Increasing the Students’ Speaking Ability through Role-Playing with Slovin’s Formula Sample Size

Tiara Djati Anugraheni 1*, Lidiyatul Izzah 2, Muhamad Sofian Hadi 3

1, 2, 3 Universitas Muhammadiyah Jakarta, Indonesia

* tiara.djatianugraheni01@gmail.com

Abstract

The ability to communicate is required at this time because it allows for effective communication of ideas, information, and other concepts. To enhance speaking skills, one must use the appropriate media, including flashcard learning media employing the role-playing method. The purpose of this study is to determine the extent to which the Role-Playing Card method with Slovin's Formula as the sample size can increase students' speaking abilities. The purpose of this experimental study is to determine whether the use of Role-Playing Cards can assist students in developing their speaking abilities. This investigation employed a pre-experimental design. This study involved 42 eighth-grade students from SMPN 19 Kota Tangerang Selatan. Information gathered from the pre- and post-tests The results of the analysis indicate that the t-test value (12.195) is significantly greater than the t-table (23.190). This shows that the null hypothesis (H0) or negative hypothesis, namely that role-playing card methods cannot increase students' speaking ability, cannot be accepted, and the alternative hypothesis (H1) or positive hypothesis, namely that role-playing card methods can increase students’ speaking ability, must be accepted. This research concludes, based on the results of t-test calculations, that the role-playing card method is an effective medium for helping students hone their speaking skills.

Keywords: Students’ Speaking Ability; Role-Playing; Slovin's Formula; Sample Size

Introduction

Language is a means by which individuals can communicate with one another. English, on the other hand, is a language that is spoken all over the world and is therefore no less vital to master and use. This global period requires a higher level of sophistication. In addition to this, it can be used to cultivate relationships within international forums, improve ties between states, and serve a variety of other purposes. Recognising the vital function that English plays in everyday life. Because of this, it is vital for people all over the world to be able to understand and communicate effectively in English.

Speaking is a productive or active skill because it necessitates the correct production of language through sound. According to Hossain (2015), speaking is the language skill that most language learners attempt to improve the quickest. The mastery of a language's speaking abilities has become a priority for many second- or foreign-language students. Due to the fact that speaking is the capacity of humans to express their ideas, emotions, and thoughts through oral speech, which typically entails a speaker, we can express our perspective, understanding, and thoughts through speaking.

https://doi.org/10.30605/jsgp.6.3.2023.2825
Teaching English is not a simple task; there will undoubtedly be challenges and difficulties in the classroom. Students typically struggle with speaking fluently because they have limited opportunities to practise English in real-world situations. Second, students do not know how to accurately pronounce English words because they do not use them in daily conversation. The type of activity provided by the teacher is another issue that affects students’ capacity to speak English (Syarifuddin et al., 2022). Students struggle to learn how to communicate in class because the instructor does not use engaging media to facilitate the teaching and learning process. Therefore, in order for students to be successful in learning to speak, it is necessary to consider the common challenges they confront.

To reduce the challenges that cause failure in the teaching and learning process of English in class, teachers must also practice creativity in responding to the limitations and constraints that occur in their students. One of them is using flash card media with the role-playing method. Scrivener, cited in Kuśnierek (2015) In role-playing, the learner is usually given some background knowledge about the "role" (e.g., person or position). ‘Role cards’ often have this written on them. Students can spend some time getting ready before meeting with other students to act out a short scene using their thoughts and any information from the role cards. Role cards serve an important purpose; as a result, students are provided with important information about the role they will assume. As a result of the basic directions placed on paper, the parameters posted on the cards help students reveal important information about the persona they are describing while giving the speaker greater confidence.

As explained by Krebt, D. M. (2017), in role play, people act or pretend to be different characters in an imaginary environment. In live role-playing games, one can interact with other people directly by talking, acting, and occasionally fighting. Role-playing games emphasize vocal explanations of character activities. It’s a fun, immersive, and fantastic method of honing students’ English. Kuśnierek, A. (2015) states that very often, if not always, the difference between role-playing and simulation is ignored. Researchers made it clear that players in the simulation were not limited in what they could say. Students imagine themselves in various ways, just as they do in real life.

Kuśnierek, A. (2015) Role-playing may not be an option for some teachers. They may think that participating in role-play will cause anarchy and that such activities are inappropriate for the class and will lead to disciplinary problems. Consequently, the teacher can train students’ speaking skills in any social situation through role-playing. This suggests that learners are faced with situations where speech is more necessary for social communication than the language specified in the lesson plans. According to researchers, role-playing helps students develop language, which is essential for social interaction but is underemphasized in the curriculum. Role-playing is a useful activity for these students, and it also teaches them how to interact in various contexts as well as helping them learn new words.
Kowalska in Kuśnierek, A. (2015) states that students' imaginations can grow through role play. Students may need to use their imagination and creative thinking to fulfill the functions they have been assigned. In addition, the capacity for creative thinking may come in handy in the future. Role-playing and reading are great ways to develop the creative thinking skills needed for some jobs. Students are allowed to pretend to be someone else, which is another benefit of role-playing. Such methods can help shy students overcome their fear of public speaking.

Role-playing is one method for training speaking abilities. One of the methods used to determine the number of samples in this study was Slovin’s formula. Slovin’s formula is a useful tool for calculating the size or number of samples. The set error tolerance criteria must be taken into consideration when deciding on the bare minimum number of samples required for the study. Based on the explanation above, several methods can be used to teach speaking. Therefore, the researcher is interested in teaching speaking skills to junior high school students. The objective of this study is to find out, "Can students’ speaking skills be improved using the role-playing card method?"

Method

The Study Design

The researchers used a quantitative approach and a pre-experimental design to examine the pre-test and post-test results of a single group in the study. According to Neely-Barnes and Lennon-Dearing (2020), quantitative research is characterised by the use of a systematic methodology, such as the scientific method, in order to produce information. The quantitative research approach is characterised by the collection of numerical data in order to elucidate, forecast, and/or control the phenomena under investigation. As per a particular group, a singular class was employed for the purpose of learning assessments, with the pre-test and post-test serving as tools to evaluate the achievement of learning objectives. Consequently, both the control and comparison groups were not utilised in the measurement.

The study was conducted over a total of eight meetings by the researchers. The initial gathering was conducted in order to collect preliminary data. The primary objective of the pre-test is to evaluate the speaking proficiency of students prior to the administration of any intervention or treatment. The experimental group of students was administered treatment employing the Role-Playing Card method, enabling them to engage in English language practise through the use of flashcards. Ultimately, in the concluding session, students undergo a post-test to assess the extent to which their oral proficiency has advanced subsequent to the intervention.

Creswell (2012) states that experimental research endeavours to systematically examine a hypothesis in order to ascertain the extent to which the independent variable exerts a significant impact or outcome on the dependent variable. The researcher uses a pre-experimental design, incorporating an experimental group that undergoes a pre-test, treatment, and post-test. A variable refers to a characteristic that can be quantitatively assessed and documented using an
instrument, with variations in values or scores observed across different individuals. Variables can be categorised into two distinct types: independent variables (X) and dependent variables (Y). The selection and manipulation of the independent variable (X) were conducted by the author in this study, while the dependent variable (Y) was subjected to testing in order to assess the impact of the independent variable (X). The study utilised role-playing cards as the independent variable (X), employing the Slovin formula. The dependent variable (Y) in this investigation was the students’ speaking ability.

The Sample Population or Subject of the Research

The population used for this study consists of eighth-grade students enrolled at SMPN 19 Kota Tangerang Selatan during the academic year 2022-2023. Within the educational institution under consideration, there exists a configuration consisting of five distinct classes of students enrolled in the eighth grade. The cumulative number of individuals comprising this collective body of learners amounts to a total of 200 students. The research sample consisted of 42 students who were enrolled in an 8th-grade science class at SMPN 19 Kota Tangerang Selatan. In this particular class, the number of female students is 23, while the number of male students is 19. The participants in this study were actively engaged from its inception until its conclusion. For the purpose of this study, the researchers employed a cluster random sampling technique to select a single class. The experimental group in this study consisted of the class.

Data Collection Techniques and Instrument Development

The assessment tool employed in this research was a speaking test. The purpose of the speaking test is to assess the level of fluency and accuracy of students' speaking abilities. The task assigned to students involves collaborating in pairs to generate a dialogue centred around a pre-established subject matter. Subsequently, they are required to produce a video recording lasting between 2 and 3 minutes. The assessment of students' speaking skills will be conducted by evaluating various indicators, including pronunciation, fluency, vocabulary, grammar, and comprehension (Rahmah, 2016).

Data Analysis Techniques

The data for this study are the results of students' speaking tests. Students' speaking achievement in the pre-test and post-test is calculated based on the test results. Consequently, the two data sets were statistically examined. Before determining the right sample, the researcher used the Slovin formula to accurately determine the minimum sample required for this study. Then the researcher used the Paired Sample T-Test as a data analysis technique to find out significant differences between students’ pre-test and post-test scores, and the data were analyzed with IBM SPSS Statistics version 25. The purpose of this test is to see if there is a difference in the results of students’ pre-test and post-test scores.
Results

For the sample, the researcher used Slovin's formula to get accurate results from the research conducted. The formula used is as follows:

\[ n = \frac{42}{1 + 0.3} = \frac{42}{1.3} = 32.30 \approx 32 \]

So, from the results above we can get, the students needed in this sample are 32 students, which are determined with an error rate of 10%. The result of pre-test and post-test was distributed based on the classification of students’ achievement by Farhan (2020). It was shown in the following table:

<table>
<thead>
<tr>
<th>Value</th>
<th>Level of Achievement</th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
</tr>
<tr>
<td>90-100</td>
<td>Excellent</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>76-89</td>
<td>Good</td>
<td>15</td>
<td>36%</td>
</tr>
<tr>
<td>66-75</td>
<td>Enough</td>
<td>25</td>
<td>59%</td>
</tr>
<tr>
<td>40-65</td>
<td>Poor</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>0-39</td>
<td>Very Poor</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 1 reveals that there were no students who achieved excellent or very poor performances. The majority of the students (59% of the total) were classified as "enough," while a smaller proportion (5%) were classified as "poor," consisting of only two students. Additionally, a total of 15 students were classified as proficient, accounting for 36% of the sample population. The results of the post-test indicate a noticeable difference in the scores after the implementation of the treatment. None of the students received grades of poor or very poor. The majority of the students, comprising 55% of the total student population, were classified as good. Additionally, a smaller proportion of students, specifically 14%, were classified as excellent, while 31% of the students fell into the enough category. The research findings from the pre-test and post-test were visually represented in the form of a chart, which was presented in the following manner:

Diagram 2. The Students’ Pre-Test and Post-Test Chart
To test the data above, the writer used several stages using the SPSS statistical formula to determine the mean, median, and mode. The result of the statistic data was in the table below;

Table 2. Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>pretest</td>
<td>42</td>
<td>63,00</td>
<td>87,00</td>
<td>73,2619</td>
<td>5,79343</td>
</tr>
<tr>
<td>posttest</td>
<td>42</td>
<td>67,00</td>
<td>97,00</td>
<td>79,8095</td>
<td>8,03722</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The study’s findings indicate that the average pre-test score was 73.26, whereas the average post-test score was 79.80. The pre-test had a median score of 73.00, while the post-test had a median score of 78.50. The pre-test exhibited a standard deviation of 5.79, whereas the post-test displayed a standard deviation of 8.03. The researchers employed a hypothesis-testing approach to address the stated hypothesis. The researchers employed the Shapiro-Wilk normality test in IBM SPSS 25 to assess the normality of the data. The process of conducting a normality test using IBM SPSS 25 is illustrated in the table provided below.

Table 3. Test of Normality

<table>
<thead>
<tr>
<th>Tests of Normality</th>
<th>Kolmogorov-Smirnova</th>
<th>Shapiro-Wilk</th>
<th></th>
<th>df</th>
<th>Sig.</th>
<th></th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>pre test</td>
<td>,166</td>
<td>,948</td>
<td>42</td>
<td>,005</td>
<td></td>
<td>42</td>
<td>,057</td>
<td></td>
</tr>
<tr>
<td>post test</td>
<td>,137</td>
<td>,953</td>
<td>42</td>
<td>,047</td>
<td></td>
<td>42</td>
<td>,085</td>
<td></td>
</tr>
</tbody>
</table>

In order to assess the normality of the research, a standard significance level of 0.05 (\( \alpha = 5\% \)) is employed within the field of education. Data normality testing can be employed to evaluate whether the data exhibits a normal distribution or not. This study utilised a sample of 42 students from an experimental class. The results of the pretest scores revealed statistically significant findings (\( \alpha < 0.05 \), two-tailed), with a calculated value of 0.57. Similarly, the post-test scores also showed statistically significant findings (\( \alpha < 0.05 \), two-tailed), with a calculated value of 0.85. These findings indicate that the significance score, derived from the normality calculation table data, exceeded the predetermined threshold of \( \alpha = 0.05 \). Hence, it can be inferred that the data from both the pre-test and post-test exhibit a normal distribution. Upon discovering that the distribution of the data was normal, the researchers proceeded to conduct a hypothesis test using IBM SPSS 25, employing the t-test methodology.

Table 4. Paired Samples Test

<table>
<thead>
<tr>
<th>Paired Samples Test</th>
<th></th>
<th>Std. Deviation</th>
<th>Std. Error of the Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair 1 pretest - posttest</td>
<td>-6,54762</td>
<td>3,47957</td>
<td>,53691</td>
<td>-7,63193 - -5,46331</td>
<td>-12,195</td>
<td>41</td>
<td>,000</td>
</tr>
</tbody>
</table>
The results of the T-Test analysis are presented in Table 4 above. The average pre-test and post-test scores were calculated to be -6.54762, with a standard deviation of 3.479. The mean standard error was determined to be 0.536. The lower difference was recorded as -7.631, whereas the upper difference was measured as -5.463. The test yielded a t-value of -12.195 with 41 degrees of freedom and a significance level of 0.000. The provided table indicates that the t-test value was 12.195, while the t-table value was 3.190. This implies that the t-test value exceeded the t-table value. Based on the findings, it can be inferred that the results demonstrated the rejection of the null hypothesis (H0) and the acceptance of the alternative hypothesis (H1). At that point in time, there are notable outcomes observed when comparing the period prior to the treatment and the period subsequent to its implementation. Hence, the utilisation of Role-Playing Card techniques has a substantial impact on the attainment of students' speaking skills. The use of Role-Playing Cards has the potential to enhance students' oral communication abilities.

Discussion

This study aims to evaluate the efficacy of the role-playing card method for enhancing the speaking skills of junior high students. The students are given learning materials, specifically flashcards. In this study, role-playing cards are used to supplement English language learning activities. The results of the pre-test indicated that the student's English proficiency remained in the adequate range. They are hesitant to express their ideas and views. In addition, they appeared timid and disinterested in speaking practice. In contrast, post-test results demonstrated that students felt more secure and confident after implementing the Role-Playing Card method. Additionally, they speak English without hesitation or dread of making errors.

In accordance with what Chan (2012, p. 21) explained, role-playing has proven to be an effective learning technique that combines interactive and experiential elements to promote student flexibility in learning. The question of whether and how role-playing can be applied to problem-based learning (PBL) is, however, under-discussed. Methods involving role-playing can add excitement to the classroom and enhance student learning. This method allows students to act out, dramatise, and observe examples of real-world problems without needing a written script to discuss them afterward. Because students participate in the process and see how the problem is solved firsthand, this method aids students in their comprehension and analysis of community issues. The effectiveness of employing the role-playing method has been demonstrated in enhancing students' oral communication abilities. The evidence supporting this claim is derived from the analysis of student achievement data, which reveals a t-test value of 12,195 that surpasses the critical t-table value of 3,190 at a significance level of 5%. This implies that the alternative hypothesis (H1) is accepted, while the null hypothesis (H0) is both accepted and rejected. Therefore, it can be inferred that the utilisation of Role-Playing Cards has a beneficial impact on the oral proficiency of eighth-grade students enrolled at SMPN 19 Kota Tangerang Selatan during the academic year 2022-2023. The theoretical framework established
in this research can serve as a foundation for other authors to conduct further studies pertaining to Role-Playing Cards.

The utilisation of the Role-Playing Card technique in the pedagogical context provides beneficial results in enhancing the oral proficiency of high-achieving students, as evidenced by the aforementioned account. This is due to the fact that students are able to acquire English language skills in a more enjoyable manner when they engage in conversational activities, particularly those centred around everyday subjects. This phenomenon is feasible due to the comprehensibility and sustainability of the material facilitated by emerging educational media. According to the previously mentioned description, the use of the Role-Playing Card technique has been observed to greatly facilitate the enhancement of students' proficiency in spoken English.

**Conclusion**

After presenting and analysing previous data, the researcher concluded that the Role-Playing Card method can enhance the speaking skills of students. The increase in pupils between the pre-test and post-test demonstrates this. Based on research conducted with eighth-graders at SMPN 19 Kota Tangerang Selatan, it is possible to conclude that Role-Playing Cards can influence students' communication skills. This is evident from the students' efforts to improve their speaking precision and fluency. The results of the students' pre-test and post-test provide evidence of student growth: pre-test results (73.26) and post-test results (79.80). The students' post-test scores were higher than their pre-test scores, indicating that their speaking abilities had improved. In addition, at the 5% threshold, the t-test value is greater than the t-table. The alternative hypothesis is adopted and the null hypothesis is rejected if the result of the t-test value is greater than the t-table level. Due to the acceptance of the alternative hypothesis, it is possible to conclude, based on the results of the t-test calculation presented above, that learning activities utilising Role-Playing Card methods can improve students' speaking abilities.

**Acknowledgment**

-  

**References**

https://doi.org/10.25134/ijli.v4i1.4342


