education center affiliated with a Canadian university in Montreal. The Center offers a full-time intensive English program to develop learners' skills in speaking, listening, reading, writing, grammar, and vocabulary. The English Program includes eight levels: beginner 1 & 2, elementary 1 & 2, intermediate 1 & 2, and advanced 1 & 2. The target learners are adult ESL students who aim to enter English language universities and businesspersons whose goal is to acquire higher levels of English proficiency. Each level encompasses 260 course hours in 10-week sessions (i.e., 26 hours per week). By successfully completing the Advanced level (i.e., Advanced 2), students obtain a certificate of proficiency.

All teacher and student participants were active iPad users in their English classes. In these classes, iPads were mostly reserved for listening activities. A typical listening activity consisted of teachers asking students to listen to a story on their tablets, answer comprehension questions (multiple choice, short essays, etc.), and collaborate with other students in follow-up activities (e.g., discussing the take-away message or complete tasks involving other skills).

ESL learners. The ESL learner participants were 45 young adult students, their age range was 18-30 years. The learner's English language proficiency ranged from intermediate (level 6) to advanced (level 8); nine learners (20%) at level 6, 25 learners (55.5%) at level 7, 11 learners (24.4%) at level 8. The learner participants were from a range of different countries. Most of the participants were international students on student visas studying ESL courses so that they can be accepted into a university program at the institution. For the demographics of learners, see Appendix A.

ESL teachers. The ESL teachers were 11 (8 female, 3 male); nine responded to the surveys and 11 participated in the interview. The teachers' ages ranged from 25-55 years old, with most within the 25-44 age group (44.5%); their range of years of teaching experience was 7-43, with a range from 1-16 years using iPads as pedagogical tools (four of the teachers owned their own iPads). All teacher participants were highly qualified and experienced teachers, having worked at the Center for an average of 10 years. These participants have been trained on how to use iPads for language teaching at the Center. For the demographics of teachers, see Appendix B.

Location

At the Center, a number of technological tools are used to reinforce students' learning (e.g., iPads, desktop computers, speakers). The content of each class is downloaded onto a set of iPads distributed to students for use in group activities, including video watching, listening to course material, and the use of educational apps. At the Center, technology is supported and managed by a consultant (e.g., to facilitate the playback of high-quality audio, video, and the use of other computer-based technologies).

Materials and Procedure

The current research was conducted through surveys, and semi-structured open-ended interview questions for both groups of participants (ESL students and ESL teachers).

Survey. There were two sets of surveys: one set for learners (Appendix C), and the other for teachers (Appendix D). Participants responded individually in a pencil-and-paper format. Learners' survey questions were adapted from Rossing et al. (2012), and was administered to explore students' perceptions of learning and engagement when using iPads in classrooms. Following Diemer et al. (2013), Mango (2015), Rossing et al. (2012), and Itayem (2014), survey questions were set up to investigate students' perceptions of their learning (*learnability*), level of

comfort (*usability*), and their *motivation* for using iPads in classrooms, as well as their *willingness to use the platform* in the future. For the purpose of this thesis, color-coded statements in learner and teacher surveys indicated measurements for the four themes encompassed by this research: 1) *learnability* (in green), 2) *usability* (in blue), 3) *motivation* (in yellow), and 4) *willingness to use tablets* (in pink) – see Appendix E and Appendix F.

Learner survey. The learners' survey included 62 structured questions and 3 unstructured questions. The response choices are “balanced structured” because they allow the participants to choose from “Strongly Agree, Agree, Neutral, Disagree, or Strongly Disagree”. The responses have “unforced-choice items” that allow the respondent to use a neutral midpoint (Lewis-Beck, Bryman, & Liao, 2003); accordingly, the responses are operationalized using a 5-point Likert scale. The survey begins with rapport-building questionnaire items, then continues with items addressing and measuring participants' attitudes toward the pedagogical use of iPads. Chronbach's alpha coefficients for the internal consistency of the four participants' attitude scales were .85 for *learnability*, .84 for *usability*, .89 for *motivation*, and .85 for *willingness to use tablets* (note that values greater than .70 indicate high reliability). The survey ends with three open-ended questions asking the participants about their opinions, suggestions and recommendations, as illustrated in Appendix C.

Teacher survey. The teachers' survey contained 60 structured questions and 3 unstructured open-ended questions adapted from Young's (2016) study to analyze teachers' attitudes toward using iPads as teaching tools. As was the case with the learners' survey, responses are “balanced structured” and have “unforced-choice” items. The teacher participants can choose their responses from “Strongly Agree, Agree, Neutral, Disagree, or Strongly Disagree” to provide their perceptions on using iPads in their classrooms. Chronbach's alpha

coefficients for the internal consistency of the four teachers' perception scales were .93 for *learnability*, .85 for *usability*, .88 for *motivation*, and .78 for *willingness to use tablets* (values greater than .70 indicate high reliability). The last three open-ended questions were used to elicit the teachers' experiences on the challenges and effects of using iPads in classrooms (see Appendix D).

Interview. There were two sets of interview questions for the two groups of participants: learners and teachers. Semi-structured oral interviews were conducted individually with the participants from each group, face-to-face with the researcher. 15 ESL learners (7 female, 8 male) and 11 ESL teachers (8 female, 3 male) were interviewed. Each interview set included 9 questions and was audio recorded and transcribed by the researcher for qualitative analyses. The interview questions were also designed to investigate the tool's potential with respect the four themes considered: *learnability*, *usability*, *motivation*, and *willingness to use tablets* (see Appendix G and Appendix H).

Results

The research questions asked: (1) What are the perceptions of adult English L2 *students* on using iPads as *learning* tools regarding *learnability*, *usability*, *motivation*, and *willingness to use tablets*? And (2) What are the perceptions of English L2 *teachers* on using iPads as *teaching* tools regarding *learnability*, *usability*, *motivation*, and *willingness to use tablets*? To answer the two questions, survey and interview data were used; accordingly, the analysis was built up by combining the findings of the quantitative and qualitative data from both learners and teachers.

Learners' Perceptions

Quantitative analysis: Surveys. Descriptive statistics were used to analyze the survey data, in which means and standard deviations were calculated for the learners' perceptions

regarding the four themes adopted for analysis (as reported earlier, Chronbach's alpha coefficients for the internal consistency among members of each theme were high, with the majority above 0.84). In the learners' survey, 15 items addressed the first theme, *learnability* ($M = 3.27$, $SD = 0.10$; Appendix I), 12 items measured *usability* ($M = 3.5$, $SD = 0.14$; Appendix J), 11 items targeted *motivation* ($M = 3.14$, $SD = 0.25$; Appendix K), while the last 10 items examined the participants' *willingness to use tablets* ($M = 3.58$, $SD = 0.12$; Appendix L). Table 2 shows the means and the standard deviations for the learners' perceptions in terms of *learnability, usability, motivation, and willingness to use tablets*. As these results indicate, learners hold positive perceptions of the use of tablets in all four themes adopted.

Table 2

Learners' Perceptions on Learnability, Usability, Motivation, Willingness to Use Tablets

Learners	Learnability		Usability		Motivation		Willingness to use tablets	
	<i>M/5</i>	<i>SD</i>	<i>M/5</i>	<i>SD</i>	<i>M/5</i>	<i>SD</i>	<i>M/5</i>	<i>SD</i>
	3.27	0.10	3.5	0.14	3.14	0.25	3.58	0.12

Note. All mean values are out of 5 (/5).

Qualitative analysis: Interviews. An inductive thematic analysis was conducted to analyze the data obtained from the learners' interviews, following Braun and Clarke (2006) and Saldaña (2009). As discussed earlier, responses were transcribed, coded and analyzed based on the four research themes: *learnability, usability, motivation, and willingness to use tablets*. (See Appendix Q for a sample of responses reflecting these four themes.)

Overall, learners displayed a positive attitude toward using iPads to learn in their ESL classes. Particularly, they stated that iPads were useful to learn English, especially for listening and speaking ($n = 10/15$), (e.g., "I believe that using iPads for listening and speaking is better than using [it for] in and reading and writing" and "I can increase my listening or to practice my

speaking as well”). There were also references to perceived improvements in pronunciation ($n = 4/15$); e.g., “*it is improving pronunciation for the students.*”

Regarding *usability*, most learners highlighted the convenience of using iPad in learning English ($n = 9/15$). For example, one learner stated that their use of iPads “*is very convenient to us to learn a new language, English*”. Other statements reflected learners’ perceived benefits of iPads in efficiency (e.g., “*we can get the information we need quickly*”), in helping them take detailed notes (e.g., “*We can take more notes in more details*”), and in assisting them in sharing information (e.g., “*it’s very easy that we can share information with each other*”).

Concerning *motivation*, almost half of the learner participants ($n = 8/15$) emphasized their motivation and interest in using the device in their ESL classes; for instance, one learner stated that he “*[felt] very good if the teacher uses the iPad in the class*”. A third of the learner participants ($n = 5/15$), however, explained their motivation based on *learnability* and *usability* reasons. For example, one learner said, “*I like it. I think it make the education easier,*” while another added, “*it’s a good choice because [...] we can get the information we need quickly*”.

Finally, a third of the learners expressed their *willingness to use tablets* in the future, particularly because of their professional needs ($n = 5/15$) (e.g., “*I prefer to use iPads because our society is developing, so we need to use this in the future*”). However, most participants identified disadvantages regarding the pedagogical use of iPads, often accompanied by suggestions for improvement. First, they found that students may lose concentration in class ($n = 5/15$). A possible solution to this problem, as reported, would be to impose strict control on their use (e.g., for searching materials that are not accessible in the classroom), accompanied by the supervision of teachers. The participants also suggested that the use of iPad should be limited in terms of time (e.g., “*[if you have] one hour, they give you 10 minutes. Two hours, they give you*

20 minutes [for iPad use]”) and what types of software can be used (e.g., “if we have it in the class, [...] we can’t open anything else except only the video or the listening, because if they left it open, we’ll open Google, and we’ll research for other stuff, not for the work”). Second, although some learners reported they experienced eye strain problems (eye fatigue that follows two or more hours of looking at a screen; $n = 3/15$), and the inconveniences of writing without a keyboard ($n = 3/15$), their overall perceptions on *usability* was high.

To conclude, despite the limitations reported above, most learners perceived the use of iPads positively concerning the four themes included in the investigation.

Teachers’ Perceptions

Quantitative analysis: Surveys. In the investigation of the teachers’ survey, 15 items addressed the *learnability* theme ($M = 3.42$, $SD = 0.21$; Appendix M), 15 examined *usability* ($M = 3.57$, $SD = 0.17$; Appendix N), 10 measured *motivation* ($M = 3.16$, $SD = 0.17$; Appendix O), and 9 items addressed the theme of *willingness to use* the technology in their own teaching ($M = 3.46$, $SD = 0.24$; Appendix P). As reported, Chronbach’s alpha coefficients for the internal consistency among members of each theme were high, with the majority above 0.85. Table 3 summarizes the means and standard deviations of the teachers’ perceptions on *learnability*, *usability*, *motivation*, and *willingness to use tablets*, all indicating that, similar to what was observed for the learners, the teacher participants hold positive perceptions of the use of tablets in all themes adopted.

Table 3

Teachers' Perceptions on Learnability, Usability, Motivation, Willingness to Use Tablets

	Learnability		Usability		Motivation		Willingness to use tablets	
Teachers	<i>M/5</i>	<i>SD</i>	<i>M/5</i>	<i>SD</i>	<i>M/5</i>	<i>SD</i>	<i>M/5</i>	<i>SD</i>
	3.42	0.21	3.57	0.17	3.16	0.17	3.46	0.24

Note. All mean values are out of 5 (/5).

Qualitative analysis: Interviews. As indicated earlier, the interview data from the teachers were transcribed, coded, and analyzed under the four themes that guided this investigation (Appendix R illustrates some of the key statements that served to substantiate the analysis). Overall, the teacher participants perceived the pedagogical use of iPads positively in the four themes encompassed by this research.

Starting with *learnability*, most teachers highlighted that they found tablets useful learning tools for their ESL classes ($n = 9/11$). For example, one participant reported that “[using iPads], adding the visuals for students, it tends to really enhance their learning experience”, while another stated that “I’m in favor of using iPads in learning, not only in language, but particularly in English. [...] it adds value to the learning.” Four teachers underlined that iPad can cater to a variety of learning styles (e.g., “I’m sure that there are other people with different learning styles or various learning styles who would potentially benefit from the use of the iPad”).

Regarding *usability*, most teacher participants ($n = 7/11$) agreed that iPads are practical and easy to use pedagogically (e.g., “they are easy to use [...] and] can help students to access information very easily”). The participants also mentioned that the use of iPads aided their teaching and created a more learner-centered environment (e.g., “instead of [...] controlling

everything, [students] are controlling their own, and I can use my time walking around and helping with individual problems they might be having”).

With respect to *motivation*, most teachers ($n = 8/11$) articulated that iPad use motivated their students to practice the language (e.g., *“increases students' motivation”*), and made them more interested in their ESL classes (e.g., *“students seem happy when I bring iPads into the class”*).

Finally, approximately half of the participants ($n = 6/11$) expressed that they are closely connected to their devices (e.g., *“Me and my iPad are best buddies”*), and that they were already using tablets in their daily lives for many activities such as reading, learning more about teaching to improve their skills, or leisure (e.g., *“I use it for surfing the web. Actually, I use it a lot for knitting”* and *“I use my tablet enormously for multiple things. [...] for professional development activities, [...] for reading largely, [...] and also for watching videos”*). Acknowledging the pedagogical value of tablets, two teachers reported that they plan to purchase one for their own teaching, to enrich their ESL classes in order *“to reach out into the world and bring the world into the classroom in ways you cannot do with pencil and paper or words on a board,”* and *“for project-based activities like developing videos or creating multimedia”*.

To conclude, considering the four themes included in the investigation, most teachers perceived the pedagogical use of iPads positively, in both the quantitative and qualitative analyses of the data.

Discussion

The main goal of this study was to explore ESL learners' and teachers' perceptions of using tablets in their classrooms. More specifically, we examined the following two research questions: What are adult English L2 students' perceptions of using iPads as learning tools with

respect to *learnability*, *usability*, *motivation*, and *willingness to use tablets*? Using the same parameters, the second research question focused on English L2 teachers' perceptions of utilizing iPads as teaching tools. The results discussed below highlight the attitudes of both learners and teachers toward using iPads in their L2 classrooms.

Learners' Perceptions

Learnability, as mentioned earlier, is a concept that encompasses a technology's ability to foster engagement and communication, which help learners develop confidence and consequently improve their learning. The findings related to *learnability* are consistent with the literature. When students use tablets in the classroom, they become more engaged with the material, and adopt a more positive attitude toward the overall learning process (Albadry, 2015; Diemer et al., 2013; Itayem, 2014; Mango, 2015; Rossing et al., 2012; Zou & Yan, 2014), which underlines the pedagogical usefulness of tablets. Similar to the positive feedback reported in Abdous et al. (2009) regarding the efficacy of podcasts on language acquisition, our participants perceived iPads as useful and effective additions to their ESL classes, which also helped facilitate the development of their aural and oral skills (see Lys, 2013 for similar claims involving listening and speaking in a tablet-based learning context). As documented in previous research (e.g., Ahmed & Nasser, 2015), students regarded themselves as autonomous learners during tasks such as correcting spelling mistakes, looking up difficult vocabulary, and searching for specific information. For those few learners who disagreed on this point ($n = 4/45$), they mentioned that they preferred learning through interactions with their teachers and other students, particularly in speaking, rather than with the tablets (see Zou & Yan, 2014 for similar observations involving tablet users).

The second most positively perceived theme was *usability*, which measured how user-friendly the device is by taking into account the learners' enjoyment levels. Similar patterns have been reported in prior perception studies (e.g., Gabarre et al., 2014; Itayem, 2014; Zou & Yan, 2014), in which the ease and convenience of using iPads in language courses were viewed highly positively by the L2 students. In agreement with what was observed in Berson et al. (2012), Lawrence (2016), and Riley (2016), the learner participants of this study reported that they have no usability issues with their tablets, particularly for personalized and group activities involving listening, doing homework, taking notes, and searching for and sharing information with their classmates (see also Rossing et al., 2012 for similar findings). From a *usability* standpoint, the use of tablets is not without its problems, as learners tend to get distracted ($n = 22/45$ in the current study) and often use social media or browse the internet during class time (Geist, 2011). Although some learners reported eye strain complications (the discomfort that follows two or more hours of digital device use; $n = 12/45$), and the inconveniences of writing without a keyboard ($n = 4/45$), their overall perception on *usability* for iPads was high.

Motivation is said to generate learner enthusiasm and encourage the use of the platform for learning. Our findings for this construct are supported by other studies that confirm that learners' attitudes toward using tablets are positive (e.g., Ahmed & Nasser, 2015; Albadry, 2015; Eyal, 2015; Mango, 2015; Rivera, Mason, Moser, & Ahlgrim-Delzell, 2014), as their levels of motivation increase when they are encouraged to engage in language-related activities on their tablets.

Finally, the findings for learners' *willingness to use tablets*, which is defined by the positivity in their perceptions toward using the device in their future learning, were similar to previous studies (Diemer et al., 2013; Gabarre et al., 2014; Itayem, 2014; Mang & Wardley,

2012). In particular, our findings align with those reported in Itayem (2014), where a clear relationship was found between learners' perceived *learnability*, *usability* and *willingness* to use iPads. As learners recognized the *usability* and *learnability* potentials of the device, they became more *willing to use it* in their future language learning endeavors.

Teachers' Perceptions

Regarding the second research question, which switched the focus to teachers, the findings revealed that these participants perceived the pedagogical use of tablets positively across the four themes investigated, as has been observed in previous studies (e.g., Jahnke & Kumar, 2014; Morrison et al., 2015; Whalley et al., 2015). Consistent with Keane, Lang, and Pilgrim (2012), teacher participants highlighted the pedagogical benefits (*learnability*) of using iPads in their ESL classes. According to the teachers, incorporating iPads in teaching enabled students to learn at their own pace anytime anywhere, which can cater to more independent and autonomous students, particularly for the teaching of listening.

In terms of *usability*, the findings presented in the current study are corroborated by previous research (Whalley et al., 2015; Young, 2016), which show that, via the use of tablets, students can more easily access information for their own research projects and, consequently, improve their own (autonomous or non-autonomous) learning (see Ahmed & Nasser, 2015 for similar claims). Teachers also stated that incorporating tablets in their ESL program boosted student-centered instruction, a notion strongly supported by the literature (e.g., Ahmed & Nasser, 2015; Lawrence, 2016; Lys, 2013). Another feature associated with *usability* is the iPads' ability to enhance exposure to the target language by providing learners with ample access to the L2 and, consequently, multiple ways of accessing it. Research in math education, social studies, and learning disabilities show that iPads can foster personalized learning through the multimedia

resources afforded by the technology (e.g., Al-Mashaqbeh, 2016; Berson et al., 2012; Rivera et al., 2014; Stacy et al., 2017).

Although the overall attitude of teachers toward the use of iPads in their classes was positive, *motivation* was the theme that was ranked the lowest among the four themes. Such findings can be explained by the fact that the teachers who participated in this study used the tablets in a limited way in their classrooms. As they clarified in the interviews, iPads were mainly used to practice listening skills; consequently, many of their pedagogical possibilities were not fully explored. Despite this limitation, some teachers expressed their interest in continuing to use iPads in their current and future language classes.

Finally, *willingness to use tablets* received the second highest score after *usability*. As indicated earlier, we interpret this finding as a result of the interplay of teachers' perceived *learnability*, *usability* and *willingness to use iPads*: because teachers recognized the *usability* and *learnability* benefits of the device, they became more *willing to use it* in their future teaching endeavors (see Itayem, 2014 for similar claims).

In summary, there was an overall positive attitude from both learners and teachers toward the use of iPads in L2 education, and our findings regarding users' perceptions on *learnability*, *usability*, *motivation*, and *willingness to use iPads* comply with previous studies on learners' and teachers' attitudes toward their use in L2 classrooms (e.g., Albadry, 2015; Diemer et al., 2013; Gabarre et al., 2014; Itayem, 2014; Young, 2016).

Conclusion

The study examined the perceptions of ESL learners and their teachers toward using tablets in their classrooms. Four key themes were used to guide the participants' perceptions: *learnability*, *usability*, *motivation*, and *willingness to use the technology*. The findings revealed

that both students and teachers view the pedagogical use of the target technology positively across these four themes. As such, the study's main contribution is to add more data and analysis to the investigation of users' perception of the pedagogical implementation of technology (tablets in our case), particularly including both learners and their teachers. Another interesting contribution is that, contrary to most previous studies that acknowledge a potential "novelty effect" in their findings (e.g., Cardoso, 2011; Rossing et al., 2012; claimed to positively affect performance in the initial stages of the pedagogical implementation of a new technology), most learners ($n = 31/45$) and teachers ($n = 11/11$) in the current study stated that they had been using iPads pedagogically for more than one year. This way, our findings can be said to provide a more accurate portrayal of users' perceptions of a specific technology, after the novelty effect has worn out.

Limitations

As is the case with any study of this magnitude, there are several limitations that need to be acknowledged. Firstly, the sample size is small for both learners ($n = 45$) and teachers ($n = 11$). In addition, participating learners did not receive equal tablet-based instruction in classes due to logistics and administrative decisions (e.g., lack of equipment, the assumption that intermediate-proficiency students would benefit the most from tablets); consequently, the tablets were rarely used in the lower-proficiency classes. Finally, the data were coded, rated and interpreted by only one rater, in consultation with her supervisor.

Implications

Based on the results and the users' recommendations for implementing tablet-based L2 education, there are some implications that we would like to put forward, on the assumption that an ill implementation of any technology can considerably diminish its pedagogical impact

(Rossing et al., 2012). Importantly, it is crucial to have sound instructional planning design that integrates proper pedagogical tablet use (Berson et al., 2012; Gabarre et al., 2014; Keane et al., 2012). In other words, incorporating iPads in the presentation, practice and/or performance stages of the language lesson should be thoroughly planned, considering users' preferences and perceptions (as reported in this study), time constraints, and the opportunities afforded by the technology (e.g., it has the potential to promote both autonomous learning and collaboration among learners).

To ensure the proper and effective use of tablets in class, teachers need to build up their knowledge of technology through adequate training (Gabarre et al., 2014; Godwin, 2011; Lawrence, 2016), in order to enhance their level of comfort with the device (Geist, 2011). Furthermore, providing teachers with devices and allowing them to have enough preparation time ensures a well-established pedagogical infrastructure (Lawrence, 2016; Rossing et al., 2012; Young, 2016), which will foster higher comfort levels among its users (Diemer et al., 2013; Geist, 2011) and, consequently, increase the chances of the technology being effectively and efficiently integrated into the L2 classroom.

Future Directions

Future research should replicate this perception study with a larger ESL teacher and learner population. Secondly, research needs to be conducted to investigate how teachers' attitudes toward using tablets may impact their learners'. Previous literature (e.g., Diemer et al., 2013) revealed the positive relationship between learners' levels of comfort and their perception toward using technology in learning and in future professional development. Similarly, Geist (2011) concluded that teachers' comfort level had a positive impact on their perceptions of using iPads in class. Further studies should explore whether teachers' level of comfort and technical

knowledge can make a difference in their learners' perception of the platform. Thirdly, researchers should include and control for a wider variety of L2 proficiency levels to fully capture users' perception, particularly considering how the technology can be best implemented considering the students' linguistic needs. Finally, it would be interesting to design a study with specifically prepared tablet-based materials to explore the development of a particular linguistic feature with learners (e.g., the development of the morphophonemics of English past -ed forms in both perception and production).

As highlighted by our participants and in previous research (Ahmed & Nasser, 2015), tablets have become a part of students' and teachers' daily lives. Exploring the best applications and practices that appeal to today's learners – the digital natives – can enhance the language learning and teaching process. Consequently, more research is needed so that the advantages of integrating tablets in the classroom are maximized, especially in the L2 learning environment.

Chapter Three

This chapter presents a general conclusion and discussion of the study which is thoroughly elaborated in Chapter 2. The current research investigates the perceptions of learners and teachers of ESL toward the classroom use of iPads in regards to four main themes: *learnability, usability, motivation, and willingness to use the device*. The four themes that guided the study are commonly found in MALL perception studies. What is known about users' perceptions of MALL-based pedagogy (including tablet and non-tablet devices) is that students and their instructors view the use of these platforms positively. Furthermore, it has been acknowledged that the use of MALL-based pedagogy has the perceived potential of enhancing learning in the following ways: (1) it improves the overall learning experience, i.e., *learnability* (e.g., Diemer et al., 2013; Obari & Lambacher, 2015); (2) it increases learners' level of comfort, i.e., *usability* (e.g., Altena, 2015; Itayem, 2014); (3) it boosts *motivation* (e.g., Cardoso, 2011; Huang, 2013), and (4) it increases students' *willingness to use the technology* (e.g., Cardoso & Collins, 2016; Cumming & Rodriguez, 2013).

As previously outlined, very limited research has been conducted to investigate learners' perceptions of the pedagogical use of tablets (a particular type of mobile device) in ESL contexts (Ahmed & Nasser, 2015), and less has been done with ESL teachers' perceptions (e.g., Keane et al., 2012; Young, 2016). Two research questions were addressed: 1) What are the perceptions of adult English L2 students of using iPads as learning tools regarding *learnability, usability, motivation, and willingness to use tablets*? 2) What are the perceptions of English L2 teachers toward using iPads as teaching tools as far as *learnability, usability, motivation, and willingness to use tablets* are concerned? The findings of this study support previous literature that reported

the mutual positive attitudes of learners (e.g., Zou & Yan, 2014) and teachers (e.g., Young, 2016) toward using the tablet technology in ESL classes.

Pedagogical Implications

Based on the study results and the participants' recommendations regarding using tablet in ESL classrooms, some implications should be considered, in light of Rossing et al.'s (2012) claim that the misuse of technology can substantially weaken its pedagogical benefits. Therefore, it is crucial to have a sound instructional design that integrates proper pedagogical iPad use (Berson et al., 2012; Gabarre et al., 2014; Keane et al., 2012). In other words, incorporating iPads in the presentation, practice and/or performance stages of a language lesson should be well thought-out and planned to avoid wasting time in off-topic activities. In addition, it is important for teachers to consider the potential for excessive usage of the technology at the expense of other more collaborative language-learning activities.

To ensure effective usage of iPads in class, teachers need to build their knowledge of technology and enhance their level of comfort (Geist, 2011) by means of adequate training and guidance (Gabarre et al., 2014; Godwin, 2011; Lawrence, 2016). Furthermore, allowing teachers enough preparation time, providing them with devices, and ensuring a well-established infrastructure (Lawrence, 2016; Rossing et al., 2012; Young, 2016) can motivate the integration of technology in L2 pedagogy and, as a result, foster users' level of comfort whether as learners (Diemer et al., 2013) or as teachers (Geist, 2011).

Future Research

Teachers' level of comfort and its effect on the pedagogical added value for learners are some of the critical issues that deserve to be extensively investigated. In the current study, 25% of the teacher participants ($n = 3/11$) suggested that when the classroom teacher has a higher

level of comfort with the technology, their students benefit more than those attending in classrooms where the teacher is less confident with the devices: “*it’s obviously much more beneficial to certain learners more than of others based on the teachers’ level of comfort using technology*”. This suggestion is corroborated by previous research (e.g., Diemer et al., 2013) that examined the relationship between learners’ levels of comfort and their perception degrees toward using technology in learning. Similarly, it was concluded by Geist (2011) that teachers’ level of comfort has a positive impact on their learners’ perceptions. It would be interesting to investigate the effect of teachers’ comfort level on learners’ perceptions when using tablets in ESL classes.

Based on the limitations of this study and what was discovered during its implementation, we would like to highlight other directions for future research. First, it would be important to reproduce this type of perception study with much larger ESL teacher and learner populations. Second, further research needs to be conducted to investigate how teachers’ attitudes toward using tablets may impact their learners’. For clearer findings, scholars are also encouraged to design a study to explore whether teachers’ level of comfort and technical knowledge can make a difference in terms of their learners’ perception of the platform. In addition, learner participants in this study were of different proficiency levels in English, with the majority of the active tablet users from lower-proficiency students, indicating that higher level students had far less access to the tablets during class time. This means that participating learners did not receive equal tablet-based instruction in classes. Therefore, it is recommended that future researchers consider the amount of time each class assigns for using the devices and how this could influence their perceptions. Finally, it would be interesting to design a study with specifically prepared tablet-

based materials to explore how much students are able to learn when they use iPads in ESL classrooms.

To conclude, the potentials of using tablets in language classrooms reveal pedagogical merits that deserve further investigation. As highlighted by this study and supported by Ahmed and Nasser (2015), the tablet technology has become a part of learners' and their teachers' daily lives. While this small-scale study shows that perception of tablet use is positive, future research should explore the best applications and practices that may appeal to today's teachers and learners – the digital world natives – and enhance the language learning/teaching process. Thus, more dedicated work is essential to maximize the advantages of integrating tablets in the classroom, especially in ESL learning environments.

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Appendices

Appendix A

Demographics of the Learners

Name	Age	Gender	Level	L1	Country
A	25	F	6	Farsi	Iran
B	21	F	6	Japanese	Japan
C	21	M	6	Mandarin	China
D	26	F	6	Arabic	Saudi Ar.
E	18	M	6	Arabic	Saudi Ar.
F	18	F	6	Chinese	China
G	20	M	6	Chinese	China
H	19	F	6	Chinese	China
I	22	M	6	Chinese	China
J	18	M	7	Chinese	China
K	24	M	7	Chinese	China
L	18	F	7	Chinese	China
M	19	F	7	Chinese	China
N	19	M	7	Chinese	China
O	20	M	7	Chinese	China
P	19	M	7	Cantonese	China
Q	21	F	7	Japanese	Japan
R	16	F	7	Chinese	China
S	19	M	7	Cantonese	China
T	28	M	7	Chinese	China

U	20	F	7	Chinese	China
V	20	M	7	Chinese	China
W	18	M	7	Chinese	China
X	19	M	7	Chinese	China
Y	19	F	7	Chinese	China
Z	18	M	7	Chinese	China
AA	21	M	7	Chinese	China
BB	22	M	7	Chinese	China
CC	19	M	7	French	Canada
DD	19	M	7	Chinese	China
EE	20	F	7	Chinese	China
FF	19	M	7	Chinese	China
GG	18	F	7	Chinese	China
HH	22	F	7	Arabic	Saudi Arabia
II	19	F	8	Chinese	China
JJ	20	F	8	Arabic	KSA
KK	19	M	8	Chinese	China
LL	19	F	8	Chinese	China
MM	20	M	8	Chinese	China
NN	N/A	F	8	Chinese	China
OO	18	F	8	Chinese	China
PP	30	F	8	Arabic	KSA
QQ	19	M	8	Chinese	China
RR	20	F	8	Chinese	China
SS	19	M	8	Chinese	China

Note. Pseudonyms were used to maintain confidentiality.

Appendix B

Demographics of the Teachers

Name	Age	Gender	Years Teaching Experience	Years Using iPads in ESL classrooms	Own an iPad?	Plan to have an iPad?
C	25-44	F	7	1	No	Yes
I	25-44	F	17	3	No	No
G	45-55	F	20	6	Yes	-
A	45-55	F	25	3	Yes	-
B	45-55	F	25	4	Yes	-
H	45-55	F	25	16	No	No
D	56 and over	M	30	2	No	Yes
E	56 and over	F	33	3	Yes	-
F	56 and over	F	43	3	No	No

Note. Pseudonyms were used for the participants to maintain confidentiality.

Appendix C

Learners' Background Information and Survey

This survey is to get your feedback on the effects of using iPads in the classroom. Your participation is highly appreciated. Please note that your participation is completely anonymous.

I- Background information:

1. Age: _____
2. Gender: Female () Male () Prefer not to say () Prefer to self-describe: _____
3. Course Level: _____
4. First Language: _____
5. Home Country: _____
6. On a scale from 1 (No knowledge) to 10 (Very advanced knowledge), rate your knowledge level when using technology in general:
(No knowledge) 1 2 3 4 5 6 7 8 9 10 (Very advanced knowledge)

II- Select (✓) your answer to the following questions:

1- Before coming to this Center, had you ever used an iPad?

Yes () No ()

2- Do you own an iPad?

Yes () No ()

3- If you don't own an iPad, do you plan on buying one?

Yes () No () Not Sure ()

4- Is it your first time using iPads to learn English (not necessarily in a classroom)?

Yes () No ()

5- Is it your first time using iPads in an English classroom?

Yes () No ()

6- Have you ever used any other mobile devices (e.g., cell phones, iPods, etc.) when learning English in the classroom?

Yes () No ()

7- Do you use your mobile devices to learn English outside the classroom?

Yes () No ()

8- How much of your class time do you spend using iPads?

More than half of the time () Half of the time () Less than half of the time ()

9- Would you like to decrease or increase the time spent using iPads in your class?

To increase () To decrease () To keep it as it is ()

III- Select how strongly you agree or disagree with the following statements. Circle the option that best reflects your answer from Strongly Disagree, Disagree, Neutral, Agree, or Strongly Agree. Note that (1) indicates “Strongly DISAGREE” while (5) indicates “Strongly AGREE”.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

- 1- Using iPads helps me **learn** English in class.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 2- Using iPads helps me **improve** my **reading** skills in English.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 3- Using iPads helps me **improve** my **listening** skills in English.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 4- Using iPads helps me **improve** my **speaking** skills in English.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 5- Using iPads helps me **improve** my **writing** skills in English
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 6- Using iPads helps me **improve** my English **vocabulary**.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 7- Using iPads helps me **understand challenging lessons** in English.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 8- Using iPads helps me **solve problems** in the English class.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 9- Using iPads helps me **concentrate** to learn in class.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

- 10- Using iPads in class is **useful** for me.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 11- Using iPads in class is **necessary** for me.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 12- Using iPads improves my **self-confidence** in class.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 13- iPads are used **efficiently** in my ESL classroom.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 14- Overall, using iPads in class makes a positive difference in **my English language performance**.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 15- I am **comfortable** when using iPads in English activities.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 16- I can **easily** find features that I want when I use iPads.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 17- I find it is **easy** to **use** iPads in class.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 18- I find it is **easy** to **navigate** on iPads.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 19- I find it is **easy** to use iPads for **reading** activities.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

20- I find it is **easy** to use iPads for **writing** activities.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

21- I find it is **easy** to use iPads for **listening** activities.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

22- I find it is **easy** to use iPads for **speaking** activities.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

23- I find it is **easy** to use iPads for **group** activities.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

24- I find it is **easy** to use iPads for **pair-work** activities.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

25- I find it is **easy** to use iPads for **individual** activities.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

26- I find it is **easy** to use iPads to do my **homework**.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

27- Using iPads **motivates** me to **learn** English in the classroom.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

28- Using iPads in class is **enjoyable**.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

29- Using iPads in class is my **preferred activity** during my English class.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

30- Using iPads **motivates** me to **read** English texts.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

31- Using iPads **motivates** me to **listen** to English materials.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

32- Using iPads **motivates** me to **write** texts in English.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

33- Using iPads **motivates** me to **practice** my speaking skills.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

34- Using iPads **motivates** me to do my **homework** on an iPad.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

35- Using iPads **motivates** me to **participate** in class activities.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

36- Using iPads **motivates** me to **cooperate** with my classmates.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

37- Using iPads **motivates** me to **study** my English lessons.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

38- Using iPad in class encourages me to use iPads **outside** the classroom.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

39- I would like to continue to use the iPad to learn **new languages**.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

40- I would like to continue to use an iPad for my **courses** in the future.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

41- I would like to continue to use an iPad to do **different tasks** other than my courses.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

42- I would like to continue to use an iPad to find **resources** for my studies.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

43- I would like to continue to use an iPad to **communicate** online with others in English.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

44- After the course, I would like to continue to use an iPad to **practice** my **reading** skills.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

45- After the course, I would like to continue to use an iPad to **practice** my **listening** skills.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

46- After the course, I would like to continue to use an iPad to **practice** my **writing** skills.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

47- After the course, I would like to continue to use an iPad to **practice** my **pronunciation**.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

Appendix D

Teachers' Background Information and Survey

This survey is to get your feedback on the effects of using iPads in the classroom. Your participation is highly appreciated. Please note that your participation is completely anonymous.

I- Background information:

1. Age: 25 - 44 () 45 - 55 () 56 and over () Prefer not to say ()

2. Gender: Female () Male () Non-binary/third gender ()
Prefer not to say () Prefer to self-describe: _____

3. Years of teaching experience: _____

4. How many years have you been using iPads in your English as a second language classroom?

5. Do you own an iPad?
Yes () No ()

6. If you don't own an iPad, do you plan on buying one?

Yes () No () Not sure ()

7. On a scale from 1(*No knowledge*) to 10 (*Very advanced knowledge*), rate your knowledge level when using technology in general:

(No knowledge) 1 2 3 4 5 6 7 8 9 10 (Very advanced knowledge)

8. Do you think it is practical to use iPads in the classroom?

Yes () No () Not sure ()

9. Is it challenging for ESL teachers to use iPads in classrooms?

Yes () No () Somewhat ()

10. Have you received any technical training on using iPads for teaching English as a second language?

Yes () No ()

11. Would you prefer any other mobile devices other than iPads (e.g., cell phones, iPods) to use in your English class?

Yes () No () Not Sure ()

- IV- Select how strongly you agree or disagree with the following statements. Circle the option that best reflects your answer from Strongly Disagree, Disagree, Neutral, Agree, or Strongly Agree. Note that (1) indicates “Strongly DISAGREE” while (5) indicates “Strongly AGREE”.**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

- 1- Using iPads helps my students **learn** English in class.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 2- Using iPads helps my students **learn reading**.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 3- Using iPads helps my students **learn listening**.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 4- Using iPads helps my students **learn speaking**.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 5- Using iPads helps my students **learn writing**.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 6- Using iPads helps my students **improve** their **vocabulary**.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 7- Using iPads helps my students understand **challenging lessons**.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 8- Using iPads helps my students **solve problems** in class.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 9- Using iPads in class helps students **collaborate** with each other.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 10- Using iPads helps my students **concentrate** to learn in class.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

11- Having iPads in the classroom is **useful** for my students.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

12- Using iPads in class is **necessary** for my students.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

13- Using iPads improves my students' **self-confidence** in class.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

14- Using iPads in class **enhances** learning English for students with different learning styles, for example, visual, verbal, or aural.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

15- Overall, using iPads in class makes a positive difference in **students' performance** when learning English.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

16- I am **comfortable** when using iPads in class as an ESL teacher.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

17- I can **easily** find features that I want when I use iPads.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

18- I find it is easy to **use** iPads in class.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

19- I find it is easy to **navigate** on iPads.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

20- I find it is easy to **use** an iPad for preparing my ESL classes.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

- 21-I find it is easy for my students to use iPads for **reading** activities.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 22-I find it is easy for my students to use iPads for **writing** activities.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 23-I find it is easy for my students to use iPads for **listening** activities.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 24-I find it is easy for my students to use iPads for **speaking** activities.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 25-I find it is easy for my students to use iPads in **group** activities.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 26-I find it is easy for my students to use iPads for **pair-work** activities.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 27-I find it is easy for my students to use iPads for **individual** activities.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 28-Using iPads in class makes the course content **more accessible** for students.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 29-Using iPads in class is **easy for students** who have some basic knowledge of technology.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 30-Using iPads in class **facilitates** my work with students.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

- 31-** Using iPads **motivates** my students to **learn** English in the classroom.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 32-** Using iPads in class is **enjoyable** for my students.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 33-** Using iPads in class is my students' **preferred activity** during my English class.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 34-** Using iPads **motivates** my students to **read** English texts.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 35-** Using iPads **motivates** my students to **listen** to English materials.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 36-** Using iPads **motivates** my students to **write** English texts.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 37-** Using iPads **motivates** my students to **practice** their speaking skills.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 38-** Using iPads **motivates** my students to **participate** in class activities.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 39-** Using iPads **motivates** my students to **cooperate** with each other.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**
- 40-** Using iPads **motivates** my students to **study** their English lessons.
Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

41- I will use the iPad to do **different tasks** other than teaching my classes.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

42- I will use the iPad to find **resources** for my future classes.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

43- I would like to **receive more training** to use iPads in my teaching.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

44- Using iPads in class encouraged me to using iPads **outside** the classroom.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

45- I will use the iPad for teaching my **classes** in the future.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

46- I will use the iPad **more often** in my future classes.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

47- I will encourage my students to use the iPad to **practice** their **reading** skills after the course.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

48- I will encourage my students to use the iPad to **practice** their **listening** skills after the course.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

49- I will encourage my students to use the iPad to **practice** their **pronunciation** after the course.

Strongly DISAGREE (1) (2) (3) (4) (5) **Strongly AGREE**

Appendix E

Color-Coded Statements for Learners' Survey

As illustrated below, there are color-coded statements in the learners' survey to measure the four variables: 1) **learnability**, 2) **usability**, 3) **motivation**, and 4) **willingness to use tablets**.

Learnability (14 statements)

1. Using iPads helps me **learn** English in class.
2. Using iPads helps me **improve** my **reading skills** in English.
3. Using iPads helps me **improve** my **listening skills** in English.
4. Using iPads helps me **improve** my **speaking skills** in English.
5. Using iPads helps me **improve** my **writing skills** in English.
6. Using iPads helps me **improve** my English **vocabulary**.
7. Using iPads helps me understand **challenging lessons** in English.
8. Using iPads helps me **solve problems** in the English class.
9. Using iPads helps me **concentrate** to learn in class.
10. Using iPads in class is **useful** for me.
11. Using iPads in class is **necessary** for me.
12. Using iPads improves my **self-confidence** in class.
13. iPads are used **efficiently** in my ESL classroom.
14. Overall, using iPads in class makes a positive difference in **my English language performance**.

Usability (12 statements)

1. I am **comfortable** when using iPads in English activities.
2. I can **easily** find features that I want when I use iPads.
3. I find it is **easy** to **use** iPads in class.
4. I find it is **easy** to **navigate** on iPads.
5. I find it is easy to use iPads with **reading** activities.
6. I find it is easy to use iPads with **writing** activities.
7. I find it is easy to use iPads with **listening** activities.
8. I find it is easy to use iPads with **speaking** activities.
9. I find it is easy to use iPads with **group** activities.
10. I find it is easy to use iPads with **pair-work** activities.
11. I find it is easy to use iPads with **individual** activities.
12. I find it is easy to use iPads to do my **homework**.

Motivation (11 statements)

1. Using iPads **motivates** me to **learn** English in the classroom.
2. Using iPads in class is **enjoyable**.
3. Using iPads in class is my **preferred activity** during my English class.
4. Using iPads **motivates** me to **read** English texts.
5. Using iPads **motivates** me to **listen** to English materials.
6. Using iPads **motivates** me to **write** English texts.
7. Using iPads **motivates** me to **practice** my speaking skill.
8. It **motivates** me to do my **homework** on an iPad.

9. Using iPads **motivates** me to **participate** in class activities.
10. Using iPads **motivates** me to **cooperate** with my classmates.
11. Using iPads **motivates** me to **study** my English lessons.

Willingness to use tablets (10 statements)

1. Using iPad in class encourages me to use iPads **outside** the classroom.
2. I will use the iPad to learn **new languages**.
3. I will use the iPad for my **courses** in the future.
4. I will use the iPad to do **different tasks** other than my courses.
5. I will use the iPad to find **resources** for my studies.
6. I will use the iPad to **communicate** online with others in English.
7. After the course, I will use the iPad to **practice** my **reading** skill.
8. After the course, I will use the iPad to **practice** my **listening** skill.
9. After the course, I will use the iPad to **practice** my **writing** skill.
10. After the course, I will use the iPad to **practice** my **pronunciation**.

Appendix F

Color-Coded Statements for Teachers' Survey

As illustrated below, there are color-coded statements in the teachers' survey to measure the four variables: 1) **learnability**, 2) **usability**, 3) **motivation**, and 4) **willingness to use tablets**.

Learnability (15 statements)

1. Using iPads helps my students **learn** English in class.
2. Using iPads helps my students **learn** reading.
3. Using iPads helps my students **learn** listening.
4. Using iPads helps my students **learn** speaking.
5. Using iPads helps my students **learn** writing.
6. Using iPads helps my students **improve** their vocabulary.
7. Using iPads helps my students understand **challenging lessons**.
8. Using iPads helps my students **solve problems** in class.
9. Using iPads in class helps students **collaborate** with each other.
10. Using iPads helps my students **concentrate** to learn in class.
11. Using iPads in class is **useful** for my students.
12. Using iPads in class is **necessary** for my students.
13. Using iPads improves my students' **self-confidence** in class.
14. Using iPads in class **enhances** learning English for students with different learning styles, for example, visual, verbal, or aural.
15. Overall, using iPads in class makes a positive difference in **students' performance in learning English**.

Usability (15 statements)

1. I am **comfortable** when using iPads in class as an ESL teacher.
2. I can **easily** find features that I want when I use iPads.
3. I find it is easy to **use** iPads in class.
4. I find it is easy to **navigate** on iPads.
5. I find it is easy to **use** an iPad for preparing my ESL classes.
6. I find it is easy for my students to use iPads in **reading** activities.
7. I find it is easy for my students to use iPads in **writing** activities.
8. I find it is easy for my students to use iPads in **listening** activities.
9. I find it is easy for my students to use iPads in **speaking** activities.
10. I find it is easy for my students to use iPads in **group** activities.
11. I find it is easy for my students to use iPads in **pair-work** activities.
12. I find it is easy for my students to use iPads in **individual** activities.
13. Using iPads in class makes the course content **more accessible** for students.
14. Using iPads in class is **easy for students** who have some basic knowledge of technology.
15. Using iPads in class **facilitates** my work with students.

Motivation (10 statements)

1. Using iPads **motivates** my students to **learn** English in the classroom.
2. Using iPads in class is **enjoyable** for my students.
3. Using iPads in class is my students' **preferred activity** during my English class.
4. Using iPads **motivates** my students to **read** English texts.

5. Using iPads **motivates** my students to **listen** to English materials.
6. Using iPads **motivates** my students to **write** English texts.
7. Using iPads **motivates** my students to **practice** their speaking skill.
8. Using iPads **motivates** my students to **participate** in class activities.
9. Using iPads **motivates** my students to **cooperate** with each other.
10. Using iPads **motivates** my students to **study** their English lessons.

Willingness to use tablets (9 statements)

1. I will use the iPad to do **different tasks** other than teaching my classes.
2. I will use the iPad to find **resources** for my future classes.
3. I would like to **receive more training** to use iPads in my teaching.
4. Using iPad in class encourages me to use iPads **outside** the classroom.
5. I will use the iPad for teaching my **classes** in the future.
6. I will use the iPad **more often** in my future classes.
7. I will encourage my students to use the iPad to **practice** their **reading** skill after the course.
8. I will encourage my students to use the iPad to **practice** their **listening** skill after the course.
9. I will encourage my students to use the iPad to **practice** their **pronunciation** after the course.

Appendix G

Interview Questions for Learners

- 1- How do you feel when you see your teacher is going to use iPads in your English class?
- 2- What do you think are the benefits of using iPads in learning English?
- 3- What do you think are the disadvantages of using iPads in learning English?
- 4- Do you think you should spend more time using iPads to learn English in the classroom?
- 5- Which type of activities do you prefer using with iPads (for example, individual, pair-work, or group activities)?
- 6- Some students are more visual than others, other need to hear things, while others need to play with things (they're more hands-on). Do you think using iPads in class satisfies your learning style? How?
- 7- Away from your English classes, do you usually use iPads in your daily life? For how long? Why/why not?
- 8- Do you use iPads to learn English outside your classroom? If yes, How often? Why/why not?
- 9- What are your recommendations for better using iPads to learn English?

Appendix H

Interview Questions for Teachers

- 1- What do you think about using iPads in your English as a Second Language (ESL) class?
Why/ why not?
- 2- What do you think are the benefits of using iPads in teaching English?
- 3- What do you think are the disadvantages of using iPads in teaching English?
- 4- Do you think you should spend more time using iPads in your classroom activities?
- 5- Do you prefer certain applications (apps) to teach ESL in your classes? Specify any.
- 6- Which type of activities is better suited for iPads (for example, individual, pair-work, or group activities)?
- 7- Away from your English classes, do you usually use iPads in your daily life? For how long?
Why/why not?
- 8- Do you use iPads to improve your teaching skills? How? How often?
- 9- What are your recommendations for more effective use of iPads to teach English?

Appendix I

Learners' Perceptions on Learnability: Means (/5) and SDs

Item	Mean/5	SD
1 Learn ESL	3.53	0.66
2 Improve Reading	3.11	0.83
3 Improve Listening	3.96	0.85
4 Improve Speaking	2.78	0.95
5 Improve Writing	2.91	0.92
6 Improve Vocabulary	3.78	0.82
7 Understand lessons	3.58	0.84
8 Solve Problems	3.71	0.84
9 Concentrate	3.04	0.82
10 Useful	3.49	0.82
11 Necessary	2.67	1
12 Improve Self-Confidence	2.64	0.8
13 Used Efficiently	3.27	1.03
14 Positive Performance	3.38	0.75
Overall	3.27	0.10

Note. All mean values are out of 5 (/5).

Appendix J

Learners' Perceptions on Usability: Means (/5) and SDs

Item	Mean/5	SD
1 Comfortable	3.58	0.99
2 Features are easily found	3.64	0.88
3 Easy to use	3.69	0.97
4 Easy to navigate	3.33	1.04
5 Easy to reading	3.36	0.98
6 Easy in writing	2.8	0.97
7 Easy to listening	4.09	0.74
8 Easy to speaking	3	1.04
9 Easy in group work	3.33	1.22
10 Easy in pair work	3.51	0.92
11 Easy for individual activities	4.16	0.74
12 Easy in homework	3.53	1.12
Overall	3.5	0.14

Note. All mean values are out of 5 (/5).

Appendix K

Learners' Perceptions on Motivation: Means (/5) and SDs

Item	Mean/5	SD
1 Motivation to learn	3.02	0.99
2 Enjoyable	3.42	1.08
3 Preferred activity	3.09	0.9
4 Motivates to read	3	0.9
5 Motivates to listen	3.84	0.8
6 Motivates to write	2.71	0.87
7 Motivates to practice	2.98	1.1
8 Motivates to do homework	2.91	0.97
9 Motivates to participate	3.22	0.88
10 Motivates to cooperate	3.29	0.94
11 Motivates to study	3.18	0.87
Overall	3.14	0.25

Note. All mean values are out of 5 (/5).

Appendix L

Learners' Perceptions on Willingness to Use Tablets: Means (/5) and SDs

	Item	Mean/5	SD
1	To use outside	3.09	1.02
2	To learn new languages	3.64	1.07
3	For future courses	3.76	0.91
4	To do different tasks	3.91	0.76
5	Find resources	3.96	0.88
6	To communicate online	3.53	0.99
7	To practice reading	3.29	0.99
8	To practice listening	4	0.8
9	To practice writing	2.96	1
10	To practice pronunciation	3.64	1.17
	Overall	3.58	0.12

Note. All mean values are out of 5 (/5).

Appendix M

Teachers' Perceptions on Learnability: Means (/5) and SDs

Item	Mean/5	SD
1 Learn ESL	3.88	0.60
2 Learn reading	3.22	0.83
3 Learn listening	4	0.5
4 Learn speaking	2.88	1.16
5 Learn writing	2.77	1.20
6 Improve vocabulary	3.44	0.52
7 Understand lessons	3.44	1.01
8 Solve problems	3.66	0.86
9 Collaborate	3.66	0.70
10 Concentrate	3.33	0.86
11 Useful	3.77	0.66
12 Necessary	3	1
13 Improve self-confidence	3.11	0.92
14 Enhance learning with different learning style	3.66	0.86
15 Difference in students' performance	3.44	0.72
Overall	3.42	0.21

Note. All mean values are out of 5 (/5).

Appendix N

Teachers' Perceptions on Usability: Means (/5) and SDs

Item	Mean/5	SD
1 Comfortable	3.77	0.97
2 Features are easily found	3.44	0.88
3 Easy to use	3.77	0.97
4 Easy to navigate	3.55	0.88
5 Easy to use for preparing lessons	2.55	0.88
6 Easy for reading	3	1
7 Easy for writing	2.33	0.86
8 Easy for listening	4.33	0.70
9 Easy for speaking	3	0.86
10 Easy in group work	3.66	1
11 Easy for pair work	3.77	0.97
12 Easy for individual work	4.11	0.78
13 Courses are more accessible	4.11	0.78
14 Easy for students	4.33	0.5
15 Facilitate work	3.77	0.44
Overall	3.57	0.17

Note. All mean values are out of 5 (/5).

Appendix O

Teachers' Perceptions on Motivation: Means (/5) and SDs

Item	Mean/5	SD
1 Motivates to learn	3.75	0.70
2 Enjoyable	4	0.75
3 Preferred activity	3	0.70
4 Motivates to read	2.44	1.01
5 Motivates to listen	3.77	0.44
6 Motivates to write	2.33	0.86
7 Motivates to practice	2.77	0.97
8 Motivates to participate	3.33	1
9 Motivates to cooperate	3.22	0.83
10 Motivates to study	3	0.86
Overall	3.16	0.17

Note. All mean values are out of 5 (/5).

Appendix P

Teachers' Perceptions on Willingness to Use Tablets: Means (/5) and SDs

Item	Mean/5	SD
1 To do different tasks	3.55	1.42
2 To find resources	3.44	1.33
3 To receive more training	3.55	1.33
4 To use outside the classroom	2.11	1.26
5 To use for teaching my classes	4	0.86
6 To use more often	3.88	0.92
7 To practice students' reading	3.22	1.20
8 To practice students' listening	4	0.70
9 To practice students' pronunciation	3.44	1.13
Overall	3.46	0.24

Note. All mean values are out of 5 (/5).

Appendix Q

A Sample of Learners' Responses on Learnability, Usability, Motivation
and Willingness to Use Tablets

Theme	Sample Quotes
Learnability	I think iPad is more useful and you can go to everywhere to listening
	it's very useful to learn English, also listening and writing may be, we have some grammar, grammar mistakes when writing, the iPad will tell us.
Usability	I think I use iPads more clearly and you can do everything by yourself,
	I use the tablet because it is very convenient to open, and the screen is more convenient than the keyboard.
Motivation	I'm satisfied with that. Because when I listen, something becomes more easy.
	I feel very good if the teacher uses the iPad in the class
	we should spend more time using iPad [...] Especially the listening class, I think [...] And the in other classes is OK. To read the books or sometimes we use to check some information.
Willingness to use tablets	teachers can download some good apps, so we can use them
	I prefer to use iPads because our society is developing so we need to suit to use this in the future, maybe we do not have any paper in the future.

Appendix R

A Sample of Teachers' Responses on Learnability, Usability, Motivation
and Willingness to Use Tablets

Theme	Sample Quotes
Learnability	<p>you can also use iPads for a variety of skills like reading, writing, speaking, and listening.</p> <hr/> <p>For listening, we use it for other levels what we call listening retells. It allows them to be listening or even watching two different things, and after they can tell each other about what they heard or saw.</p> <hr/> <p>improves student learning</p>
Usability	<p>when you want to show some images, you can just put them on an iPad, it's just simple and easy and portable</p> <hr/> <p>So that's generally for our program, we need it, if not that we needed something else, it could have been any device, it could be a phone, a computer, but iPads are just the right size for it</p> <hr/> <p>very practical, less paper</p>
Motivation	<p>increases students' motivation</p> <hr/> <p>students seem happy when I bring iPads into the class</p> <hr/> <p>[...] it would really work well for learning language individually on an iPad is if it was really designed, but well really designed into that kind of gaming format, you know the way is to get to the next level is to satisfy certain criteria linguistic ones in this case, I think that would really motivate.</p>
Willingness to use tablets	<p>There's a really amazing foundation, it's non-profit, it's a website called "read write think", which is amazing, it's got interactive, it's got all kinds of teaching materials and students materials, if you call them app, yes, I'd go for it.</p> <hr/> <p>if you have a tablet with Wi-Fi, and high speed connection to the internet, you know, it's a great tool to have every student have to make a web quest, research a topic, and then answer some questions, developed their knowledge, and share that with the class, then it's a great tool, there's no other way to do it.</p>