

## **Apps 4 EFL: Web-based Language Learning with Creative Commons Data**

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### **ABSTRACT**

Apps 4 EFL ([www.apps4efl.com](http://www.apps4efl.com)) is a Web Based Language Learning (WBLL) platform wholly developed by the author. It uses Creative Commons Data in conjunction with open web technologies to deliver engaging and effective English language learning activities. This paper discusses the types of data utilized by Apps 4 EFL, and gives details about some of the pedagogical activities Apps 4 EFL provides, along with existing research that backs up the effectiveness of such activities. The results of a survey administered to Japanese university students (n=84) are also presented and evaluated. The respondents used the Apps 4 EFL platform for one semester (15 weeks), and the survey was administered at the end of the semester. The respondents used the site to study vocabulary and grammar constructions which related to the content of their respective courses. The results of the survey, along with existing research, suggest that Apps 4 EFL's activities are effective, enjoyable, and convenient ways for learners to improve their English language abilities.

### **INTRODUCTION**

There are millions of gigabytes of data suitable for English language education available online. This data includes texts, video files, audio files, sets of flashcards, example sentences, and many other kinds of information. Much of this data is made available under a Creative Commons license (Creative Commons Corporation, 2015), a style of copyright which allows others to freely use, adapt, and distribute the data. However, the data is usually not provided in a convenient form for English language teachers and learners. The Tatoeba Corpus ([www.tatoeba.org](http://www.tatoeba.org)), for example, is provided in two separate databases, one containing a list of sentences, and the other containing a list of links between sentences. This data first has to be merged in order to be pedagogically useful.

Apps 4 EFL ([www.apps4efl.com](http://www.apps4efl.com)) is a free web-based language learning (WBLL) platform wholly developed by the author. Apps 4 EFL uses a variety of open web technologies to mold creative commons data into effective and engaging English language learning activities. The outcomes of these activities can be easily tracked by teachers, and integrated into assessment procedures and grading rubrics. The benefits of web-based language learning have been expounded over the past few decades by the likes of Warschauer, Shetzer & Meloni (2000), Son (2007, 2008), Levy (2009), and Godwin-Jones

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(2016). Godwin-Jones specifically states a preference for web-based apps over other alternatives, explaining that “...the open standards route still presents the same level of interactive functionality [as platform-specific apps].” (Godwin-Jones, 2016, p.9). One of the goals of the Apps 4 EFL platform is to continue to build upon the web-based innovations which have preceded it by providing pedagogical activities with intuitive and effective interfaces.

In this paper, I first discuss the concept of Creative Commons data, and talk about the kinds of data utilized by Apps 4 EFL. Next, I give an overview of some of the pedagogical activities provided by Apps 4 EFL. Finally, I present the results of an attitudinal survey delivered to four classes of Japanese university students (n=84) who used the site for 15 weeks to study English. I conclude with the argument that Apps 4 EFL increases language learners’ motivation and ability by engaging them with authentic and highly interactive language experiences (Son, 2008).

## **CREATIVE COMMONS DATA**

### **What is Creative Commons Data?**

Creative Commons data (Creative Commons Corporation, 2015) includes texts, images, videos, audio files, etc. that are distributed under a Creative Commons license. There are several variations of the license, which can include limitations on use for commercial purposes, an obligation to acknowledge the original author, and an obligation to distribute any adapted data under the same conditions. In general, Creative Commons data can be used for educational purposes without fear of breaching copyright.

### **Wiki Texts**

Apps 4 EFL offers integrated access to three different wikis: the native English Wikipedia ([en.wikipedia.org](http://en.wikipedia.org)), the Simple English Wikipedia ([simple.wikipedia.org](http://simple.wikipedia.org)), and the English news wiki ([en.wikinews.org](http://en.wikinews.org)).

The various wikis are made available under an “Attribution-ShareAlike 3.0 Unported License”, which means anybody can share and adapt the data as long as they attribute the wiki used, and make available any adapted data under the same conditions as the original license. A vast number of texts are available from these wikis. The English Wikipedia ([en.wikipedia.org](http://en.wikipedia.org)), for example, has over 5,300,000 articles as of March 2017, while the Simple English Wikipedia, written for and by learners of English, has over 123,000 articles.

### **TED Talk Videos**

Apps 4 EFL utilizes a selection of subtitled TED Talk videos ([www.ted.com](http://www.ted.com)). These videos are made available by TED under an “Attribution NonCommercial NonDerivative” license. This means they can be used for non-commercial purposes as long as TED is attributed, and the videos are not edited, cut or altered in any way. TED has over 2100 videos as of December 2015, on a variety of engaging topics within the fields of science, technology, sociology, psychology, and a number of other disciplines.

Because TED videos are intended for native speakers of English, Apps 4 EFL utilizes English language subtitles supported with L1 keyword translations in order to make the

videos more accessible to intermediate level English language learners.

## **Pair Sentences**

The Tatoeba Corpus ([www.tatoeba.org](http://www.tatoeba.org)) is an online database of example sentence pairs in a wide array of languages. The database is made available under a Creative Commons “Attribution” license, which means the Tatoeba Corpus must be acknowledged in any activity that reuses or adapts the data. As of March 2017, the database contains over 5.6 million sentences in up to 275 languages.

The whole database is downloadable from the site (<http://tatoeba.org/eng/downloads>), however, it is not in a very usable format, and contains many sentences which are not relevant for English learners. A more convenient database containing only sentences with English translations was created by the author, and is utilized by Apps 4 EFL.

## **Quizlet Flashcards**

Quizlet ([www.quizlet.com](http://www.quizlet.com)) has accumulated one of the biggest collections of vocabulary flashcards on the internet, with over 6.4 billion term/definition pairs as of March 2017 (Quizlet, 2017). The license conditions of Quizlet flashcard sets are not explicitly stated to be Creative Commons. However, many of the facilities of the site are in accordance with Creative Commons philosophies, including the ability to copy, export and embed sets uploaded by other users. Users who do not wish their sets to be viewable by others can easily make them private. Copyright breaching sets are removed from the site in accordance with the provisions of the Digital Millennium Copyright Act. Therefore, the implied license seems to be that any public sets can be freely used for educational purposes.

The Quizlet API ([www.quizlet.com/api](http://www.quizlet.com/api)) is utilized in order to integrate Quizlet flashcards into the Apps 4 EFL platform, and provide free learning activities and tracking facilities that are not available through Quizlet itself.

## **Apps 4 EFL’s Web-Based Language Learning Activities**

Apps 4 EFL uses open web technologies in order to deliver a number of English language learning activities. These include:

- Cloze tests
- Listening gap fills
- Vocabulary quizzes
- Automated speech recognition (ASR) powered speaking activities
- Pop-up translations
- Sentence translation activities

Each of these activities will be discussed in turn.

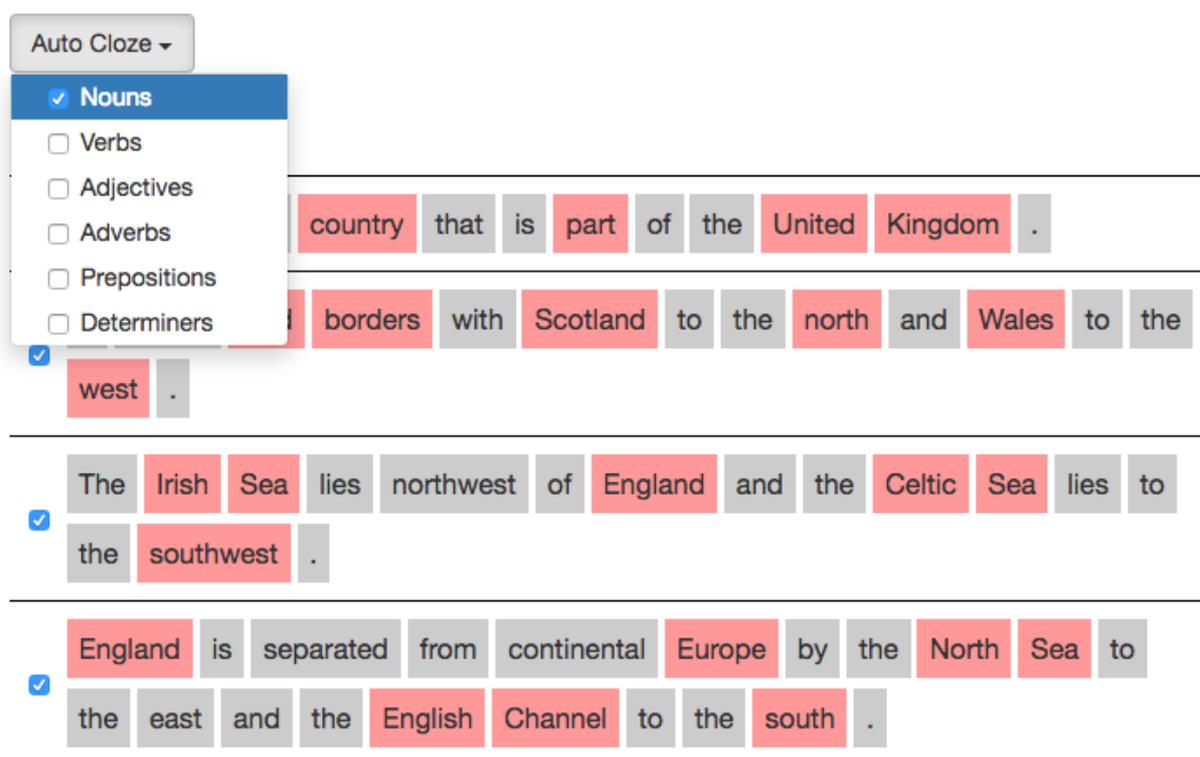
### ***Cloze Tests***

Apps 4 EFL offers the ability to automatically generate a cloze test for any Wikipedia article. Cloze tests can be used to effectively assess learners’ vocabulary knowledge and reading comprehension skills (Read, 1997). They also allow readers to develop their ability to

use contextual clues to fill gaps in incomplete messages (Wonghiransombat, 2012).

Apps 4 EFL automates the cloze test creation process, and allows learners and teachers to dynamically generate cloze tests according to their own preferences. Figure 1, below, shows an automatically generated cloze test for the Simple Wikipedia article titled “England”.

**FIGURE 1**  
**Apps 4 EFL’s “Cloze Test” activity**



Words can be removed from texts either manually or according to part-of-speech (nouns, verbs, adjectives etc.).

### ***Listening Gap Fills***

The cloze test generation activity also provides the functionality to listen to excerpts from articles. Audio is provided by a naturalistic text-to-speech engine, made available as part of the Web Speech API (World Wide Web Consortium, 2012, October 19). It is currently compatible with desktop and mobile versions of the Google Chrome and Safari web browsers (text-to-speech technology is yet to be implemented in the Mozilla Firefox web browser). Listening gap fills not only provide similar pedagogical value to cloze tests, but also engage and improve students’ listening abilities.

### ***Vocabulary Quizzes***

Apps 4 EFL provides vocabulary learning activities for any Quizlet ([www.quizlet.com](http://www.quizlet.com)) flashcard set. Various types of activities are currently available,

including: “Match Select”, “Match Type”, and “Dictate”. The “Match Type” activity (Figure 2, below) requires users to spell out answers to prompts, which can be English definitions, L1 translations, or images.

**FIGURE 2**  
**Apps 4 EFL’s “Match Type” activity**



The “Match Select” activity requires learners to select from a set of possible answers the correct term for a given definition, translation, or image, while in the “Dictate” activity, students listen to the term being spoken (via text-to-speech) and then type the term they hear.

Deliberate vocabulary learning via flashcards allows students to memorize large numbers of words in a short time, and strengthens learners’ vocabulary retrieval skills (Milliner, 2013). In addition, online flashcards have been shown to be both more enjoyable and more motivating than traditional pen and paper methods (Spiri, 2008).

### ***ASR Powered Speaking Activities (“Vocalyzer”)***

Apps 4 EFL uses both the speech synthesis and the speech recognition functionalities

of the Web Speech API (World Wide Web Consortium, 2012) to provide speaking pronunciation and fluency activities for any Quizlet flashcard set, wiki text, or video transcript. This activity is called “Vocalyzer”. It is currently compatible with desktop (Mac/PC) and mobile (Android) versions of Google Chrome. Figure 3, below, shows the “Vocalyzer” speech recognition activity for a set of Tatoeba example sentences containing the word “English”.

Functionality is provided for allowing the student to listen and repeat words and phrases from the relevant resource. Words which are recognized correctly by the computer are highlighted green, and those not recognized are highlighted in red.

**FIGURE 3**  
**Apps 4 EFL’s “Vocalyzer” activity**

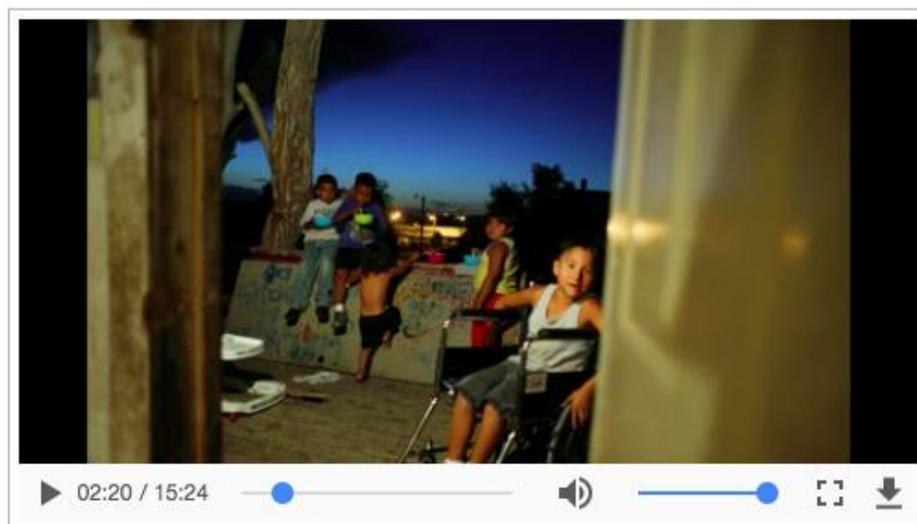


The speech recognition functionality of the Web Speech API is still a relatively new technology, and its effectiveness for English language pedagogy is still being investigated. However, the research that has already been done suggests that there are a variety of uses for the technology applicable to EFL contexts (Daniels, 2015). In addition, voice recognition has been shown to be an effective technique for improving pronunciation and fluency skills, especially where feedback is given on errors (Neri, Strik, & Cucchiarini, 2003).

### ***Pop-up Translations***

Apps 4 EFL provides automatically generated “Pop Translation” activities for any user- submitted text. Figure 4, below, shows the activity being used in conjunction with viewing a TED Talk video.

**FIGURE 4**  
**Apps 4 EFL's "Pop Translation" activity**



I'm here today to show my photographs of the Lakota. Many of you may have heard of the Lakota, or at least the Sioux. The Lakota are one of many prisoner of war camps now called the subject of today's slide show, is Black Hills in South Dakota. It is so

Lakota

Save Listen

n. ラコタ族, ダコタインディアンのも西にある部族; ラコタ語; ラコタ族のメンバー

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Apps 4 EFL's "Pop Translation" activity overcomes a variety of problems associated with the traditional method of consulting a dictionary, which is "at best time-consuming, and at worst impossible" (Yap & Baldwin, 2007, p.125) and usually requires users to be able to lemmatise the word before its meaning can be found.

With pop-up translations, the manual effort of looking up each word can be avoided. Apps 4 EFL also provides the functionality to save words for later study purposes, as well as check the pronunciation of words via text-to-speech.

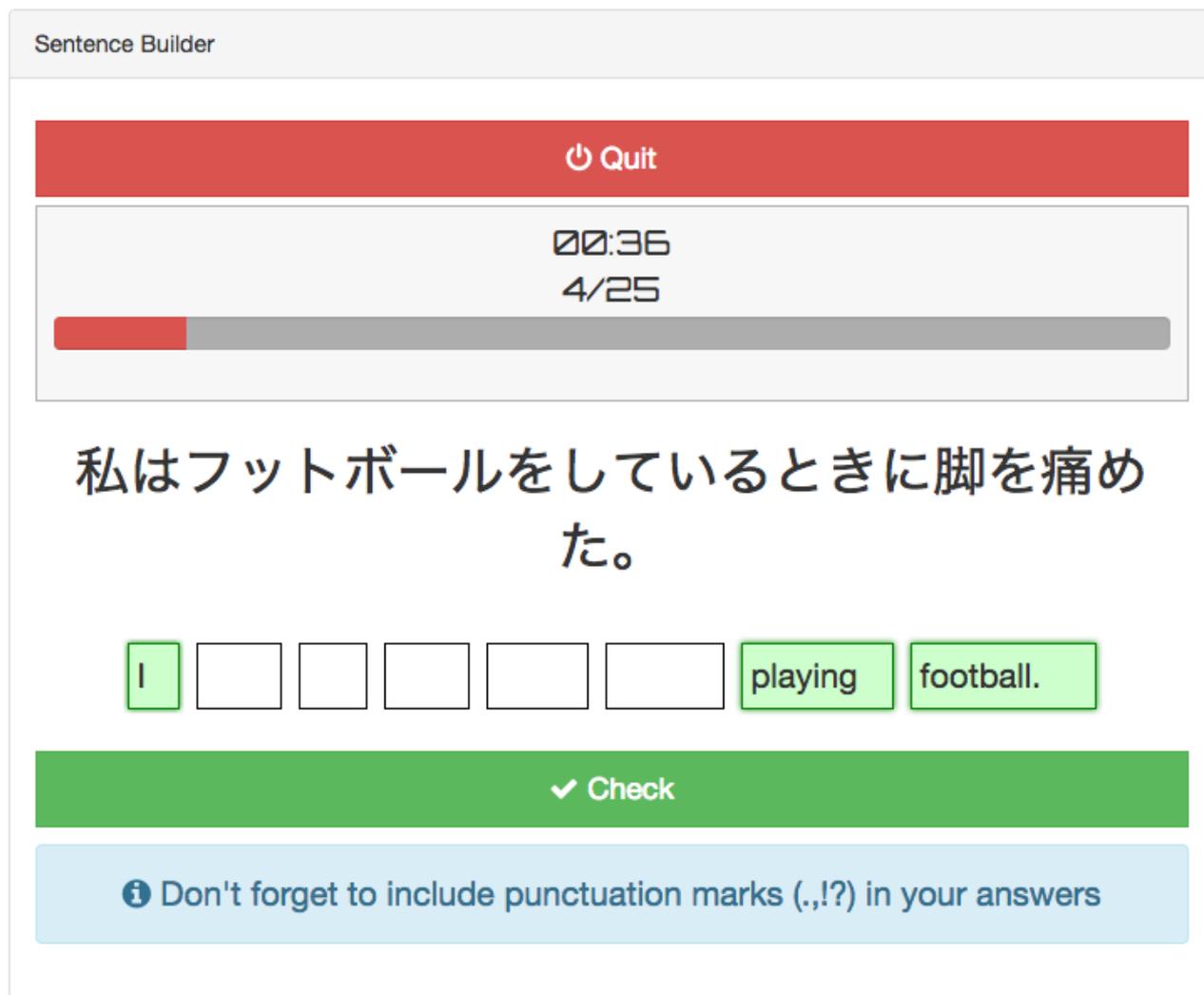
### ***Sentence Translation Activities ("Sentence Builder")***

Apps 4 EFL provides a sentence translation activity called "Sentence Builder" (Figure 5, below). In this activity, the student is presented with a sentence in their L1, and is required to translate the sentence into English. The activity is scaffolded in a variety of ways, including showing the number of words the correct translation contains, and giving immediate feedback on whether a word entered is correct or not.

Although disfavored in recent language acquisition theory, translation is still a useful manipulative language learning technique in the sense that it helps improve linguistic awareness (Cook, 2001), and has a significant positive effect on vocabulary retention

(Hummel, 2010).

**FIGURE 5**  
**Apps 4 EFL's "Sentence Builder" activity**



## SURVEY

An attitudinal survey was administered to four classes of Japanese university English learners (n=84) who used the site for one university semester (15 weeks) to assist with their English studies. The survey aimed to reveal the students' attitudes to using technology to study English in general, along with their perception of the effectiveness of each of the Apps 4 EFL study activities. It was administered at the end of a 15-week semester of English study.

## Participants

Two of the classes (n=55) were medical English classes conducted at Jikei University School of Medicine. The students were upper-intermediate and advanced level English learners. One of the classes (n=13) was a TOEFL writing exam preparation class, consisting

of intermediate to upper-intermediate level students. The final class (n=16) was a basic writing class consisting of elementary to intermediate level students. The TOEFL writing and basic writing classes were conducted at J. F. Oberlin University. The use of Apps 4 EFL was required in order to improve students' participation grades, as well as a method of assessing vocabulary knowledge, and listening and reading skills.

## Questions

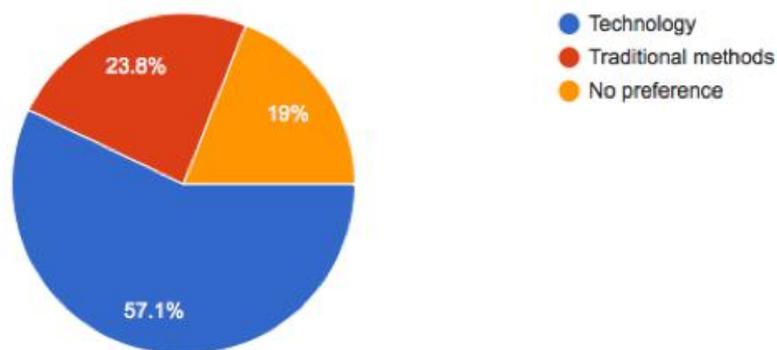
The survey was administered digitally, with students responding during the final class of the semester, and addressed the following questions:

- 1) In general, did the students prefer studying English with technology, or with traditional methods;
- 2) How effective, on a five-point Likert scale ranging from "No effect" to "Very effective", were specific Apps 4 EFL activities in improving the students' English ability;
- 3) Whether the students had any other comments about their experiences using Apps 4 EFL to learn English.

## Results

Figure 6, below, summarizes the responses to Question 1:

**FIGURE 6**  
**Responses to Question 1: "In general, do you prefer studying English with technology, or with traditional methods?"**



As we can see, almost 60% (48 respondents) expressed a preference for technology over traditional methods as a means of studying English. Approximately 20% (16 respondents) had no preference, and almost a quarter (20 respondents) expressed a preference for traditional methods.

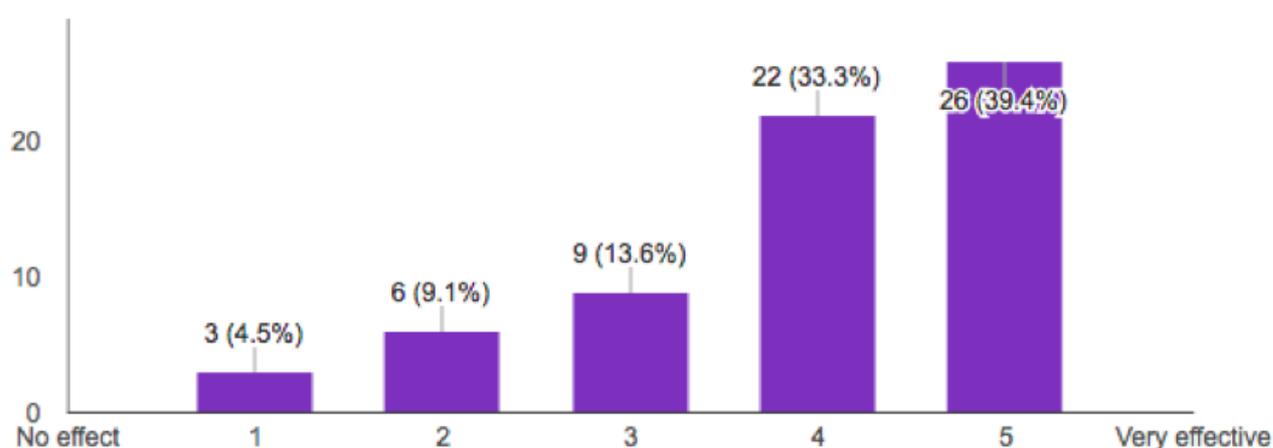
When administering the survey, "technology" was orally defined as any use of technology to study English. Examples given included studying digital flashcards, reading online, engaging with speech recognition and text-to-speech activities, etc. "Traditional methods" were defined as any method of learning English that did not entail the use of

technology. Examples given included studying vocabulary from paper flashcards, reading books, speaking in English to classmates, etc.

According to these results, we should at the very least create opportunities for those students who prefer technologically enhanced methods of study over more traditional methods. Recommending the use of Apps 4 EFL, and other WBLL tools certainly seems to be in accordance with Japanese university students' language learning preferences.

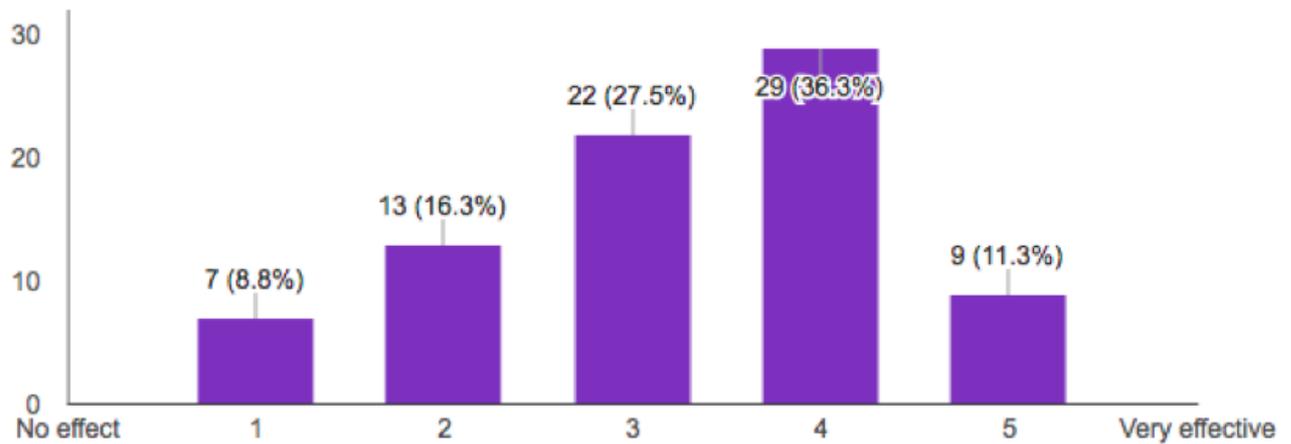
Figures 7 through 12, below, summarize the responses to Question 2 a) through g), i.e. respondents' perception of the effectiveness of Apps 4 EFL's study activities. Responses were measured on a Likert scale, ranging from 1 for "No effect" to 5 for "Very effective". Because not all students utilized all activities, the number of responses to each question varies. Students were instructed not to respond if they hadn't utilized a particular activity.

**FIGURE 7**  
**Responses to Question 2 a): "How effective was the Vocalyzer activity"?**



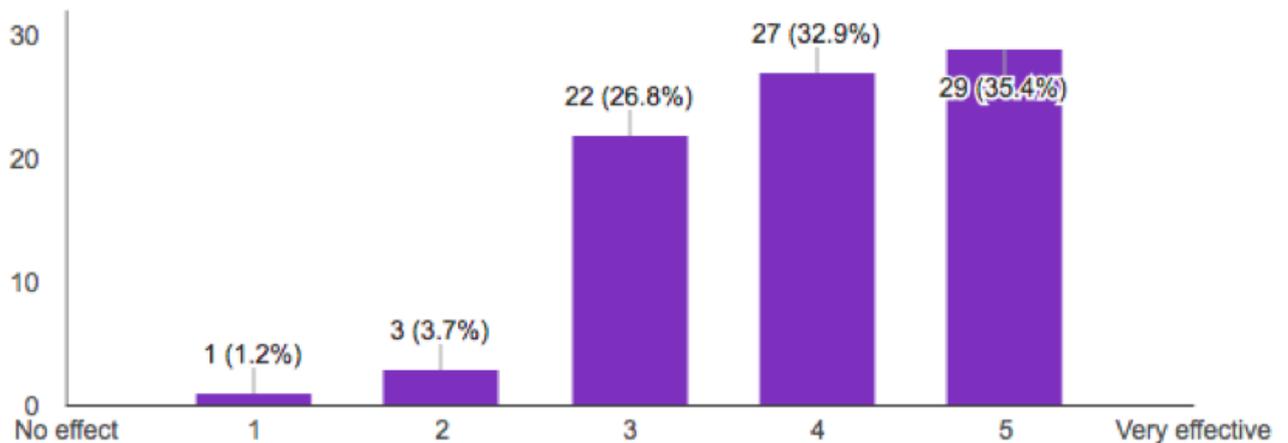
The results in Figure 7 show that the majority of students rated the effectiveness of the Vocalyzer activity very highly, with over 72% rating the effectiveness at either a 4 or a 5, although 3 students rated the activity as having "No effect".

**FIGURE 8**  
**Responses to Question 2 b): "How effective was the Cloze test activity"?**



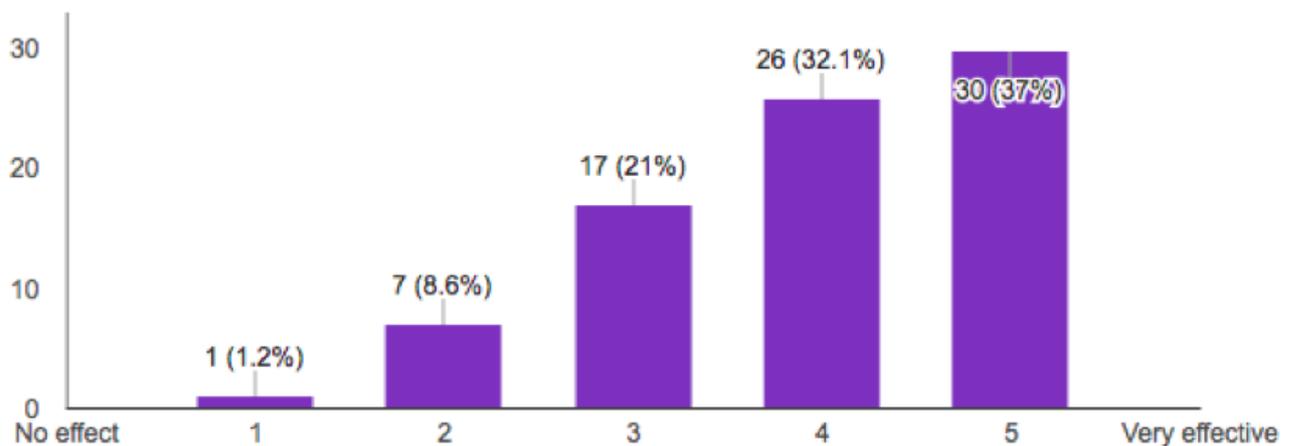
The cloze test activity was generally considered to have at least some effect, with approximately 75% rating the effectiveness at a 3, 4 or a 5. However, a significant number of respondents were clearly not convinced of the effectiveness of the activity, with approximately 25% rating its effectiveness at only a 1 or a 2.

**FIGURE 9**  
**Responses to Question 2 c): “How effective was the Match Select activity”?**



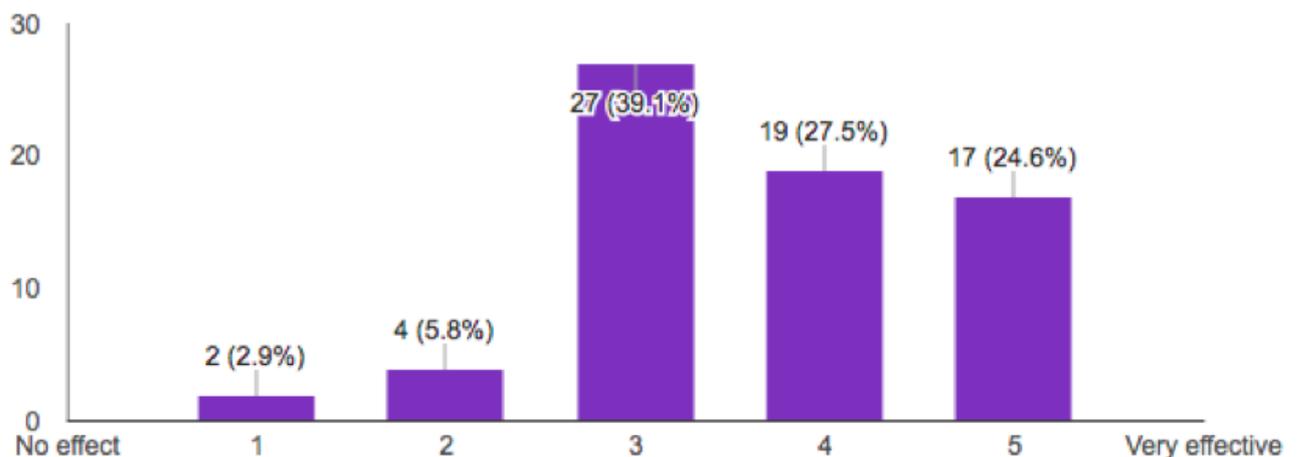
The perceived effectiveness of the Match Select activity was overwhelmingly high, with over two thirds of the respondents rating it at a 4 or a 5. Only one student considered the activity to have no effect on their English ability.

**FIGURE 10**  
**Responses to Question 2 d): “How effective was the Match Type activity”?**



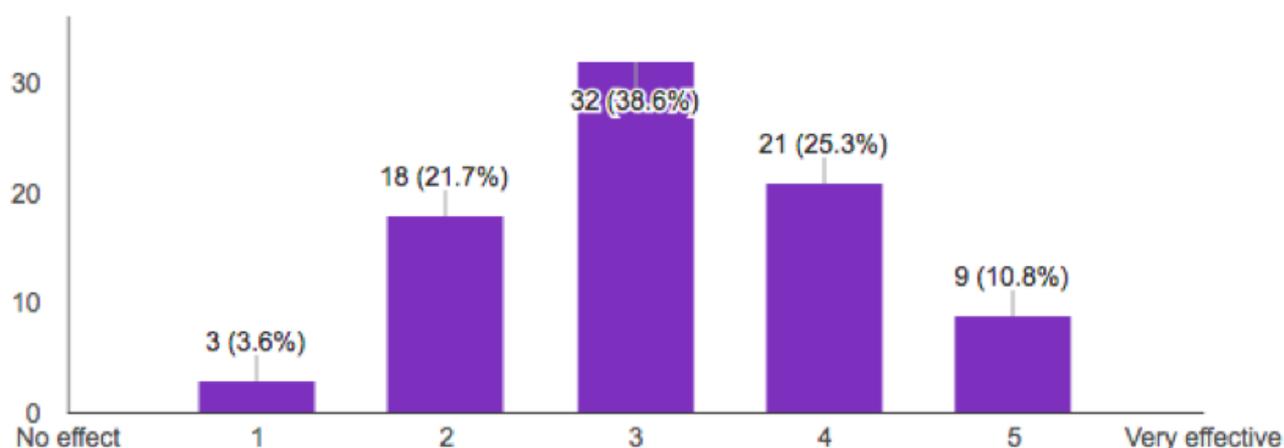
The Match Type activity was also perceived in general to be very effective, with almost 70% of the respondents rating its effectiveness at a 4 or a 5.

**FIGURE 11**  
Responses to Question 2 e): “How effective was the Dictate activity”?



The Dictate activity was deemed to be a little less effective than Match Type and Match Select, but still considered to be at least somewhat effective, with over 90% of respondents rating its effectiveness at a 3, 4 or a 5.

**FIGURE 12**  
Responses to Question 2 f): “How effective was the Sentence Builder activity”?



The Sentence Builder activity was also deemed to be at least somewhat effective by the vast majority of respondents, with almost 75% rating its effectiveness at a 3, 4 or a 5.

Most respondents did not answer Question 3 (“Any other comments about your experience using Apps 4 EFL to learn English?”), however a few responses were received, including the following (spelling and grammar errors corrected):

- A. “The high scores system was very good because my motivation went up.”
- B. “Thank you for introducing technological means for English education. It was very new and gave me great joy and motivation to study English (I didn't even think I was 'studying')”
- C. “I could find out my English level and I could gain new knowledge about English vocabulary and grammar.”
- D. “Generally, I had so much fun with Apps 4 EFL. I think it is effective to use technology to memorize English words because it is more enjoyable and it helped me to memorize words easily.”
- E. “It was totally enjoyable to use it. Thank you!”
- F. “I didn't think I could learn English by using devices, but I found that I could study and memorize English. It was very effective and interesting!”
- G. “Apps 4 EFL was useful for me to improve my spoken English. Thank you!”
- H. “I really liked to study English with Sentence Builder and it is the best way to learn English for me. I will keep studying with Apps 4 EFL.”
- I. “I think it was useful in order to improve our speaking ability.”

The comments speak to the motivational impact of the Apps 4 EFL activities (e.g. A, B), along with perceived improvements to English vocabulary knowledge (e.g. C, D), grammar (e.g. C), and speaking ability (e.g. G, I).

## CONCLUSION

Apps 4 EFL aims to help English teachers and learners utilize the vast amount of language data freely available on the Internet. Its purpose is to provide, free of charge, engaging and effective activities for English learners, the outcomes of which can be easily

tracked and monitored by teachers.

Existing research speaks to the effectiveness of the activities offered by Apps 4 EFL, and the research conducted for this study shows that most of the activities are perceived to be very effective by the students themselves.

Being the developer of the site in conjunction with actually teaching classes has opened up the possibility to respond quickly to students' feedback, and experiment with different types of activities. Some technologies (e.g. the Web Speech API) are still in the nascent stage, and suitability for English language education is still being investigated. Further investigation is required to more fully understand the impact of these technologies, and to discover whether perceived effect is in accord with measurable effect.

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