

Developing Mobile Application of Interactive English Pronunciation Training to Improve EFL Students' Pronunciation Skill

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Abstract

Pronunciation is one of language components that is crucial to support acceptable communication in English. However, in English as Foreign Language settings, English pronunciation has received less attention on the teaching as the treatment has mostly been given to grammar, vocabulary, and the four language skills. This leads to English pronunciation errors by many EFL students like those in Indonesia. To deal with this matter, a mobile pronunciation training app needs to be developed as nowadays mobile applications are becoming popular and are used by most of EFL students in Indonesia. This paper aims at elaborating how the mobile English pronunciation app is developed through Research and Development method.

Keywords: English Pronunciation, mobile apps, EFL.

1. Introduction

English has become a major part of education and has been taught to almost all levels of education in Indonesia. Generally, in Indonesia, English is branched to English for Academic Purpose (EAP) and English for Specific Purpose (ESP). EEPIS as one of vocational colleges provides English subject matter as ESP.

By the end of the college year, students of EEPIS are required to present their final project reports in English. During the presentation it was found that the students incorrectly pronounce the English words that became strange to hear. Furthermore, based on the observation done in the daily teaching and learning activities in the classrooms, it was found that the students frequently mispronounced the English phonemes in terms of vowels, diphthongs, and consonants. The data were obtained when students were doing presentation, reading aloud, asking question, answering question, responding other students' statement, and delivering opinion orally. This pronunciation problems actually occur not only in the ESP area but also in the EAP area.

The pronunciation errors happened in terms of vowels, consonants, and diphthongs. Based on the findings on the daily class observation and field notes during the presentation of the students final projects, the errors are such as the word buy which was pronounced, by the students, as /bui/ instead of the correct and acceptable one /bʌɪ/, language as /lenjwɪj/ instead of the correct one /læŋgwɪj/, and make as /mæk/ instead of the correct one /meɪk/ [8].

These pronunciation errors are influenced by the native language of the learner [1]. Many researchers agree that mother tongue of one learning English affects the pronunciation of the target language that is later called interference. Many Indonesians learning English pronunciation tend to encounter difficulties due to differences in pronunciation such as the sound of /z/ that rarely occurs or used in Indonesian words. For example, the word bags is pronounced as /bæks/ while it should be pronounced as /bægz/. Phonem /g/ and /z/ are difficult to produce by Indonesians as they rarely pronounce phoneme /g/ of the letter "g" when it appears in the end of a word like "mandeg", that is translated as "stop" in English, that is pronounced as /mandek/.

This becomes clear that pronunciation has received less attention so that the students pronunciation skill could not increase and tends to be ignored. The worse thing is that the students did not realize that they produced the wrong pronunciation so that it is fossilized and it will be difficult to cure.

To deal with this problem, more exposure and intensity of pronunciation training are needed. However, simply adding more specific meeting for pronunciation class or adding more teaching duration in the class could not be done as the allotted time for the teaching and learning process has been given to the other subject matters set by the curriculum board.

In this all-mobilized era, it indeed becomes one of answers to this demand. Mobile devices like smartphones and tablet computers are becoming popular among societies in Indonesia and the world. Mobile apps like those running in Android and iOS platform are popular and have lots of users [2,4]. Therefore, it is reasonable when it comes to developing a mobile pronunciation application so that users can learn English pronunciation and improve their ability without having to attend a specific class on English pronunciation where they have to provide and spend special time and place [3].

By so, it is important to develop such an application which can provide teaching on basic English pronunciation and evaluation that focus on the most pronunciation errors by the EFL students as the users [5].

2. Previous Works

Bott, A. (2005) conducted a research on computer-aided self-access pronunciation materials designed to teach stress in American English. He then suggested providing EFL/ESL students with drilling of phoneme and

pronunciation test in order to build students awareness of the correct phoneme and pronunciation.

Dekaney, E. (2003) studied the effect of computerized versus classroom instruction on the phonetic and pronunciation of English words. He encouraged the next researcher to develop computerized lesson and drilling test for pronunciation teaching because the teaching of pronunciation requires the presence of audio assistance. Therefore, the best way he suggested for improving EFL or ESL students pronunciation ability is by using computerized instruction.

The similarity between this research and the previous works is in the drilling and computerized instruction approach. The difference is that the android app developed in this research is adjusted and narrowed to the commonly mispronounced English words. This consideration is underlined by interference theory in which the similarities between the source language and the target language will facilitate the learning and the difference will interfere with the learning.

3. Method

This research utilized Research and Development method. In general, this research was conducted in four steps, namely: observation, application development, try-out, and revision. The detail of the steps goes as follows:

Step 1. In this step the researcher (1) gathered some data which were English words that were frequently mispronounced by students of Electronic Engineering Polytechnic Institute of Surabaya (EEPIS); (2) developed the content for the app; (3) designed the draft of the android app with the content that is English pronunciation test especially those frequently mispronounced by EEPIS students; (4) had the draft evaluated through expert validation by some expert with related expertise to the research problem; (5) revised the draft based on the expert validation result.

Step 2. This step was the try-out of the app by some students of EEPIS and whoever potentially uses the app. The users used the app and then contributed report and suggestion on the app's flaw obtained during the try-out so that the findings in the try-out were used to refine the quality of the app. The flow of the research is shown in Figure 1.

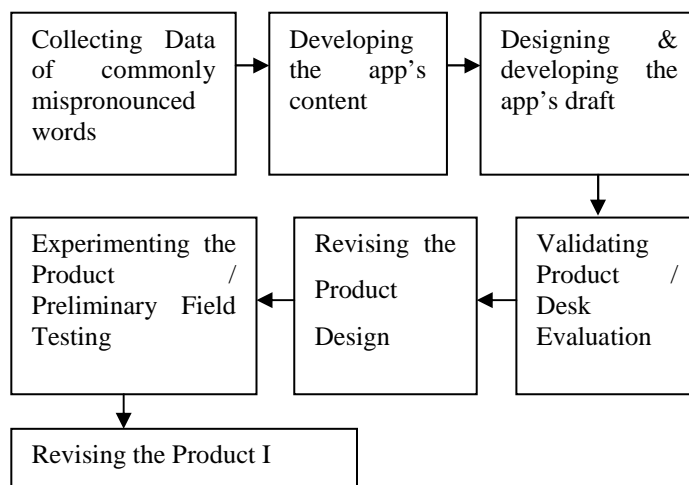


Figure 1. Flow of the research.

4. Findings

Equations and figures must be numbers based on the

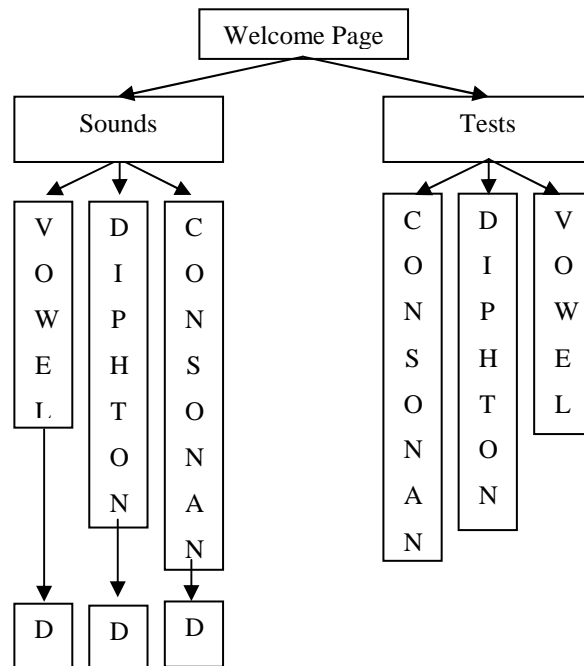


Figure 2. Flow of the app

The app starts with a welcome page and consists of links to train first with the sound of English phonemes or directly take the test. The link to the page of sounds brings the user to the English phonemes page which consists of English phonetic symbols that come with each sound. This includes the phonemes of vowels, consonants, and diphthongs. The user can tap a phonetic symbol to hear the sound of the phoneme as each phonetic symbol represents the phoneme. This page aims at introducing the users to various English phonetics and phonemes so that they can build their phonetic and phoneme awareness. These activities are established within the belief that interactivity constructs input retention for the users as they are involved not only cognitively but also physically. This way, the users are unconsciously undergoing *constructivism* theory in which they are developing their own question of what they are learning and trying to find the answer by actively involved in the learning environment [7].

Sounds

Vowels					MORE
i:	ɪ	ʊ	u:	e	ə
ɜ:	ɔ:	æ	ʌ	ɑ:	ɒ

Diphthongs				MORE
ɪə	eɪ	ʊə	ɔɪ	
əʊ	eə	aɪ	aʊ	

Consonants						MORE
p	b	t	d	f	ɟʒ	
k	g	ʃ	v	θ	ð	
s	z	ŋ	g	m	n	
ŋ	h	l	r	w	j	

Figure 3. Screenshot of phonetic transcriptions

Users can go further by tapping the *more* button to go to the detail page of vowels, or, consonants, or diphthongs. The detail page provides with the sound of each phoneme and is assisted with an example word of the phoneme and the phonetic transcription of the word. For instance, phoneme /I/ appears in word *hit* that is assisted with the phonetic transcription /hIt/. This page is provided with direct links to the homepage, test page, and detail page of vowels, consonants, and diphthongs so that when a user want to skip or go to another page, the user can just tap the link button of the desired page. With these pages, users are expected to compare the sounds of each phonemes and the typical words spelling of English phonemes. For example, a user may compare the difference of phoneme /I/ and /i/ which respectively appear in word *hit* and *sheet*.

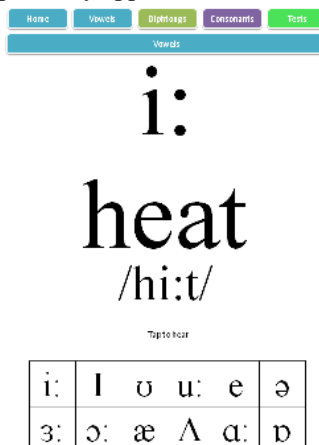


Figure 4. Screenshot of vowels page

After surfing the detail pages of vowels, consonants, and diphthongs, users are assumed ready to take test. The test is the main feature of this pronunciation app that focus on the common error pronunciation by EFL users. Hence, the test materials are based on the commonly mispronounced words obtained in the observation phase from more than 100 respondents who are EEPIS students.

The test utilizes an approach of error and correct pronunciation. The scenario is that a user will be given a word and has to choose the correct pronunciation out of two or three options, one as the correct pronunciation and the others are the distractors. The distractors are selected based on the actual mispronunciation by the EFL students. Once the user selects an answer by tapping the radio button and tap the submit button, the evaluation appears and shows whether the answer is correct or wrong. If the answer is correct, the page congratulates the user, and if the answer is incorrect, the page shows that the answer is incorrect and shows the correct one so that the user can learn by comparing them.

For instance, as shown in Figure 5, the correct pronunciation of the word *success* is /sʌkses/. However, based on the data gathered during the observation, all sample of the respondents mispronounced it as /sɒkses/ and /sʌkses/. Hence, in this sample test, the incorrect pronunciation of the word *success* become the distractor answers. Once the user opt the wrong choice that based on his/her knowledge of the pronunciation so far was correct will soon realize that it has been wrong so far. In that state, the user will construct a question in their mind [7] to search for the correct one. Then, they will try to compare between the correct pronunciation of the word *success* and the incorrect one. This is when the *constructivism* theory is applied in this instructional test.



5. Conclusion

This android app of English pronunciation error by EFL students tries to approach the teaching of English pronunciation through building awareness of differentiating between the correct English pronunciation and the common errors by them by introducing the difficulty levels [9]. Hence, the app is built under the rationale of behaviorism, cognitivism, and constructivism theory [6,7]. The challenge and surprises element provided by the app are expected to plant more retention and awareness effects to the users so that they consciously pronounce the correct pronunciation and avoid fossilization of error pronunciation.

References

- [1] Suwartono, S. (2006). *Pembelajaran Pelafalan Bahasa Inggris Melalui Teknik Sulih Suara**. Cakrawala Pendidikan, (1).
- [2] Suchato, A., Chetsiri, V., Skulareemit, V., Thongprasert, P., & Punyabukkana, P. (2011, July). *Multilingual AAC on Android*. In *Proceedings of the 5th International Conference on Rehabilitation Engineering & Assistive Technology*(p. 5). Singapore Therapeutic, Assistive & Rehabilitative Technologies (START) Centre.
- [3] Suhartono, D., Calvin, C., Yustina, M., Kurniawati, S., Soeparno, H., & Purnomo, F. (2013). *Implementation Of Voice Recognition Technology On English Learning Application By Self Learning Based On Android Device*. In *Prosiding Seminar Nasional Sains Dan Teknologi Fakultas Teknik* (Vol. 1, No. 1).
- [4] Sharma, P. (2012). *Sounds: The Pronunciation App*. *ELT Journal*, 66(3), 407-409.
- [5] Lee, S. T. (2008). Teaching pronunciation of English using computer assisted learning software: An action research study in an institute of technology in Taiwan (Doctoral dissertation, Australian Catholic University).
- [6] Felix, U. (2005). E-learning pedagogy in the third millennium: the need for combining social and cognitive constructivis approaches. *ReCALL*, 17(01), 85-100.
- [7] Guo Zong; Kuo, Tai-tzong. 2004. The charm of exquisite English enunciation during interpretation – applying behaviorism, cognitivism, and constructivism to the techniques on rapidly helping students to achieve accurate pronunciation and beautiful intonation. the sixth meeting of the South Asian Institute of Technology in English Teaching Papers, Chungli. Tamkang University Department of English
- [8] Mathew, I. (2003). Errors in pronunciation of consonants by learners of English as a foreign language whose first languages are Indonesian, Gayo and Acehnese. *Monash University Linguistics Papers*, 3(2), 29.
- [9] Kane, M., Cabral, J. P., Zahra, A., & Carson-Berndsen, J. (2011). Introducing difficulty-levels in pronunciation learning. In *SLaTE* (pp. 37-40).

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