Electronic Texts and their Use in the Modern Language Classroom

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Abstract

In this paper, the author discusses the use of an electronic textbook used with Japanese university students in an English speaking course. In this small-scale study, students were provided with tablet computers and required to give their opinions via a study diary regarding the use of a textbook available on the tablet computer every day of the 15-week course. Results indicated that students were satisfied with the electronic version of the textbook, especially being able to obtain immediate feedback on their answers to practice exercises completed outside of class time, and the convenience of having audiovisual materials embedded within the text.

Introduction

In the late 1950s, a sudden increase was observed in the use of technology in the language classroom with the introduction of the language laboratory. Morton (1960) expressed satisfaction in how the use of such technology increased the possibilities of autonomous learning, individual instruction and a smooth transition into the lesson for latecomers. More than half a century later, the use of electronic devices and computer-assisted language learning (CALL) continue to boom, especially in English as a foreign language (EFL) environments. In this paper, the author reports on the use of a textbook available on a tablet computer in the exact same format as its paperback version but with added functions, and discusses the benefits for both instructors and students alike.

Literature Review

Much of the recent literature pertaining to CALL has focused on the use of mobile phones in the classroom, or mobile-assisted language learning (MALL). A large percentage of the research into the effects of MALL has concentrated on vocabulary acquisition. Levy and Kennedy (2005) used mobile phones to send vocabulary items to their students studying Italian in the foreign language environment, Australia. Although in this study, Levy and Kennedy expressed satisfaction with being able to provide input even outside of classroom time and they received positive feedback from the students, in a latter study, students commented that the emails with vocabulary items became annoying, and feedback suggested they wanted to create a distinct gap between their study time and private time (Kennedy & Levy, 2008).

This attitude of viewing mobile phones for entertainment and not for studying has been reflected in studies in the EFL environment in Japan. Stockwell (2008), for example, reported in his study of MALL on vocabulary acquisition that students tended to prefer to use computers with a full screen for study and their mobile phones for fun. In a study investigating the use of the social networking system Twitter as a means of extending discussions conducted in a foreign cultures class, Leis (2014)

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suggested that although students with high self-perceived English language proficiency were satisfied with this way of taking lesson content outside of the classroom, those with less linguistic self-confidence did not share the same opinions. These students, like those in Stockwell and Kennedy and Levy's studies, opined that mobile phones should not be mixed with their education, rather left as devices for playing games and contacting friends. On the other hand, in a large-scale study of the effects of using tablet computers in the EFL classroom with high-school graduate students, Gitsaki and Robby (2014) reported benefits of using such devices, with positive effects on performance in exams as well as increased second language (L2) learning motivation and more active participation in class.

Past studies also show comparisons between using digital and paper materials for educational purposes with differing results. Koyama and Takeuchi (2004) investigated whether the use of electronic dictionaries would bring about higher performance in vocabulary acquisition. The results indicated that although the students using electronic dictionaries seemed to show more effort in their studies from the perspective that they looked up more vocabulary items, no statistically significant differences were observed between the two groups in the posttest. On the other hand, in a study of university students with upper intermediate to advanced proficiency Dziemianko (2010) suggested that electronic dictionaries were effective in comparison with paper dictionaries in increasing vocabulary acquisition in receptive and productive tasks, both in a posttest and a delayed posttest conducted three weeks later. Ashcroft and Cvitkovic (2015) used the online application Quizlet® in comparison with the more traditional method of word cards made of paper. The results of Ashcroft and Cvitkovic's study suggested that although there were no statistically significant differences between the two methods of study for students with advanced linguistic L2 proficiency, the electronic method of study (i.e., Quizlet®) resulted in significantly higher scores in the posttest for those whose English proficiency was either at the beginner or intermediate level.

In a study comparing paper and digital textbooks on the reading performance of university graduates, Hassaskhah, Barekat and Farhang Asa (2014) suggest that not only do learners show a stronger liking for paper textbooks, but using these traditional forms lead to higher performance in comparison with their digital counterparts. Hassaskhah et al. conclude, however, that it is essential for educators "to help promote the interactive nature of the features realized in digital texts and assist learners to gain motivation and a positive attitude towards using them" (2014, p. 15).

With recent researches, such as those summarized above, showing conflicting conclusions whether digital forms of study may be effective in increasing students' L2 learning motivation as well as their learning capabilities or not, there is a call for studies related to effects beyond vocabulary acquisition. This is especially important now as, along with the increasing availability of tablet computers, the number of textbooks focused on language learning and available in the digital format is rapidly growing. In the present small-scale study, the author reports on students' attitudes to using an electronic textbook with the goal of gaining a deeper understanding of the benefits of this kind of textbook.

The Text

In order to gain an understanding of the benefits and limitations of using an electronic textbook, the researcher chose Q: Skills for Success Listening and Speaking 3, published by Oxford University Press (OUP), available through OUP's Oxford Learner's Bookshelf on tablet computers and desktop/laptop computers. This text was chosen both because there is an exact same paperback version and the various tasks and exercises available in the text. These will be discussed here with comparisons to the paperback version.

Schemata Building

Figure 1 shows a screen shot from the first page of Chapter 1 in the textbook. When students click on the box found in the upper middle section of the figure, the page shifts to another, which shows a video of a news report from abroad embedded in the text (Figure 2). The activity is related to the topic of the chapter and helps build students' knowledge about subject before working through the unit. This schemata-building option of viewing a video is not available in the paper version of this textbook.
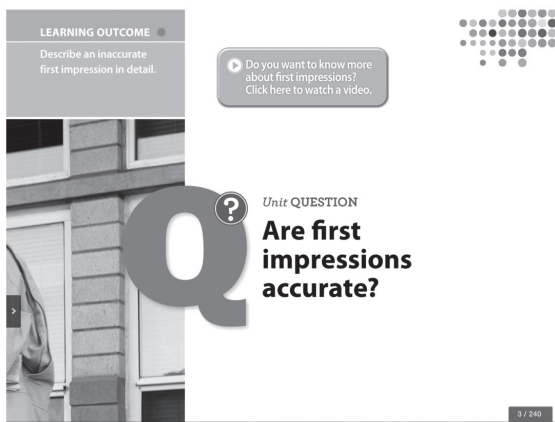

Figure 1. Opening page of Chapter 1, Q: Skills for Success, 3©Oxford University Press.
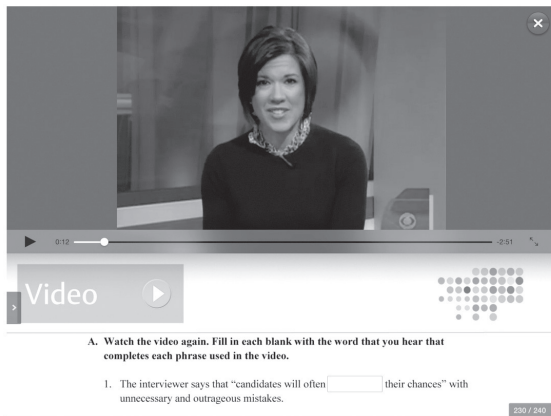

Figure 2. An example of a schemata building exercise using embedded videos in Q: Skills for Success 3,©Oxford University Press.

Instant Feedback

Although the same exercises are found in both the electronic and paperback versions of the text, the electronic version allows students to receive instant feedback on their answers (Figure 3). These responses and results can then be emailed directly to the instructor through an email function found on the left side of the screen. This function also allows answers to be removed so that students can redo the practice exercises.
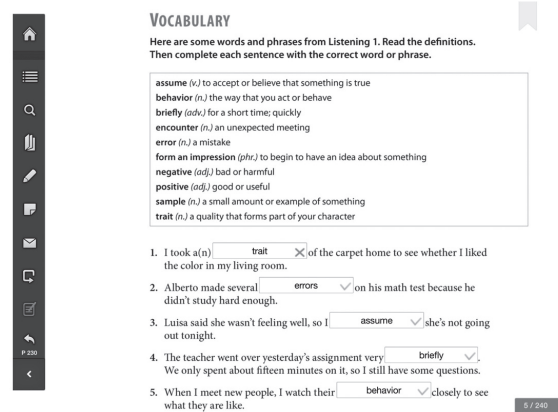

Figure 3. Instant feedback on homework in Q: Skills for Success 3,©Oxford University Press.

Audio

Similar to the video feature discussed earlier, audio, with a choice of viewing the transcript or not, is embedded in the digital textbook and easily accessible for students and teachers alike. Furthermore, a speed-adjusting function enables students to change the pace of the speech. Although the audio is available with the paper text, it requires users to download the audio data via the publisher's website.

Other features

Other features of the electronic version of the textbook include a function to search and find keywords that appear in the text, capability to highlight and digitally write on the text itself, and note function that allows users to leave either text or audio notes while studying that can be read or listened to when reviewing, or deleted at a later date.

The Study

Research question

The availability of textbooks on a tablet computer,

in the same form as the paper version, but with added features, is still a relatively new concept, and therefore there has been little research to date. In this small-scale study, the researcher focuses on gaining an insight to the strengths and weakness of electronic textbooks from the students' and teacher's perspective. The focus of this study, therefore, centers on the following research question:

Research question: What are the benefits and limitations of using an electronic textbook in an EFL course?

The class

The present study was conducted as part of a one-semester (i.e., 15 weeks) advance English communication course. The course was an elective, and focused upon improving students' speaking and listening skills through both practice exercises in the text and discussions lead by the students. Students were provided with free copies of the digital textbook and those students who did not own a tablet computer were also lent one for the duration of the course. The entire course was conducted using the digital textbook. Students did not have access to the paper version therefore they could only do homework and self-study using the digital textbook.

Participants

A total of five second- and fourth-year students studying at an Education University in Northeast Japan participated in this study. Table 1 displays descriptions of the participants with pseudonyms, rather than their real names. Three of the students,

When asked at the beginning of the semester the reasons for electing this course, the majority of students remarked a desire to improve their English proficiency. Two students in the class did not major in English Education. Despite majoring in music education with the goal of becoming a music teacher at a junior high school, Dave expressed a wish to obtain a sub-license as an English teacher. Eddie, however, stated that the only reason for taking this

course was in order to graduate and he had already received credit from the other possible choices, suggesting a lower motivation to learn English in comparison with the other students.

Table 1

Descriptions of the Participants in this Study

Student	Gender	Age	Major	Tablet Computer
Anna	Female	21	English Education	No
Betty	Female	22	English Education	Yes
Charlie	Male	21	English Education	Yes
Dave	Male	21	Music Education	Yes
Eddie	Male	23	Science Education	No

Note. Tablet Computer refers to whether the participant owned and had experience using a tablet computer. The author lent tablet computers to those who did not own one.

Method

Due to the low number of participants, a qualitative design, with some quantitative elements, was chosen for this study. Participants were required to complete a study diary every day of the course (i.e., 105 entries). The study diary, which was created using the free online software Google Forms, and accessible via a Quick Response Code (QR Code), could be completed in either Japanese or English. It included items to measure students' attitudes toward using the electronic text such as How did you use your text today? and What good or bad points did you find with your text today? See Appendix for a list of the items used in the study diary.

Due to various reasons (e.g., participating in a teaching practicum, forgetting to do the diary entry), students were unable to complete the diary on a number of days, resulting in an average of 46.20 ($SD = 30.23$) entries out of a possible 105 (i.e., 44.00%). A breakdown of students' submissions of the study diary is displayed in Table 2.

Results and discussion

In order to gain a clearer understanding of the

Table 2

Breakdown of Study Diary Entries by Participants

Student	Total Entries	Total Days Spent Studying	Average Time Studied per Day
Anna	95	69	18
Betty	44	44	23
Charlie	26	26	39
Dave	49	28	26
Eddie	17	13	33

benefits and limitations of using electronic textbooks in an EFL environment, three items from the study diary will be focused upon in this section:

1. Item 2: Where did you look at your text today?
2. Item 3: How did you use your text today?
3. Item 5: What good or bad points did you find with your text today?

Where did you look at your text today?

Item 2 asks the place where students used their electronic textbook in order to discover whether being able to use an electronic text affects the place where they study. The author had assumed that because of the portability of the tablet computer and availability of embedded video and audio, students may feel less anxious studying in public places such as on public transport and at restaurants, thus increasing the amount of time students studied.

However, as the data in Table 3 indicate, this assumption was nullified as a large percentage of the places students studied at were either home (i.e., 75.45%) or university (i.e., 11.61%). Although there were times when students studied on public transport (i.e., 8.04%) and at cafes (i.e., 2.68%), whether these figures are more, less or simply reflect the same pattern for paper textbooks can only be answered in further studies comparing the use of these two styles of textbooks. Although a direct comparison is not being conducted in this paper, these figures suggest that the electronic text may not bring any distinct advantage over a paper text

from the perspective of studying in public places, such as on public transport and in cafes. Because only a small percentage of study time had been spent at these public places, clearer advice from the instructor about where to use the electronic textbook may be needed in the future.

Table 3

Frequency of Places of Students Using Their Textbooks

Place of study	Number of times
At home	169
At university	26
On the bus/train	18
At a cafe	6
At my part-time job	5

How did you use your text today?

In Item 3 of the study diary, the researcher intended to investigate the sections of the electronic textbook used most by participants. It was predicted that students would appreciate the readily available listening tasks and practice exercises for the lesson to be taught in the upcoming class, and this would reflect in a higher percentage used in these parts of the text. Students in regular classes have often commented that although audio is available in paper textbooks, it is burdensome and time-consuming to download the files from the Internet. The predictions of the author were confirmed, as displayed in Table 4, with sections of the text designed for practice exercises to prepare for class (i.e., 44.72%) and listening exercises (i.e., 19.51%) receiving a high concentration of the students' study time. A high percentage of study time was also dedicated to studying vocabulary (i.e., 28.46%). However, this does not appear to be a unique feature of the electronic version as the same exercises and word lists are in both the digital and paper versions of the text.

Table 4

Breakdown of How Students Used Their Textbooks

Focus of study	Number of times
Studying vocabulary	35
Preparing for class	55
Doing listening exercises	24
Doing speaking exercises	3
Other	6

Note. Preparing for class includes activities such as browsing through the text, and thinking about discussion topics.

What good or bad points did you find with your text today?

The final question of the present study intends to gain an insight to participants' feelings toward using an electronic textbook. When reading participants' responses, two main patterns could be observed:

1．a need for concrete instruction from teachers; and

2．a clear appreciation for the listening activities easily accessible in the electronic textbook.

Note that grammatical errors in comments from participants referred to here have been corrected and comments in Japanese translated into English for the purposes of this paper.

Quite early in the investigation, several comments were made suggesting participants were having trouble getting accustomed to a textbook on a tablet computer. Anna, for example, mentioned the difficulty of taking notes on an electronic textbook in the second week of the course: *It is not easy to write the meanings of words on the tablet.* Here, it could be inferred that Anna shows preference for a paper textbook, on which students can easily take memos and write definitions of difficult words. However, the text and audio note-taking functions described earlier in this paper seemed to have caused difficulties for Anna. She also displayed confusion in how to use the text, recording the following comment in her study diary three times: *All of my answers were somehow erased, but I don't know why.* Betty, on the other hand, expressed positive feedback to the text commenting:

I like being able to write and record memos, which can be saved within the text. It should be noted here that Betty was using her own tablet computer while Anna was using one borrowed from the researcher. Therefore, experience with using a tablet computer may have attributed to these opinions.

The previous experience of using a tablet computer may have been influential in Betty's positive experience from the beginning of the study. This is supported by Betty's comment during the second week of the course: *At first, I was nervous about using a textbook on a tablet. However, an electronic textbook includes recording, memos, and many functions. So I can study if I have just my tablet. It was very convenient.* Eddie, who was also using a borrowed computer tablet rather than his own, expressed in the first week of the study that he was having trouble finding parts of the text that he wanted to study: *I can't find the speaking part in this unit.* However, two weeks later, he suggested he had learned more about the textbook when studying vocabulary at home: *A really good point is that I can check my answers immediately.* These reactions from participants suggest that despite students owning smartphones, it still may take several weeks to get used to using an electronic textbook. Therefore, instructors should be aware of the necessity to both provide clear training on how to use the electronic textbook effectively, as well as patience as students develop a fondness for the devices.

The second trend was based on the use of listening materials. Although all students commented on the convenience of having the audio preinstalled and available regardless of being online or not, and not having to download it from the publisher's website, Betty especially seemed to use this function, making several diary entries based on how she used it.

In addition to using the listening material for general practice based on exercises within the text, Betty used the listening function together with the optional transcript to do shadowing, a popular listening and speaking practice often used in English

classes in Japan in which students read a clauses and sentences in a passage moments after they have been read by a teacher (see Murphey, 2001 for a discussion on shadowing). Seven times, Betty remarked in her diary: *Because the transcript is easily available with the audio, it makes practicing shadowing very easy.* Twice, she added: *Being able to adjust the speed of the audio makes both listening and shadowing easier.* The speed adjustment Betty refers to here is the function with the audio allowing students and teachers to increase and decrease the speed of the speech being delivered in the text.

Although the embedded and transcript are obviously very convenient for students and teachers, one weakness with the current form, which needs to be improved in future electronic texts is the way the transcript is presented. Currently, the transcript is presented only as one large chunk of writing, which students read as they listen. In order for the script to be presented in a more authentic way, the author opines that the script be shown as appearing and disappearing subtitles, timed to match the Intonation Phrases of the speaker (See Tench (1996) and Wells (2006) for more on Intonation Phrases). Not only will this provide authentic spoken language in a written form, it will also allow deaf and hard-of-hearing students to participate in listening practice in a similar way to students with regular hearing, a vital part of the inclusive education system initiated by the Japanese Ministry of Education, Culture, Sports, Science and Technology in 2012 (MEXT, 2015).

Conclusions

The results of this study have added depth to the discussion of whether more textbooks should be available in the digital format and how more teachers of and students of second languages can take advantage of the benefits of electronic textbooks.

The paper is limited by the most obvious weakness of such a low number of participants, and lack of the

use of interviews, which would have given deeper insight to students opinions on the use of digital textbooks. With a higher number of participants, more quantitative results, such as changes in proficiency and learning motivation may be achieved. Also, in future studies with a larger sample size, a comparison between two classes, one taught using the paper-version of the textbook and the other on a computer tablet, may provide clearer indications of the benefits and limitations of electronic textbooks. With the number of textbooks on table computers increasing, this is an area requiring further research, to gain a deeper understanding of how to create and use these materials in the most effective ways.

Acknowledgements

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Appendix

Items used in the study diary

1. About how many minutes did you spend looking at your text today?
2. Where did you look at your text today?
3. Which section of the text did you look at today?
4. How did you use your text today?
5. Think about your text. What good or bad points did you find with your text today?
6. Reflect on your study style. What good or bad points did you find with your study style today?