IMPROVING THE ABILITIES IN ENGLISH PRONUNCIATION OF MATHAYOMSUKSA 1 (7th GRADE) STUDENTS BY USING MULTIMEDIA*

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ABSTRACT

The objectives of this research article were 1) to develop multimedia with English pronunciation for class grade 7 with 80/80 performance criterion, 2) to compare English pronunciation abilities of Mathayomsuksa 1 students before and after the learning using the English pronunciation multimedia, 3) to survey the students' satisfaction with learning using the English pronunciation multimedia for Mathayomsuksa 1 students. The sample of this study consisted of 25 Mathayomsuksa 1 students in Ban Nongpan School, Na Dun District, Maha Sarakham Province selected by using the purposive sampling technique. The instruments for data collection in this research consisted of 7 learning plans, the English pronunciation multimedia for Mathayomsuksa 1 students, an achievement test and a satisfaction questionnaire. The statistics used for data analyses were mean, standard deviation and dependent sample t-test for testing hypothesis.

The results of the research were as follows: 1. the efficiency of the multimedia to improve English pronunciation skills for Mathayomsuksa 1 students, developed by the researcher, was 89.03/89.60, which was higher than the defined criterion. 2. The English pronunciation abilities of Mathayomsuksa 1 students was higher than before learning using the English pronunciation multimedia with at the 0.05 level of significance and corresponding with the hypothesis, and 3. The satisfaction of Mathayomsuksa 1 students with the learning using the English pronunciation multimedia for Mathayomsuksa 1 students, showed the averagesatisfaction score at high level, indicating that the students were highly satisfied.

Keywords : 1. Developing the Ability to English Pronunciation 2. Pronunciation 3. Multimedia 4. Students

1. Background and Problem Statement

In the world today, learning foreign languages is important and necessary for daily life, as it is an important tool for communication, education, acquiring knowledge, work and entertainment. Developing understanding on diverse cultures and visions of the world community leads to have friendship cooperation with other countries. It also helps students understanding themselves and others better, as well as understanding differences of languages and cultures, traditions, thoughts, societies, economies, politics and governments. Moreover, students have good attitude towards using foreign languages and can use foreign languages for communication, and have ability to access various knowledge easier and wider, and have vision in living their lives (Office of the Basic Education Commission, 2008).

As mentioned above, Thai education policy has recognized the importance of English instruction in schools. Students must have listening, speaking, reading and writing skills, and be able to use English to communicate effectively. In language instruction, students need to learn various elements of language, such as, vocabularies, grammar, reading, writing and speaking. However, the first important thing that makes students succeed in learning English and be able to use English in communicating with people in the world clearly and correctly, is having skills in correct pronunciation which support students to achieve communication effectively. Many researchers had conducted studies on pronunciation, states that in learning a foreign language, knowing only vocabularies and sentence structures is not enough. If students are unable to combine those vocabularies into sentences and speak out in a way that a native speaker could understand, implying that they are unable to communicate the language. Particularly English words, if they are pronounced incorrectly, a native speaker would not understand or misunderstand. Pronunciation is important and essential, because if the students pronounce incorrectly from the beginning, it would be difficult to make correction (Binturki, 2008).Correct pronunciation ensures that the message is communicated effectively. Fries (1970) states that in learning any language, the students must first learn how to pronounce the language correctly. Ellis (1997) states that knowing grammars and vocabularies are important for students but they need to pronounce the structure or those vocabularies correctly. Moreover, good pronunciation

is the first goal of the students. Gilakjani (2011) points out that if the speakers have unacceptable pronunciation, their words will not be understandable and makes them unable to communicate successfully. According to Garrigues (1999) the fundamental effective voice communication is a good pronunciation. If a person speak clearly and accurately, the audience will understand easily what the speaker is trying to express.

From the author's experience in English instruction of Mathayomsuksa 1 students in Ban Nongpan School, Na Dun District, MahasarakhamProvince, the students had difficulties in pronouncingfricative consonants /f/,/v/,/θ/,/ð/,/s/,/z/,/ʃ/,/ʒ/, affricate consonants /tʃ/,/dʒ/, tap or flap consonant /r/, and lateral consonant /l /in English. The students could not distinguish the sounds /ʃ/from / tʃ /, for example, the words "ship" and "chip". The students would pronounce /s / instead of /ʒ /, such as, the word "vision". In addition, the students were confused in pronouncing /l/ and/ r/ at the beginning of the syllable, for example, the words "rice" would be pronounced "lice", and the word "right" would be pronounced "light". Such problems corresponded with Chaipa, K. (2005), who indicated the problems in English consonant pronunciation, which highlighted the difficulties in pronunciation of single consonants at the beginning of syllables. There are 21 single consonants in Thai language. However, when comparing to English, there are additional 9 sounds that do not exist in Thai language, namely, /g/, /v/, /θ/, /ð/, /z/, /ʃ/, /ʒ/, /dʒ/, /r/.The/g/ phoneme is a consonant that sounds like "kor" for Thais. Despite the facts that the "kor" sound in Thai language is non-resonant, whereas the /g/ sound in English is resonant. The /v/, /θ/, /ð/,/ z/,/ʃ/, /ʒ/sounds are fricative consonants, that are prevalent in English, while there are only 3 sounds, namely,]f, s, h] are found in Thai language. The /dʒ/ sound is pronounced similarly to the /tʃ/ sound, but the /tʃ/ sound is non-resonant. And the /r/ sound is pronounced as the /l/sound.

In this research, the author aimed to develop an English pronunciation multimedia to improve English pronunciation for phonemes /f /, / v /, / θ /, / ð /, / s /, / z /, / ʃ/, / ʒ /, / dʒ /, / tʃ /, / l/ and / r/ for Mathayomsuksa 1 students in Ban Nongpan School, Na Dun District, Mahasarakham Province. This research study also included

the assessment on the effectiveness of the English pronunciation multimedia, and the students' satisfaction with learning using such pronunciation multimedia.

The use of multimedia in teaching and learning is not only able to maintain student's interest but also able to make them enjoy learning. Furthermore, Cairncross and Mannion (2001) found that multimedia had the potential to create high quality learning environments. The key elements of multiple media, user control over the delivery of information and interactivity can be used to enhance the learning process and create integrated learning environments. Multimedia, therefore, was recognized to be an effective tool for instructional purposes (Burden and Byrd, 1999). Consequently, adopting multimedia technologies in teaching process would bring new motivation and environment to the students, and engage them more in the learning, leading to a more successful result.

2. Research Objectives

2.1 To develop an English pronunciation multimedia for Mathayomsuksa 1 students, to met the efficiency criterion of the 80/80.

2.2 To compare English pronunciation ability before and after learning by using the English pronunciation multimedia of Mathayomsuksa 1 students.

2.3 To survey the students' satisfaction of the learning by using the English pronunciation multimedia for Mathayomsuksa 1 students.

3. Research Benefits

3.1 This research aimed to develop an English pronunciation multimedia tool that would assist the students to pronounce English correctly.

3.2 The multimedia tool would encourage the students to learn English and increase their confidence in speaking English.

3.3 The study results would be beneficial for schools in acquiring for new English teaching approaches.

3.4 The research obtained instructional media that are efficient, interesting and modern.

4. Research Methodology

4.1 Research Design

The research procedure was conducted according to the One Group Pretest - Posttest Design (Thongbu, S., 2007). In a one-group pretest-posttest design, a pretest was constructed to evaluate participants' background knowledge (O_1), followed by learning using the English pronunciation multimedia for Mathayomsuksa 1 students (X), then the posttest was conducted (O_2).

4.2 Population

The target group in this research was 25 Mathayomsuksa 1 students who enrolled in Ban Nongpan School, Na Dun District, Mahasarakham Province under Mahasarakham Primary Educational Service Area Office 2selected by using the purposive sampling technique.

4.3 Research Instruments

The instruments used in this research comprised: 1) Lesson plans. 2) The developed English pronunciation multimedia for Mathayomsuksa 1 students. 3) An English pronunciation test and 4) A satisfaction questionnaire.

4.4 Construction and Efficiency Evaluation of the Instruments

4.4.1 Construction of the Lesson Plans

The lesson plans included English pronunciation in teaching process. The lesson plans consist of 12 phonemes, namely, /f/, /v/, /θ/, /ð/, /s/, /z/, /ʃ/, /ʒ/, /dʒ/, /tʃ/, /r/, /l/ which were divided into 7 topics. Conducted the instructional plans that corresponded to the objectives and teaching methodology. There were seven lesson plans, with a total of 14 hours for 7 weeks, 2 days per week, and 1 hour per day in the English class. Each lesson plan consisted of a heading that consisted of the number of the lesson plan; learning strands area; class; topic; time and date; concept use of the plan, objectives of learning and teaching, activities used in the plan, learning processes; materials or media and the assessment of learning. The learning process in the lesson plans consisted of five stages: warm up, presentation, practice, production and wrap up. After that five experts to check the consistency of the plan with learning objectives before the final versions were completed. In terms of the index of item objective congruence (IOC), it was found that the values

was equivalent to 0.60-1.00.Later the plans were adjusted following the comments of the experts. And final plans were used with the participant group.

4.4.2 Multimedia

The stages and steps in the development of a multimedia instructional system are explained in following paragraphs.

Step 1: The pronunciation proficiency tests, a questionnaire and an interview.

Step 2: Selecting instructional approach, the research chose the appropriate approach for teaching students' pronunciation.

Step 3: Designing the multimedia, the multimedia activities

Step 4: Produce multimedia, after the preparing the flowchart and storyboards, the media components such as text, pictures, videos and audio used in the multimedia were produced by using Microsoft PowerPoint.

Step 5: Conduct implementation

In this step, the multimedia prototype was utilized for a tryout study in three steps; 1) individual testing (with three pilot samples), 2) small group testing (with nine pilot samples), and 3) field study testing (with more than thirty pilot samples). The samples in each group are assigned to use the multimedia with suitable duration. After the treatment ended, the multimedia is modified and edited based on problems that occurred during the tryout prototype.

4.4.3 English Pronunciation Tests

1) The English pronunciation test were checked by five experts in the field of English or English language teaching to check the validity of the pronunciation test by using the index of item objective congruence or IOC. The usable items should be 0.5 - 1 in IOC. In terms of the index of item objective congruence (IOC), it was found that the value of each item was between 0.60 and 1.00.

2) The English pronunciation test was found difficulty value from 0.42 to 79 and discrimination was found from 0.22 to 77.

3) The English pronunciation test was again administered to the same group. The English pronunciation test was used to calculate reliability by using Lovett's formula. The co-efficient of reliability was found to be 0.92.

4)Printing a complete test to be used for further data collection with the sample group.

4.4.4 The Criteria for Evaluating Students' Pronunciation

Each student was tested by pronouncing the words. The researcher assessed and gave the scores the tests through five criteria as follows: 1=Very poor, 2=Poor, 3=fair, 4=Good, 5=Excellent

4.4.5 Construction of Satisfaction Survey Questionnaire

The satisfaction questionnaire consisted of three parts. The first part contained questions which collecting the student's personal information; name, gender, age and education. The second part contained three parts of content, multimedia presentation and activity for the students to express their opinions and feelings about the English pronunciation multimedia for Mathayomsuksa 1 students. In this part, they were asked to indicate 5 levels of satisfaction; most, more, moderate, low and very low with the 11 statements addressing three components of satisfaction with English pronunciation multimedia. The third part was the recommendation or suggestions from the learners. It took about 15 minutes for the students to complete all the parts of the questionnaire. By Srisa-ard, B. (2002).

4.4.6 Data Collection

1) In the first week, the participants including 25 Mathayomsuksa 1 students were informed of the purposes of the course syllabus. Then, they were tested by a pretest. The purpose of this pretest was to investigate the background knowledge of the population. The scores of each population were collected as data for this study. The students were pre-tested before every learning lesson.

2) In the second to the eighth week, teaching and learning was carried out, using the lesson plans that the researcher had constructed. One plan covered 2 periods in each week. Within each week, students then learned according to the learning management plan by using English pronunciation multimedia for Mathayomsuksa 1 students developed by the author.

3) In the ninth week, after completing the learning and teaching activities for all units, the researcher gave posttest students. In this posttest the students would pronounce 30 words. The scores were recorded for further data analysis.

4) In the tenth week, the population answered the questionnaire asking about their satisfaction questionnaire on the learning and teaching by the English pronunciation multimedia for Mathayomsuksa 1 students. The scores of the opinions of the participants were collected as data for this study.

5) The data received were then statistically analyzed.

4.4.7 Data Analysis

1) Analyzing the efficiency of the English pronunciation multimedia for Mathayomsuksa 1 students for all 12 phonemes, and the efficiency of the outcome (E_1/E_2), setting the criterion of 80/80.

2) Analyzing and comparing English pronunciation skills of students, who learned by using the English pronunciation multimedia for Mathayomsuksa 1 students before and after the learning.

3) Analyzing the satisfaction level of student's learning which used the English pronunciation multimedia for Mathayomsuksa 1 students by using score rating criteria Patthiyatane, S. (2016).

4.4.8 Statistics Used for Hypothesis in the Research

The statistics used for data analyses were mean, standard deviation and dependent sample t-test for testing hypothesis.

5. Research Results

5.1 Efficiency evaluation of the English pronunciation multimedia

In this section, the researcher evaluated the efficiency of the multimedia tool in improving English pronunciation skills for Mathayomsuksa 1 students. The assessment administered was a formative evaluation for instructional efficiency and a summative evaluation for learners' outcome. The Brahmawong E_1/E_2 formula, based on criteria of 80/80 standard or other evaluation was employed for the multimedia efficiency evaluation. The students' pre-test and post-test scores were compared and were calculated and analyzed by T-test statistic methods to confirm the multimedia efficiency and to examine students' improvement. The results show in efficiency of the English pronunciation multimedia constructed for this research met the set criteria 80/80. (E_1/E_2 = 89.03/89.60).

Table 1 Efficiency of the English pronunciation multimedia (E_1/E_2).

Efficiency of the English pronunciation multimedia (E_1/E_2)	Full scores	$\bar{x}$	S.D	Efficiency evaluation
The efficiency of the process (E_1)	70	62.32	1.41	89.03
The efficiency of the products (E_2)	30	26.88	1.30	89.60

Note: $\bar{x}$ = Mean; S.D. = Standard Deviation

       From Table 1, the efficiency of the English pronunciation multimedia, developed by the researcher, in improving English pronunciation abilities for Mathayomsuksa 1 students was found to be higher than the defined criterion, with the $E/_1E_2$ value of 89.03/89.60.

       5.2 Effectiveness of the English pronunciation multimedia in improving pronunciation proficiency

       In this section, the researcher assessed the effectiveness of the multimedia tool in improving English pronunciation for Mathayomsuksa 1 students, by comparing their English pronunciation scores before and after the learning. The result is shown in Table 2.

Table 2 Comparison of the English pronunciation test scores before and after the learning by using the English pronunciation multimedia for Mathayomsuksa 1 students.

Tests	N	$\bar{x}$	S.D.	$\sum D$	$\sum_D 2$	t	p
Pretest	25	15.12	1.59	294	3552	29.62	.000*
Posttest	25	26.88	1.30				

Note: $\bar{x}$=Mean; S.D.=Standard Deviation; D=the difference between posttest and pretest

       From Table 2, Show that students' pronunciation pretest means score was 15.12 and the posttest mean score was 26.88. When comparing between the pretest and posttest scores, it was found that the posttest scores of the students were higher than the pretest scores at the .05 level of significance.

5.3 Students' satisfaction with learning by using the English pronunciation multimedia. The satisfaction of Mathayomsuksa 1 students with the learning using English pronunciation multimedia was at a high level with mean score ($\bar{x}$=4.40, S.D. = 0.19).

6. Discussion

The development of the English pronunciation multimedia for Mathayomsuksa 1 students revealed some significant findings that could be discussed as the followings:

6.1 The efficiency of the English pronunciation multimedia for Mathayomsuksa 1 students was 89.03/89.60, which meant that the efficiency of the multimedia lessons was higher than the set criteria at 80/80. This was because the English pronunciation multimedia which was developed by the author was constructed following the steps of multimedia construction (Kurt,S., 2018). Additionally, the lesson plans assigned to use the multimedia were created in line with the principles of a good lesson plan construction and efficiency evaluation. Therefore, the activities were arranged to support students pronunciation improving within the relaxing classroom atmosphere leading to students' confidence in pronunciation practice (Moonkum, S., 2006; Seema Hasan, E., 2009). Such lessons organized by using multimedia which contain attractive and motivative media such as pictures, video and audio raise students' interest, motivate students' participation in learning activities and make them enjoy learning (Cairncross and Mannion, 2001). These resulted in pronunciation skill improvement during learning each unit and the skill remained high in posttest at the end overall lessons. This finding was congruent with Fei Ping Por (2011) who found that multimedia lessons encouraged students to increase practice of correct pronunciation in a low-anxiety learning environment. It is in line with the finding of Junkerd, R. (2011) who developed a multimedia lesson on English speaking for communication for Prathomsuksa 5 students. She found that the lesson had efficiency at 81.25/82.75, corresponding to the defined criterion at 80/80.

6.2 The English pronunciation scores of the posttests was significantly higher than that of the pretest at the .05 level of statistic. This might be because the multimedia presented both slides and motion pictures, with audio description, music sound, colorful graphics, and clear texts could attract the students' attention, and

stimulate the students to learn, be enthusiastic, and pay attentions, which helped the students to achieve higher learning outcomes (Hofstetter, 2001; Rozinah, 2005). The finding on the effectiveness of the multimedia lessons on students' speaking and pronunciation skills is consistent with the studies of many researchers. Pimwam, K. (2012) and Nipattamanon, J. (2018) used English songs operated by using computer transferring language through songs via multimedia such as pictures, video, and audio. Pimwam, K. (2012) found that students' pronunciation of the final sounds increasingly correct. Meanwhile Nipattamanon's students improved their pronunciation and speaking skills after they learned from the songs through karaoke application. Similarly, Junkerd, R. (2011) was able to improve her students speaking skill by using multimedia for English speaking lessons. The effectiveness of the multimedia on students' pronunciation in this study is also consistent with the findings of some research overseas. Hardison (2004) found the effectiveness of computer-based tool in assisting speech trainings. Banafa (2004) found that the use of interactive multimedia CD-ROM was beneficial in improving the pronunciation and oral communication skills of Arab college students. Fei Ping Por (2011) found that Multimedia Pronunciation Learning Management System could encourage students to increase practice of correct pronunciation in a low-anxiety learning environment, bringing about the pronunciation learning effectiveness and a fun experience.

6.3 Students'satisfaction with learning by using the English pronunciation multimedia was at high level ($\bar{x}$=4.40, S.D.=0.19), showing that the students were highly satisfied with the developed English pronunciation multimedia. This might be due to the developed multimedia to improve English pronunciation ability for Mathayomsuksa 1 students assisted the students in learning, leading to a satisfaction of the learning activities. The use of multimedia in teaching and learning is not only able to maintain student's interest but also able to make them enjoy learning. Multimedia had a potential to create high quality learning environments (Cairncross and Mannion, 2001). Furthermore, Cairncross and Mannion (2001) found that the key elements of multiple media, user control over the delivery of information and interactivity can be used to enhance the learning process and create integrated learning environments. Multimedia, therefore, was recognized to be an effective tool

for instructional purposes (Burden and Byrd, 1999). Moreover, it was because lesson plan helps the learning and teaching process is tightened and systematically. Students join an activity with happy, funny and student-centered learning. The teacher provides learning activities with self confidence (Ruksuttee, S., 2001). As Seema Hasan, E. (2009) mention that planning lesson plan help the teacher know what they should teach for the learners each week or hour, including explore various problems that will help them feel confident in learning management. Consequently, it is clear that, good lesson plans using English pronunciation multimedia can enhance students' pronunciation skills.

7. New Knowledge Gained

The Model of English Pronunciation Multimedia
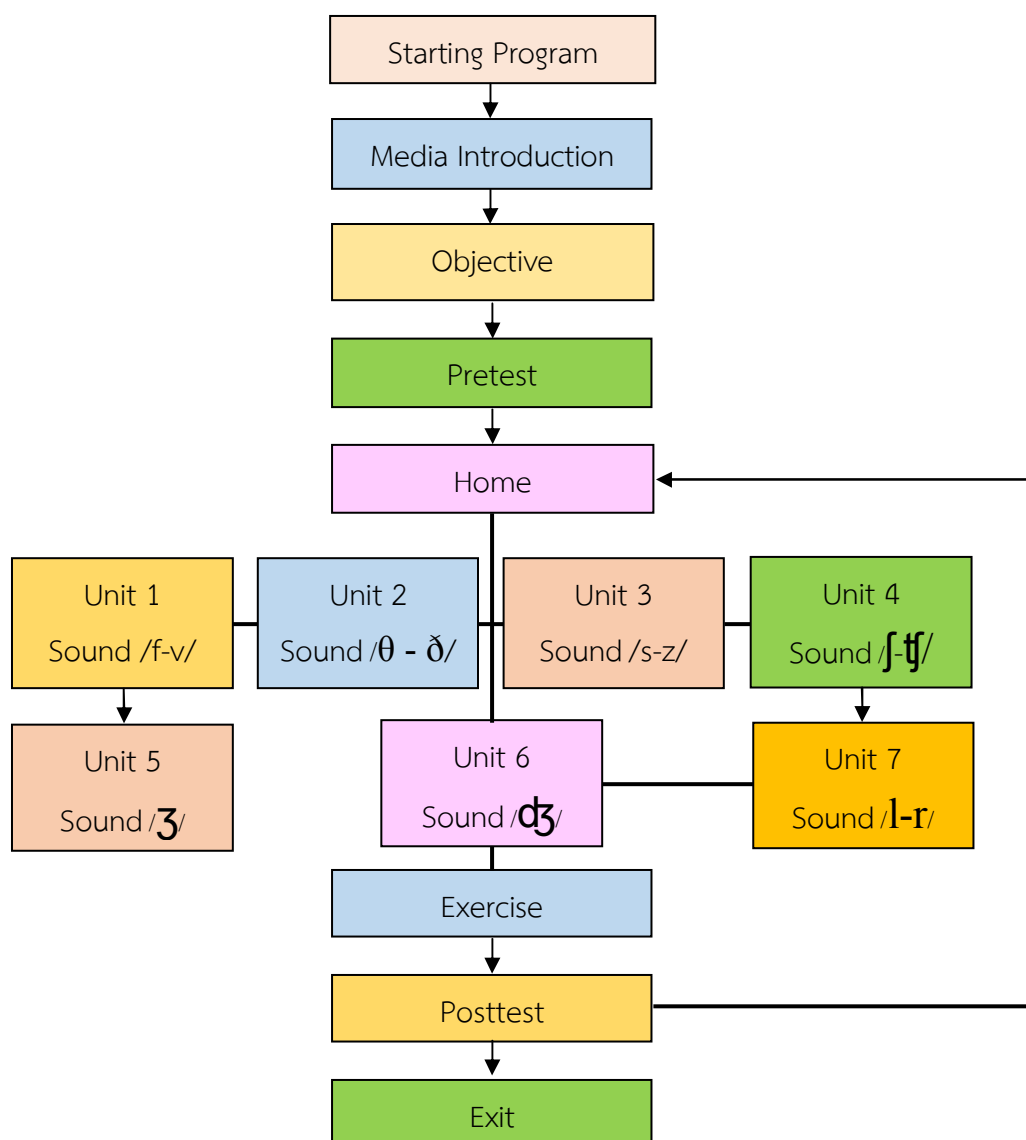
8. Research Recommendations

8.1 Policy Recommendations

8.1.1 The Ministry of Education should have a policy to employ foreign teachers to enable students to learn the correct pronunciation of English.

8.1.2 The Ministry of Education should provide quality teaching materials to help improve students' English pronunciation.

8.2 Implementation Suggestions

8.2.1 Teachers should use the multimedia lessons appropriately with the suitable length of time and regularly switching with other activities.

8.2.2 The content of the lessons using multimedia should be suitable for students' level.

8.3 The suggestion for the further research

8.3.1 The English pronunciation multimedia for Mathayomsuksa 1 students should be developed for other courses, as the research found that students who learned through computer-multimedia lessons could achieve learning results higher than students who learned from a conventional teaching approach.

8.3.2 More varieties of multimedia tools should be developed, such as, a game-based computer multimedia lessons, and computer-multimedia lessons in a form of simulation.

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