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# USING ACCENT REDUCTION SOFTWARE TO IMPROVE ENGLISH BEGINNERS' PRONUNCIATION

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**Abstract - This paper discusses to use of accent reduction software to improve English beginners' pronunciation. The majority of research in computer assisted learning highlighted the use of a computer application in English pronunciation teaching or training. However, most of the studies focus on improving English pronunciation at a university level, while studies to improve English beginners' pronunciation with a software aid is limited. In fact, the foundation of pronunciation skill should be taught earlier to provide better English pronunciation in the future. In this study, the author implemented an accent reduction software to improve the first year Junior High School English pronunciation in Palu, Central Sulawesi. The study used experiment method. A class with 30 English beginner students was administered pronunciation improvement using ELSA Speak software for 16 weeks with 90 minutes duration each meeting. The software was installed in the school desktop and notebook as well as in other mobile devices belong to students to allow independent practices. Meanwhile, a controlled class was taught as usual by an English teacher. A pre-test was given to both classes before the treatment was embarked and after the treatment was completed, a post test was again given to both classes. In addition, survey questionnaires were also distributed to all students after treatment sessions completed to understand their perception on the use of software in teaching pronunciation. Statistical calculation showed that pronunciation achievement of treatment class is significantly higher than control class. Survey results also show that students have higher satisfaction regarding motivation, imitation, flexibility and independence learning.**

**Keywords - *Accent Reduction Software, English Teaching, Pronunciation, English Beginners***

## I. INTRODUCTION

The emergence of computer applications in education can be traced back to a study carried out by Kurland & Kurland [1]. At the beginning, computers were used merely for administrative purposes in education with hardware became the main instrument. Later, many software, such as tutorials, simulations, and educational games, was emerged to support education. The first generation software for educational computing pioneers were generally proponents of some form of program instructions. Within English teaching context, many software has been used to teach English vocabulary, speaking, and pronunciation.

Pronunciation is the act of manner of pronouncing words; utterance of speech, a way of speaking a word, especially a way that is accepted or generally understood, and a graphic representation of the way a word spoken, using phonetic symbols [2]. A process to pronounce an English sound is difficult for a student who learns English as a foreign language in particular when a teacher is also not a native speaker. Failure to pronounce an English sound properly might result in misunderstanding of meaning.

Relating to this case, Fraser (2000) argues that pronunciation is one of the most important language skills. Pronunciation is important not only to communicate ideas easily but also to understand other speakers properly. It is particularly important to integrate pronunciation into beginner classes as it will, from the very beginning, help avoid the risks of fossilization and stabilization of pronunciation habits [3]. In other words, pronunciation plays central roles in speech recognition, speech perception, and speaker identity [4]. Conversely, limited pronunciation skills can decrease learners' self-confidence, restrict social interactions, and negatively affect estimations of a speaker's credibility and abilities [5].

As the pronunciation is significantly important, teachers have implemented various technological aids in an English pronunciation classroom to help students improve their pronunciation performance. Computer based technology, such as accent reduction software, has been used in pronunciation practices and it has the best quality for sound giving the students the chances to look at articulatory movements to producing sounds [6]. Due to its positive outcomes, this type of software has been used to improve university students' pronunciation performance [e.g: 3, 7].

However, limited studies have been carried out to understand how this software can be used to improve beginners' English pronunciation. Young students are considered able to master English pronunciation faster compared to older students [8, 9]. Previous researchers (e.g: Collier, 2006) found that younger students produce better pronunciation when they learn a foreign language at a younger age. The author argues that better foundation of pronunciation skill should be taught earlier to provide better English pronunciation in the future.

As a result, the author will use an accent reduction software, called ELSA Speak, to improve pronunciation of

beginners English learners (grade seventh) at a Junior High School. This software can guide the teachers to provide a better learning environment for the learners. It also provides learners with a free environment where they can have unlimited access to a repetitive practice on pronunciation at their own pace [10]. In this study, the author will answer the following research question:

> *"Does the use of accent reduction software will improve the pronunciation of the 7th grade students of Junior High School students?"and how they perceive the use of software to improve pronunciation skill?*

The aims of this study are to shed light on the use of an accent reduction software in teaching English pronunciation in an interesting environment. The use of this software can enhance pronunciation practice because of the rampant use of mobile devices, such as smartphones and tablets, by students and teachers. More desktop and laptop are also available in a school environment.

The structure of this paper is as follows. The second section presents previous studies related to the use of accent reduction software in teaching pronunciation. The third section presents theoretical perspective related to the use of accent reduction software in pronunciation teaching. Section fourth discusses the methodology of this study. Meanwhile, results and discussions are presented in the fifth section. Conclusion and limitation of this paper are presented in the final section.

## II. PREVIOUS STUDIES

Research on pronunciation using computer software has been carried out by many researchers all over the world [e.g: 3, 7, 11]. Gorjian, et al., [11], for example, investigated the effect of CALL (Computer Assisted Language Learning) in teaching prosodic features to EFL (English as a Foreign Language) learners. The findings suggest that applying CALL could improve EFL learners' pronunciation. The result also shows that learners who practiced stress and intonation by using CALL approach are more successful than the learners who are taught through a traditional method. The difference between their research and this research is that this research will be carried out in a beginner English learners classroom environment, which is the first grade of junior high school. Meanwhile, previous studies were carried out at university levels.

In addition, Kawai & Hirose [12] discussed the role of speech recognition technology for teaching Japanese double-more phonemes to other language speakers. They discovered that this technology can help learners measure the phoneme durations and as well as monitor their progress by telling the learners (a) what the mistake was, (b) the severity of the error, and (c) how to correct the mistake. The difference between Kawai's research and this research is on the scope of the research. In that research, they specifically measure the phoneme duration.

Furthermore, Wang & Munro [13] experimented an investigation the impact of CAPT (Computer Assisted Pronunciation Training) on learning English vowels. There was a total of sixteen Mandarin and Cantonese EFL learners who are improved in pronouncing these sounds within three months of training. The result of their study shows that by applying CAPT the Chinese EFL learners' understanding of the vowel contrasts could be increased. The difference between their research and this research is the scope. Their research was focusing on the English vowel. Meanwhile, this research is only focusing on the dental fricative and alveolar fricative sound.

## III. ACCENT REDUCTION SOFTWARE FOR PRONUNCIATION IMPROVEMENT

Accent reduction software is an application that can be installed on a smartphone, tablet, notebook, and personal computer which is used as for learning or practicing a new accent or the sound system (or phonology) of a language or dialect. The software is functioned as Computer-Assisted Accent Modification which can supplement traditional accent modification by providing users with drill opportunities and feedback in various forms of pronunciation [14]. The software helps beginning speakers of English as second language (ESL) students to improve phoneme production after training with the Speech Works program by a non-speech-language pathologist (SLP) trainer.

Ferrier, Reid & Chenausky (1999) in their studies at a university found that students who had weekly one-on-one sessions with a teacher and independent practice showed greater gains on both pre- and post measures than controls. Students also showed even greater gains in their pronunciation and help students increase correct phoneme production and that automatic monitoring of independent practice motivates learning [14].

When accent reduction and text-to-speech software is integrated into classrooms, it can help learners of English improve their pronunciation due to factors such as practice sessions in which the learner can take risks without stress and fear of error and immediate feedback.[3]**.** In this case, the software is able to specifically raise the students' awareness of the prosodic elements such as intonation, which was visually illustrated in various pitch contours. Nevertheless, this new technology should be treated as a mediating tool to stimulate learning and thinking rather than as something that can replace the teacher's job [10]**.** In another word, the use of the software is not intended to replace a teacher but it enhances the teacher performance in teaching.

Findings from Iranian EFL students indicated that integrating computer-based materials in a classroom had a significant effect on the students' pronunciation skills. Teachers are functioned as facilitator and mediator in teaching pronunciation. The teachers help students to try more to overcome their pronunciation difficulties through the use of software. The students' pronunciation can be improved by awareness and repetition of the sounds from the software [6].

Common methods used in teaching pronunciation through accent reduction software include a distinct user feedback (such as vocabulary trainer playing a reference pattern) or widely rely on fully automatic methods (speech recognition regarding the target language) causing evaluation mistakes, in particular, across various English phonetic and phonemic sound [15]. Teachers can compiled an audiovisual database and set up an automatic system for the accent reduction (such as ELSA Speak) by using recordings English speakers pronunciation of English words, phonemic, and phonetic.

## IV. METHOD

This study applied an experimental method, pretest–posttest controlled group research design [3, 16]. Two classes of the seventh-grade students of a Junior High School were recruited. One class with 30 students was used as a treatment class. Meanwhile, another class with also 30 students was functioned as controlled class. The school has seven classes of grade seventh students, but only two classess were randomly selected for this study.

On the first meeting, an informed consent form was signed by the students agreeing to participate in this study. After students signed the form, the teacher (the author herself) administered the pre-test. One class (controlled group) followed the traditional instruction and was taught by a usual teacher, another class (experimental group) followed traditional instruction which integrated the use of accent reduction software for pronunciation practices.

The treatment with an accent reduction software, ELSA Speak, was given for 16 weeks with 90 minutes duration each meeting. The software was installed in the school desktops and notebooks, as well as other mobile devices, belong to students to allow independent practice. Meanwhile, a controlled class was taught as usual by an English teacher.

During the treatment sessions, the experimental class students were also taught with other skills of English such as grammar, speaking, reading, and listening to keep pace with the school curriculum. However, pronunciation related to words sound, phonemic, and phonetic was assisted using the ELSA Speak software. Meanwhile, the controlled class students were not assisted with the software in their pronunciation practices.

After 16 weeks of meetings, a post-test was given to both experimental and controlled classes. All the pre-test and post-test scores obtained by experimental and control groups was analyzed using the SPSS software package using the one-way ANOVA test to establish whether there are significant differences between the two classes of participants at the 0.05 alpha levels.

Survey questionnaires were also distributed to all students after treatment sessions. The objective was to understand their perception on the use of the software in teaching pronunciation. The survey covered students' perception on four aspects; motivation, imitation, flexibility and independence learning relating to the software use.

## V. RESULT AND DISCUSSION

The results of this are presented in two sub-section which are the teaching result and software survey result. Both results are discussed as follows:

### *A. Teaching Result Using Software*

Prior given treatment using the accent reduction software, both experimental and controlled class were given pre-test to understand students pronunciation skill. The result of the test shows that average score of experimental and controlled class students were 58 and 56. The highest score of experimental class students was 80 and the lowest score was 36, while the highest score of controlled class students was 81 and the lowest score was 31. The results show that students from both classes have relatively similar in pronunciation ability.

Following the pre-test result, the author gave sixteen weeks treatment to experimental class students using the accent reduction software tool, while controlled class students was taught with conventional method by a teacher. After completing the treatment, the author again gave another test (post-test) to find out the students progress in pronunciation mastery.

The results of post-test of both classes show that there is a significant different in pronunciation ability between both classes. The average score of students in controlled class was 71 with the highest score was 83 and the lowest score was 59. On the other hands, the average score of experimental class students was 85, with the highest score was 92 and the lowest score was 78.

Moreover, the author computed the t-counted to find out the significant difference pronunciation ability between the experimental and control class students. The author found that the t-counted is 3.538. To find out the significant difference of the test results, the author compared the value of the t-counted with the value of the t-table. The degree of freedom (df) of the table is $n_x + n_y - 2 = 30 + 30 - 2 = 58$ with 0.05 level of significance cannot be found in the t-table.

The researcher obtained that the value of t-counted was 3.538, and the value of t-table was 1.832. Thus, the result proved that the value of the t-counted is higher than the value of the t-table (3.538 > 1.832). This means there was a significant difference of pronunciation achievement between the experimental and controlled class students. The findings highlighted that the implementation of Accent Reduction Software in teaching pronunciation of beginner students can significantly improve students ability.

The result above highlighted that the use of technology in teaching pronunciation can improve students achievement [17, 18]. Technology as teaching aid supports teachers and students improvement. For example, technology makes teaching more systematic, creative, less time consuming, greater student involvement, and greater instructor availability [19]. In this study, the use of accent reduction software save teacher time because the software can be used independently and more material is also available in the software.

This findings confirm previous studies, such as Kılıçkaya

[3], Seferoğlu[7], and Gorjian, *et al.*, [11], who found that using accent reduction software can improve university students' English pronounciation ability. However, this study implemented accent reduction software to improve beginers English pronounciation. In other words, accent reduction software can be used to all level of English pronunciation learners. This study has contributed to the extension of previous study in area of using ICT for English pronunciation teaching.

*B. Students' Perception*

A survey to find out students perception on the use of accent reduction software in teaching pronunciation was given to experimental class students. The survey contained 12 questions with covered four aspects perception, which are motivation, imitation, flexibility and independency. The survey used five Likert scale types from strongly agree, agree, slightly agree, slightly disagree, disagree, and strongly disagree.

The results of the survey show that 85 of students admitted that they very motivated by the use of software in pronunciation teaching. Another 90 percent of students revealed that the use of accent reduction software enable them to imitate an English sound produced by a native speaker. Regarding students perception towards flexibility of the software use, the survey shows that 81 percent of students agree that the software has high flexibility use because it can be installed in various type of devices such as a desktop, a laptop, a tablet, and a Smartphone. Finally, the survey also shows that 87 percent of students agree that learning pronunciation through the use of accent reduction software increases their independency in learning. The author suspect that this is due to the students can practice pronunciation by him/herself at anytime and anywhere without assisted by a teacher.

The use of technology in education can improve students' motivation [20, 21]. In this study context, students were very enthusiasm because they can listen to an English sound from a native speaker and then imitate the sound. Furthermore, students' independency in learning English pronunciation was also increased as found in previous studies [e.g: 22, 23]. They do not have to rely on the teacher during learning English pronunciation.

## VI. CONCLUSION AND LIMITATION

This study potentially contributes to the development of using technology in English teaching. Students might able to practice pronunciation in a more independent way because the accent reduction software can be installed on their mobile devices. The teachers can play roles as a facilitator and mediator rather than as an instructor. The classroom resemble as learning festivals rather than as teaching spectacles [24] because the learning process is dominated by students actively. The literature also supports the notion that adoption of accent reduction software in teaching English pronunciation can improve students performance in pronouncing English words, phonemic and phonetic sounds.

This study also represents a starting point for critical thinking in using a technology in teaching pronunciation to English beginners. This early study is developed based on accent reduction software use theories that have evolved from the study of pronunciation teaching at university students and may, therefore, have limitations in its applicability to beginner students at Junior High School.

**Zana Chobita Aratusa** earned her bachelor degree in English Education from University of Tadulako. She has published two articles in national journals. She finished her senior high school from Footscray City College in Melbourne Australia. She actively involved in various English teaching clubs in Palu.

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