

Development of Active Learning Method by “PLEES” Application for Japanese Students in English Class

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Abstract The problem of English language education in Japan is lack of English communication skill as Japanese students’ English pronunciation is less proficient. In additionally, Japanese students’ personalities tend towards quietness or shyness, conservatism, and a high sense of embarrassment at making mistakes to speak English. To helping students practice and resolve their pronunciation problems, *Pronunciation and Listening Enhancing English Skill/PLEES* application is developed regarding to cognitive multimedia learning principle. The experiment activity conducted with the PLEES in pair work in the classroom. The PLEES application utilization was examined by using the post-test questionnaire. The post-test questionnaires were analyzed to find the correlation between PLEES application utilization and students achievement in pronunciation and listening skill, and students’ attitude toward in English learning. It may have been helpful for students to become familiar with the items on the PLEES application in advance so that they could better estimate their pronunciation practices.

Keywords: *English Pronunciation, Cognitive Multimedia Learning, PLEES application, Pair work, Post-Test Questionnaire*

1. Introduction

The development pace of English language as global language had accelerated rapidly between the nineteenth and mid-twentieth centuries throughout the world. In 21st, English has become one of the key competencies for international communication. Many several of the countries have realized that English is an essential skill for their nation in the future, so they have implemented English language into the curriculum. One of these countries that has implemented English language as a Foreign Language into the curriculum is Japan. The sophisticated of a global tool such as ICT (Information and Communication in Japan) tools have created an unprecedented situation for teachers of English in Japan, with the Japanese government proposing to increase the level of English ability in their students. Japanese government changes included implementing introductory English classes in third grade during elementary school and making the subject compulsory from the fifth grade onwards. The English learning education system is still very grades oriented in that a good score in

achieved class simply by passing the English examination that the teacher gives to the students without completing practical exercises or tests in speaking and listening in English. English curriculum has been more than eighteen years since Japan shifted its English teaching in school from the grammar-translation method to the communicative method. Despite the utilization of the communicative method to teach English, that most learners have not improved their English speaking ability. English education in Japan has a controversy about sufficiency of communication skill but it is very contradicted with Japanese students personalities. As a whole, Japanese students’ personalities tend towards shyness, conservatism and a high sense of embarrassment at making mistakes⁽⁴⁾. Clark believes that the poor and incorrect pronunciation of Japanese English teachers, and a flawed methodology which concentrates on “conscious” rather than “acquired” learning accounts for the poor English language proficiency of Japanese students⁽¹⁾. Others have blamed the Japanese methodological tradition of grammar-translation and the focus on language analysis rather than on the communicative use

of the language ⁽³⁾. The culture of Japan is also a contributing factor. For example, typical Japanese culture values reticence ⁽⁶⁾ where an introverted, rather than extroverted, personality is often preferred by the Japanese ⁽⁸⁾. In Japanese schools, students are frequently expected to be passive recipients, rather than expressing their own ideas during class. Students typically do not want to stand out but, rather, prefer to blend in with their peers. Even when they know the answer, many Japanese students will not volunteer to provide answers to questions. Many also feel that it is rude for students to speak out and show how much they know ⁽²⁾ – some fear embarrassment of stating the wrong answer in front of their peers. These cultural values generally have encouraged reticence and helped make Japanese more apprehensive and less willing to communicate in English.

As a result, based on the background of study in this study, we developed *Pronunciation Listening Enhancing English Skill/PLEES* application to help students speak English with the correct pronunciation. It is expected to increase students' motivation in English learning. Based on the background mentioned, the researcher conducted a study concerning the correlation between the PLEES Application and their pronunciation and listening skill, students' attitudes towards English learning.

This study focuses on the correlation between the PLEES application and student's pronunciation, listening and active learning in English. This study outlines: (a) Development of the PLEES application to help students' pronunciation problem, (b) Implementation of the PLEES application in pair work, (c) Evaluation of the PLEES application utilization for students improving their pronunciation.

The remainder of this paper is organized as follows: 1) Introduction, 2) Literature Review, 3) Research method, 4) Results, 5) Discussion, and 6) Conclusion.

2. Literature Review

2.1 Active Learning in Pair Work

Active learning involves providing opportunities for students to meaningfully talk and listen, write, read, and reflect on the content, ideas, issues, and concerns of an academic subject ⁽⁷⁾. Active learning implies an active role of the learner in the process of achieving new knowledge or skills and is associated with the term 'learning by doing'. Many kinds of active learning techniques exist, including; group discussion, collaboration learning, and pair work. In this research, we adapted pair work technique into the experiment.

2.2 Cognitive learning in Multimedia

Cognitive theory and frameworks like Mayer's Cognitive Theory of Multimedia Learning provide empirical guidelines that may help us to design multimedia instruction more effectively. Multimedia learning recommends people to learn more from words and pictures than from words alone to make their learning more efficient, which is one of the multimedia principle methods⁽⁵⁾.

3. Research Method

3.1 The PLEES application development

We developed the *Pronunciation Listening Enhancing English Skill/PLEES* application with the App Inventor 2 for Android. The design of PLEES application is as follows: 1) Listening button, 2) Talking button, 3) Input text button, 4) Back button, 5) Add button, 6) English audio button. Below are the

descriptions for the different commands of PLEES application.

- Using the “*writing sentences*” command in the PLEES application;
 - 1). Type the sentences in text box, for example; type the text “*where do you come from*” and click the ‘add words’ button. All of the text input will be saved into database in view data.
 - 2). Click the back button to see the text in view data button in home menu.
- Using the “*listening sentences*” command in the PLEES application. For using the listening command in the application, we have two methods; the first is by typing sentences in the text box and the second is in listening section.
 - 1). Type the sentences in the text box, and click the *listening* button. This function of *listening* button allows the sentences to be transformed into voice audio.
 - 2). The listening section there are six button, numbered from 1 to 6. Each button function is an English audio file.
- Using the “*speaking sentences*” command in the PLEES application.
 - 1). Click the talking button and the application will show interface “*speak now*” and the user speak must speak into the microphone. The voice input is then converted to text and the text will appear in text box.
 - 2). The voice input should be clear – if the user does not speak clearly then the application cannot recognize the voice, and the application will give notice. “*Didn’t catch that, Try speaking again*”. In that case, the user will be required to speak into the microphone again.

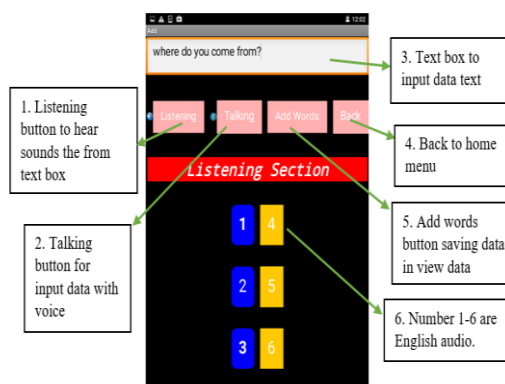


Figure 3.1 The PLEES application user interface

3.2 Participants

Participants in this study were 14 students in fourth grade in level 1 English listening class, in Kyushu Institute of Technology in Iizuka-shi, in Fukuoka prefecture. All students were under 22 years old, with students answering their gender as follows: 8 females and 6 males. Students scored under 370 score in their TOEIC test.

3.3 Experiment Activity

The experiment was conducted for 1 month on the following dates: September 29, October 6, 13, 20, 27 and finally, November 10, 2016. The experiment duration was 30 minutes for each meeting. The research experiment was conducted in pairs with the PLEES application. The participants in these study 14 students, the students divide in pair work, which was 7 students as student A and 7 students as student B. The experiment method rules are explained below:

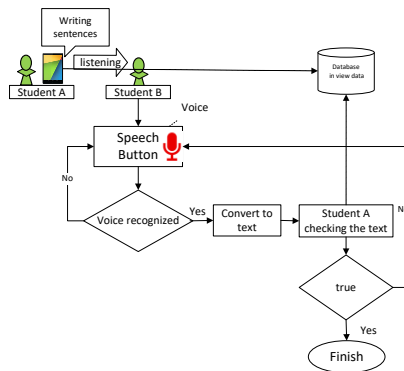


Figure 3.4 Student activity with PLEES application

- First, Student A clicked the input word button, then typed an English sentence of their own creation into the text box and clicked the “add words” button to save the sentence into the database in the view data home. Student A was not permitted to show the sentence to student B.
- Second, Student B listened to the sentences from student A by clicking the “listening” button. If Student B could hear the sound, and student A should delete the word in text box because student B could not see the sentences.
- Third, Student B was required to repeat the sentences while clicking the “talking” button and speaking into the tablet’s microphone. Student B’s voice was converted to text in the text box and the text saved into the database.
- Fourth, Student A checked the text via the view data button, along with the original text. Student B also has the opportunity to identify her/his mistakes in English pronunciation.
- Fifth, after Student B finished the task, student A would complete the same task. This activity is completed alternately.

3.4 Data Collection Procedures

Data collection occurred during the October and November activities. The participants were required to complete and sign an informed consent form translated into their own language; Japanese. The informed consent form specified that participation is strictly voluntary, that participants have the right to withdraw at any time, and that they would not be penalized or lose benefits due to the withdrawal. Moreover, in the consent form, I clearly mentioned that I would protect their confidentiality without asking their names. I collected 14 questionnaires regarding students’ experiences in learning English and post-test questionnaire. The aims of the application development are to analyze the PLEES application effectiveness for students’ to practice their pronunciation and listening in pairs.

In the post-test questionnaire, there were 40 questions divided into four main parts: 1) Part A had 13 questions about using the PLEES application; 2) Part B had 5 questions about the students’ listening skill; 3) Part C had 11 question about students speaking skill, and 4) Part D for 11 questions about students’ attitude toward learning English. The post-test questionnaire embedded Likert scale method and the Likert scales were used for most of the questions dimensions as follows; “1= *strongly disagree*, 2= *disagree*, 3= *average*, 4= *agree*, and 5= *strongly agree*” to examine attitudes by ranking the degree of agreement with an allegation.

3.5 Data analysis procedure

The questionnaire was quantitative method approach. Quantitative data collection methods regarding utilization of the PLEES application about students’ English listening, speaking skill and students’ feeling toward English learning. The Statistical Package for Social Sciences (SPSS) software is used to

conduct the required statistical analysis of the data related to the objective of the study. This was used to find the correlation between the PLEES application

utilization and students achievement in pronunciation and listening skill, and students feeling toward in English.

Table 1. Post-test Questions about PLEES application utilization, listening skill, speaking skill, and students' feeling toward learning English

No	A. The PLEES Application utilization Questions	Questions Coding
1	The application is very helpful for speaking practice	A1
2	The application is very helpful for listening practice	A2
3	The application design interface is easy to use	A3
4	The application is very helpful to correct my pronunciation	A4
5	I am happy to use the Application to improve my listening skill	A5
6	The application motivates me to improve my pronunciation and listening in English skill	A6
7	The application helps me to remember English word by listening and speaking	A7
8	I have to speak clearly and loudly into the tablets	A8
9	I am not shy to practice my pronunciation by using the application than practice with native speaker	A9
10	I can recognize my mistakes in English pronunciation by using this application	A10
11	I can know how to pronounce English word by using this application	A11
12	I am easy to hear English voice from the tablet than human voice (such as teacher, native speaker and foreign student)	A12
13	I want to practice my pronunciation by using the application on the tablet	A13
No	B. Listening Skill Questions	Questions Coding
1	I have a problem in English listening skill	B1
2	I am difficult to hear English conversation	B2
3	I am easy to understand if someone talking to me in English but I am difficult to speak in English	B3
4	I am difficult to hear in English because I don't have many English vocabularies	B4
5	I use ICT tool such as tablet, mobile phone, CDs, computer to practice my listening skill	B5
No	C. Speaking Skill Questions	Questions Coding
1	I am not confident of myself when I speak in English	C1
2	I get nervous and confused when I speak English	C2
3	I have a problem to pronounce in English	C3
4	I want to practice my pronunciation with native speaker	C4
5	I always practice my English pronunciation every day	C5
6	I am shy speaking English because the grammar problems	C6
7	I cannot speak English very well because I do not have many vocabularies.	C7
8	My English pronunciation is below average	C8
9	I believe that I can speak English very well	C9
10	I am happy with my pronunciation as long as people can understand me	C10
11	I hope to speak English with an excellent pronunciation	C11
No	D. Students feeling toward learning English Questions	Questions Coding
1	I like study English in pair work	D1
2	Studying English is important for me	D2
3	Studying English in pair work help me to improve my knowledge in English	D3
4	English has many vocabularies so it is difficult to memorize for me.	D4
5	I think English is very difficult language	D5
6	English is a language in which pronunciation is very important	D6
7	English is a language with a lot of grammar	D7
8	English is fun so I enjoyed it	D8
9	Studying English helps me to get better job/career in the future	D9
10	Studying English helps me for travelling to other countries	D10
11	Studying English is only important in school and university	D11

4. Results

With a view to evaluate the PLEES application is a good software and effective for the students to im-

prove their pronunciation skill, we analyzed the application utilization results between students achievement in listening skill and speaking skill, and students' feeling toward learning English.

Table 2. Coefficients of correlations between The PLEES application correlation results (A) with students English listening (B)

No	Questions Coding	B1	B2	B3	B4	B5
1	A1	-.367	.010	.511	-.171	-.082
2	A2	-.323	-.285	.631*	-.462	-.023
3	A3	-.253	-.247	.605*	-.221	.097
4	A4	-.031	.100	.584*	-.121	.064
5	A5	-.244	-.083	.647*	-.291	.180
6	A6	-.050	.081	.576*	-.220	.626*
7	A7	-.264	-.189	.732**	-.306	.325
8	A8	.028	.230	-.347	.025	.285
9	A9	.318	.149	-.175	-.096	.539*
10	A10	-.143	.139	.523	.137	.037
11	A11	.347	.219	.397	-.111	.631*
12	A12	-.087	-.076	.216	-.076	.465
13	A13	.061	.062	.744**	-.040	.317

* $p < 0.05$, ** $p < 0.01$

Table 3. Coefficients of correlations between The PLEES application correlation results (A) with students English speaking(C)

No	Questions Coding	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11
1	A1	.609*	.010	.021	-.021	.434	-.287	-.446	.765**	.419	.754**	.153
2	A2	.581*	-.285	-.249	-.101	.501	-.214	-.366	.586*	.613*	.701**	0.000
3	A3	.380	-.514	-.239	.007	.392	-.152	-.107	.537*	.631*	.703**	.220
4	A4	.704**	-.163	-.065	.097	.498	-.013	-.148	.635*	.732**	.691**	-.096
5	A5	.493	-.302	-.174	-.029	.636*	-.208	-.394	.740**	.657*	.838**	.080
6	A6	.362	0.000	0.000	.461	.634*	.244	-.338	.772**	.496	.669**	.359
7	A7	.450	-.259	-.104	.056	.571*	-.020	-.359	.825**	.499	.840**	.230
8	A8	-.250	.445	.257	.043	.208	.092	-.245	.087	-.316	-.275	0.000
9	A9	-.521	-.059	-.052	-.070	.394	.406	.047	-.128	.057	-.177	-.153
10	A10	.437	-.266	-.048	-.008	.387	-.058	-.205	.788**	.523	.716**	0.000
11	A11	.122	-.068	-.057	.145	.675**	.356	.073	.337	.575*	.368	0.000
12	A12	.123	-.076	.120	.541*	.173	-.102	.113	.140	.358	.238	.787**
13	A13	.596*	-.285	-.143	.298	.564*	.198	-.117	.778**	.760**	.702**	0.000

* $p < 0.05$, ** $p < 0.01$

Table 4. Coefficients of correlations between The PLEES application correlation results (A) with students' feelings toward English learning (D)

No	Questions Coding	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11
1	A1	.436	.147	.622*	-.620*	-.537*	-.168	-.171	.153	.095	-.159	.339
2	A2	.417	-.118	.715**	-.372	-.496	-.336	-.282	-.142	.088	-.135	.407
3	A3	.391	.076	.528	-.322	-.442	-.229	-.579*	-.080	.134	-.022	.326
4	A4	.420	.077	.706**	-.326	-.130	-.088	-.121	-.114	.056	-.035	.214
5	A5	.520	.026	.739**	-.488	-.499	-.235	-.291	.146	.277	-.039	.445
6	A6	.304	.252	.371	-.354	-.213	-.115	-.132	.629*	.543*	.346	.448
7	A7	.513	.080	.680**	-.458	-.389	-.239	-.381	.210	.295	.108	.554*
8	A8	.195	-.104	-.112	.067	-.216	-.108	.488	.614*	.148	.007	.066
9	A9	.126	.061	-.198	-.017	.186	-.364	-.246	.396	-.007	-.159	.169
10	A10	.492	.057	.684**	-.382	-.265	-.065	-.299	.041	.137	-.011	.148
11	A11	.347	.110	.324	-.131	.064	-.194	-.214	.288	.264	.058	.293
12	A12	-.171	.465	-.174	.055	-.366	.415	.213	.322	.651*	.595*	.055
13	A13	.527	-.153	.733**	-.108	-.194	-.193	-.320	.104	.339	.233	.265

* $p < 0.05$, ** $p < 0.01$

Table 2 showed the coefficients of correlation between the PLEES application utilization and students' listening skill. The data on the C3 question and A5 question showed significant correlation that the PLEES has proved Japanese students have not difficulties to understand in English but they have problems when speaking English and also it is very helpful for listening practice, as can be seen in correlation .631*. The application helps students to correct their pronunciation by using the PLEES application in correlation .576*. Students have some problems in listening and pronunciation so The PLEES application motivates students to improve their pronunciation and listening skill in correlation .576*.

Table 3 showed the coefficients of correlation between the PLEES application utilization and students speaking skill. The data on C8 to A1 showed that students English pronunciation is below average and PLEES application was very helpful for speaking application practice (in correlation .609*), C8 to A4 helpful to correct students pronunciation (in correlation .635*). C8 to A6 have significant correlation between students pronunciation below average and the application motivates students to improve their pronunciation .772**. Students could recognize their English pronunciation mistakes by using the PLEES application in correlation .788**. C8 to A13 had significant correlation about students eager to use this application for practicing their English pronunciation in correlation .778**.

Table 4 showed students feeling toward learning English. The PLEES application was conducted in pair work. In the questionnaire, we asked about studying English in pair work effective to improve students knowledge in English (D3) and the PLEES application utilization. Studying English in pair work helped students to improve their knowledge in speaking practice in correlation .622*, very help full for listening practice in correlation .715** and very helpful to correct students' pronunciation in correlation .706**. The application was helped students to remember English word .739** and students want to use the PLEES application to practice their pronunciation by using tablet in correlation .733**. The application motivates students to improve their English pronunciation and listening (A12) because it helps them to improve job prospects (D10) in correlation

.543*. The application also helps students to remember English vocabulary through listening and speaking, helping students studying at school and university.

5. Discussion

From the post-questionnaire results, The PLEES application has been proved that Japanese students do not have difficulties to understand in English but they get problem to speak in English. The problem of Japanese students lacks in pronunciation because they hesitate to talk and they have had a little experience speaking English. There are some external causes that influence students' production effect of speaking English such as class environment tools and entrance examinations and otherwise there are also internal factor causes that influence Japanese students such as an anxiety, self-confidence, and willingness to communicate. With the PLEES application, Japanese students can practice their vocabulary by typing sentences and hearing the sentences spoken aloud, allowing them to practice their English vocabulary, listening and pronunciation through the PLEES application. Students then find English to be fun and enjoyable; becoming excited to use the Application. In additionally, pair work methods have good influenced with the PLEES application to enhance interaction and knowledge among students in English class. Students have positive comments and good appreciates about the activity and software utilizations. Students felt happy, and they want to use this application for long time because we only did the experiment for 30 minutes in the classroom. The PLEES application has three function in one application such as students can practice their writing, listening, and speaking in English in one application so the application is very useful. The PLEES application voice produce artificial voice that very similarity with native voices so it is very good for students to practice their listening skill. Students said with the PLEES application, she could practice them pronounce very well with formal and informal English words by listening and pronounce the word.

6. Conclusion

English education in Japan has focused more on the speaking component by emphasizing the importance of communicative skills in English. Many Japanese university students hesitate to talk because they have very little experience speaking English. There are some external causes that influence students' ability effect of speaking English such as class size and entrance examinations and otherwise there were also internal causes that may influence Japanese students such as an anxiety, self-confidence, and willingness to communicate. The results of factor analysis revealed that the PLEES application utilization helped students

The active learning method during the pair work of this experiment activity received positive feedback from students as they felt studying English in pairs helped them improve English knowledge. Every student has different personality, but almost Japanese students tend shy away from speaking in English. With speaking activities in pair work methods, the emphasis is on the students speaking together, often exchanging views or opinions, and express agreement and disagreement. Pair work allows students to use English and encourage students' cooperation, which is itself, important for the atmosphere of the class and for the motivation, it gives to learning with other students.

These future studies would be very important in understanding how to adequately implement and integrate the PLEES application into the Japanese English classroom so that Japanese can communicate and improve their English pronunciation and have the self-confidence to speak English in public.

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