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THE EFFECT OF IMPLEMENTING PODCAST IN ENHANCING STUDENTS' SPEAKING ACHIEVEMENT IN THE FULLY DIGITAL ERA

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Abstract

In the current century, the appropriation of technological platforms which requires new approaches for education should be fostered to today's youth, often referred as digital natives, since they are growing up surrounded and immersed in rapid technological development. The purpose of the present study aims to investigate whether the implementation of technological platforms in language teaching and learning, focused on the implementation of podcast, helps the students to enhance their speaking achievement. This experimental study was administered to the eleventh grade students of science program in which they were assigned into experimental and control group randomly. To assess the students' speaking performances in the post-test, analytic scoring rubric covering content, fluency, accuracy on pronunciation, grammar, and spelling was involved. From the data analysis, the value of significance column (2-tailed) was 0.025, which was lower than 0.05 ($p < 0.05$). Consequently, the formulated null hypothesis (H_0) was rejected. Regarding the result of this research, the implementation of podcast showed a significant effect on the eleventh grade students' speaking achievement. Further, the implementation of podcast generated the students to be motivated and challenged

in the speaking class. For future scope, the current study suggested that EFL students have to be familiarized with the integration of podcasting technology in language learning in order to get better gains in all language skills, viz.: listening, reading and writing as it showed a significant effect in this study.

Keywords

ICT in Education, Podcast, EFL Speaking in Indonesia, Speaking Achievement

1. Introduction

It is rare to find a language class that does not use some form of technology in this fully digital era because technology is very much part of language learning throughout the world at all different levels. However, it may still happen in developing countries because they are lack of knowledge and awareness in implementing technology for language teaching and learning process. Thus, it is important to make them understand the use of technology, especially for language teachers who are responsible on language teaching and learning process. Incorporating various forms of technology give many benefits. It supports language teaching, engages students in the learning process, provides authentic examples of the target culture, and connect classrooms in other countries where the target language is spoken (Perez, 2015). Therefore, it can be concluded that technology has a heavy impact on education.

There are so many technology forms that can be implemented in language teaching and learning process. One of the forms is podcast. Podcasting, one of the newest technological platforms to emerge into the mainstream, becomes the lead in the recent education revolution (Hasan & Hoon, 2013). This revolution happens due to important underlying idea which shows that integrating podcast in the language teaching learning process helps the students to improve some crucial skills such as researching, writing, speaking effectively, solving problems, managing time, grabbing attention, and improving their vocabulary (Hasan & Hoon, 2013). According to Aguilar (2007: 45), podcasting technology is related to some learning theories, such as the effectiveness of authentic materials in learning, extensive learning, and autonomous learning in which it supports the provision of learning materials. Moreover, as an audio content delivery approach based on Web syndication protocols (RSS and/or Atom), podcasting is reshaping the landscape of information/content delivery by targeting a myriad of mobile and wireless devices (iPods, MP3 players, cell phones, PDAs) and increasing flexibility and portability as well as allowing for time-shifting and multitasking (Thorne & Payne, 2005). Integrating podcast seems effective as the students can experience it by themselves. The

students can learn at their best when they feel at ease and get opportunity to experience the materials (Sultana, Muthurajan & Khairuddin, 2017). Hence, the implementation can be very beneficial in teaching and learning process.

Furthermore, there are several previous studies conducted related to podcasting. Perez (2015) finds that podcasting is effective in improving students' listening ability because they can listen to appropriate exposure. Further, Tam (2012) finds that educational podcasts is effective for teaching music and visual arts, especially for demonstration activity.

Considering the benefits of educational podcasts, it seems that the implementation of educational podcast can be applied in Indonesia context since it is in line with the Government Regulation in Education no 70/2010. It states that one of the aims of education should develop human beings who are critical, innovative, independent, self-confident, and entrepreneurship-minded (*Peraturan Pemerintah Republik Indonesia*, 2010). By implementing podcast, it can help the students to be innovative, independent, and self-confident.

Related to the objective of teaching English as stated in the Indonesia curriculum, teaching and learning process is expected to enable the students to communicate in English both in spoken and written forms in daily life contexts (*Depdiknas*, 2006:278). It means that the objective of teaching English in Indonesia is focus on communication. Moreover, when we talk about English as a foreign language, Adler et al. (in Gareis, 2006:3) state that speaking skill is the most important skill among other language skills, viz.: listening, reading and writing. Speaking skill plays an important role in both academic and social life because great speaking achievement will help us to have good communication with foreigner and improve job-related qualities. Based on the explanation, it can be concluded that in mastering English, speaking skill takes an important role among the other language skills. Thus, this study will focus in investigating the implementation of educational podcast as the way of enhancing students' speaking achievement.

In the way of fostering speaking achievement, there are some aspects of speaking which are needed to consider. Great speaking achievement means that fluency and accuracy should be balance where the students do not only need to be fluent in speaking English, but they are also required to explain accurately. Fluency means that the students can talk smoothly without any hesitation, whereas accuracy in speaking depends on the mastery of the language systems covering grammar, pronunciation, and vocabulary. In addition, Hughes (2003:131) states that the aspects of speaking cover content, grammar, pronunciation, vocabulary, and fluency.

There are some differences between the previous studies and this study. This study focused on teaching speaking throughout educational podcast. The podcast is proposed because it is expected to enhance students' speaking achievement related to the benefits discussed above. Finally, this study observes and analyzes the effectiveness of educational podcast in speaking achievement.

Drawing on the background of the study above, a foregoing discussion has raised some problems which have become the main interest of the present study.

The present study is administered to find the research answer of this study. The formulated research question of this study is "Do students taught using educational podcast have significantly better speaking achievement than those taught in a conventional teaching speaking classroom?" In line with the research problems above, the purpose of this study is to examine if there is a significant effect on the eleventh grade students' speaking achievement taught using educational podcast and those taught using conventional teaching speaking.

Furthermore, this study is expected to give theoretical and practical contribution to English language teaching learning process, specifically to speaking skill. Theoretically, the result of this study is expected to fill the gap of Indonesian studies in investigating the benefits of educational podcast in improving students' speaking achievement. Brown (2007) stated that educational objectives divided into three domains: cognitive, affective, and psychomotor. The teaching learning process in the classroom should follow those objectives. In this research, while achieving the materials stated in curriculum and improving speaking ability, the implementation of podcast are expected to be encouraging, motivating, and challenging. As the result, the students are engaged in the teaching and they enjoy the learning, so they are actively involved in the process of learning conducted in the classroom.

Practically for the English teachers, the findings of this study are expected to reveal the benefits of implementing educational podcast. Moreover, the findings are expected to contribute significantly to the media of teaching speaking and may be used as a consideration in improving students' speaking achievement. It also brings benefits for other researchers who wish to investigate other kinds of teaching media and its benefits to other language skills and other related variables.

2. Methodology

2.1 Research Design

This present study employs quasi-experimental research with Posttest Only Design because the study is conducted in educational settings where selecting sample randomly out of all the population is not possible, so the researcher can only assign randomly to two different classes (Charles: 2016). According to Cohen et al. (2007:282), quasi-experimental research is often used in educational research because it is simply not possible for researchers to undertake true experiments. Therefore, there will be only two classes available as the experimental and control group.

This study employs two variables namely independent and dependent variables. The independent variable is the factor that is manipulated or controlled by the researcher while dependent variable is a measure of effect (if any) of the independent variable (Marczyk, DeMatteo & Festinger; 2005). There is an independent variables involve in this study. The independent variable of this study is the educational podcast. Students' speaking achievement becomes dependent variable that is observed and measured.

From the beginning of the experiment, the experimental group had podcast in their speaking class while in the control group had conventional teaching media. Finally, right after the experiment, the accuracy of the students' speaking achievement in both groups was measured based on the scoring rubric provided.

2.2 Population and Sample

The population involved in this study was the eleventh grade students of science program at SMAN 4 Jember, East Java, Indonesia. The eleventh graders consisted of seven classes. Since the design used is quasi-experimental design, there is no authority for the researcher to determine the sample. Only two classes taught by the same teacher are accessible. Consequently, to assign the students to the experimental group and to the control group, lottery will be used. Both of the classes share similar characteristics, such as they are in the same semester, they are taught by the same teacher, only some of students are active during teaching and learning process, and they have more female than male students.

2.3 Treatment

As it has been stated above, the strategy of teaching speaking through educational podcast implies in this research as the treatment. In this case, the treatment of the experimental and the control group are merely different in the form of teaching speaking to enhance the

students speaking achievement. The podcast will be implemented in the experimental group and conventional teaching will be implemented in control group. Before the treatments are given, a pretest has been conducted to know their speaking achievement. For the treatment, each group experience the media in five meetings in which each meeting has 90 minutes of time allotment. The teaching procedure is the same for both groups and both groups are exposed to the same teaching material. The difference is only the teaching media implemented in the experimental and control group. Finally, after having the same amount of meetings, both groups got their speaking posttest.

2.4 Research Instrument

There will be two instruments used in this research: pretest and posttest. The pretest and posttest of speaking achievement aim to investigate students' speaking achievement before and after treatment. The speaking prompts in this study are adapted from the materials taught for the students by consulting the curriculum applied in the school. The speaking test will be validated to the experts (theoretical validation) and tried out to the similar potential students (empirical validation). Then, it will be revised based on the experts' suggestions and empirical data from trialing the test.

Table 1: *Research Instrument and Variable to be measured*

No.	Instruments	Variables to Measure	Function
1.	Pre-test	Students' speaking achievement before treatment	As covariance
2.	Post-test	Students' speaking achievement after treatment	To test hypothesis

2.5 Scoring Guide

There are two main ways in assessing the students' speaking ability (Thornburry, 2005:30). They are holistic scoring and analytic scoring. Holistic scoring refers to a single score given by the rater on the basis of his/her impression to a students' performance holistically. Meanwhile, analytic scoring can be described as a separate score given by the rater for different aspects measured in the tasks. Although a analytic scoring spends longer time and more energy, but the result of scoring can be probably both fairer and more reliable as the scoring compels well-chosen and representative factors into account. Therefore, the researcher scored the students' speaking achievement analytically based on the aspects of speaking. The aspects scored are 1) content, 2) grammar, 3) pronunciation, 4) vocabulary, and 5) fluency.

Further, in the way of reducing subjectivity to assess the students' speaking achievement, the researcher used inter-rater scoring. According to Hughes (2003:12), inter-rater means different people score at the same test responses. The researcher worked together with the English teacher in scoring the students' speaking achievement as the post-test because it will reduce the subjectivity in judging the result of the test. Then, the scores of both the scorers will be taken the average to give the final result of the students' scores. To avoid gap of the score, the researcher discussed with the English teacher about the scoring rubric used. Therefore, the researcher and the teacher assess the students' speaking performance by using the same scoring rubric. Furthermore, the researcher also trained the English teacher about how to assess the students' speaking achievement by using the scoring rubric, so it could make the English teacher understand on how to use the scoring rubric.

In the way of scoring the students' speaking achievement, a rating scale from Hughes (2003:131-132) was adapted by considering a quote from Hughes (2003:105) that suggests modifying existing scales is needed to suit the purpose of the investigation. There are six criteria from each aspect of speaking but in this research, the researcher omitted the sixth criterion, that is, native like because the capability of the eleventh grade students of SMAN 4 Jember seemed not to be able to reach the criterion. The decision was made due to some underlying considerations such as all of the students are Indonesian and they use Indonesian and other local languages. Further, they do not have experience abroad, so they may not have native-speaker performance.

Table 2: *The Rating Scale of the Students' Speaking Achievement*

Aspect of Speaking	Score	Indicator
Content	1	Understands too little for the simplest type of monolog
	2	Understands slow, very simple speech, require constant repetition and rephrasing
	3	Understands careful, require many repetition and rephrasing
	4	Understands quite well normal educated speech but require occasional repetition or rephrasing
	5	Understands everything in telling something
Grammar	1	Grammar almost entirely inaccurate phrases
	2	Constant errors showing control of few major patterns

	3	Frequent errors showing some major patterns and misunderstanding
	4	Showing imperfect control no weakness that causes misunderstanding
	5	Few errors, with no pattern of failure
Pronunciation	1	Pronunciation frequently cannot be understood and use another language
	2	Frequent errors in pronunciation and frequent repetition
	3	Mispronunciations and frequent errors in grammar and vocabulary
	4	Mispronunciations which do not interfere with understanding
	5	No conspicuous mispronunciation and clear
Vocabulary	1	Less vocabulary for simple monolog
	2	Vocabulary limited and survival area (food, transportation, animal, etc)
	3	Choice of words sometimes inaccurate and limitation of vocabulary
	4	Enough vocabulary to discuss special interest
	5	Professional vocabulary precise and wide, general vocabulary adequate to cope with complex practical problems
Fluency	1	Speech is getting stuck and not complete
	2	Speech is very slow and uneven except for short sentences
	3	Speech is frequently hesitant, repeating the sentences
	4	Speech is sometimes hesitant, with some unevenness caused by rephrasing and grouping for words
	5	Speech is effortless and smooth

(Adapted from Hughes, 2003:131-132)

2.6 Data Analysis

Speaking pretest is conducted to know the average score of the experimental class and the control class before the treatment given. Further, the score will determine whether the

students' speaking achievement in the experimental and control group are homogeneous or not. The result will be the consideration in analyzing students' speaking posttest.

- If the average scores of the two groups are not different, the speaking achievement is homogeneous; the posttest score will be compared using t-test.
- If the average score of the two groups are significantly different, the speaking achievement is heterogeneous; the posttest will be compared using ANCOVA. ANCOVA is used because two groups show different result in achievement, so the co-variance is the background.

For testing hypotheses, statistical hypotheses are established to be statistically tested to answer the research problems. It is fulfilled by formulating alternative hypotheses into null hypotheses. The next step is setting criterion for a decision. The criterion of acceptance or rejection is .05 level of significance as it is required in educational field. Then, the standard error of measurement (SEM) will be calculated after knowing the standard deviation (SD). Finally, mean score from both experimental and control groups will be compared.

The last step in the data analysis is making decision whether null hypotheses are rejected or accepted. In this step, when one of the obtained values exceeds the critical value, it means enough statistical evidence is found to reject the null hypotheses and consequently alternative hypotheses are accepted. In the contrary, when the obtained values fall in the critical region, it indicates that there is no enough evidence to reject the null hypotheses, so alternative hypotheses are rejected.

3. Result and Discussion

3.1 Result

The results of the post-test were statistically analyzed by using Independent Sample t-test formula to investigate whether the mean difference between the experimental class and the control class was significant or not. It was used to know whether or not there was an effect of implementing podcast on the eleventh grade students' speaking achievement. The following table describes the result of data computation.

Table 3: The Output of Statistical Description

Group Statistics	Groups	N	Mean	Std. Deviation	Std. Error Mean
Post-test Scores of Speaking	Experimental Group	36	79,2638	5,47641	,91274
	Control Group	36	75,6944	6,15198	1,02533

From the table above, it can be seen that there were 36 students in both experimental class and control class. Based on the table 3 it can be seen that the mean score of the experimental group was 79,2638 and the mean score of the control group was 75,6944.

Table 4: The Output of Independent Sample T-Test

		Levine's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Speaking Posttest Score	Equal variances assumed	,726	,031	3,831	70	,000	2,51389	1,37273	,22393	5,25171
	Equal variances not assumed			3,836	69,074	,000	2,51389	1,37273	,22458	5,25236

The table above showed that the confidence interval of difference used was 95%. It was used because the value of alpha (p) was 0.05 which means that the deviation of normal distribution was 5%. The analysis of independent sample t-test output was divided into two steps or stages. The first step was analyzing two variances whether they were equal or not (F_{test}). Second, analyzing the two groups whether their mean scores were the same or not (T_{test}). Based on the Levine's Test for Equality of Variances column as the column used whether or not the two classes had the same variability, the value of significance column was 0.031. It was lower than 0.05 which means that the second row was the one to read. It shows that the experimental and the control groups were statistically different.

The null hypothesis (H_0) of the research was: “students taught using educational podcast have no significantly better speaking achievement than those taught in a conventional teaching speaking classroom”. There were two criteria of rejection towards the hypothesis. First, the null hypothesis (H_0) was rejected if t-computation was the same or higher than that of t-table ($t_{comp} > t_t$). Second, the null hypothesis was rejected if the probability was less than 0.05 (sig. 2 tailed < 0.05).

In the table above, we could see that the value of t-computation was higher than that of t-table ($3.836 > 1.994$). In addition, the value of probability significance (2-tailed) column shows 0.000, which was lower than 0.05. Based on the analysis, those two criteria of rejection are fulfilled so, it can be concluded that the null hypothesis was rejected. Consequently, it could be seen that there was a significant mean difference between the experimental and the control groups.

3.2 Discussion

The result of data analysis in this research showed that implementing podcast had a significant effect on the eighth grade students’ speaking achievement. It was proved that there were significance mean difference between the experimental and the control groups. Besides, it could be seen from the result of Independent Sample t-test analysis on the students’ speaking post-test scores that the statistical value of the t-computation was higher than the value of t-table with significant level of 5% ($3.836 > 1.994$). Then, the value of significance column (2-tailed) in the second row was 0.000, which was lower than 0.05 ($p < 0.05$). Therefore, the formulated null hypothesis (H_0) was rejected. It indicated that Students taught using educational podcast have significantly better speaking achievement than those taught in a conventional teaching speaking classroom. Moreover, the result of this research was relevant with the theory saying that podcast is an important tool to be implemented in language teaching since there are so many benefits got in implementing podcast. Further, the result of this research also supports the previous research findings which show the effectiveness of podcast in language teaching and learning process.

Apart from the theories and the previous researches, the research result also proved that implementing podcast was appropriate for teaching speaking and the analysis showed that Students taught using educational podcast have significantly better speaking achievement than those taught in a conventional teaching speaking classroom. In conclusion, the implementation of podcast was appropriate since it had significant effect on the students’ speaking achievement.

4. Conclusion and Suggestion

This study investigates the implementation of podcast on senior high students' speaking achievement. Based on the data analysis, hypothesis verification, and discussion done, it could be concluded that there was a significant effect of implementing podcast on the eleventh grade students' speaking achievement. The result of this study provides meaningful information for both language teachers and students which is necessary to accommodate in the process of learning English as a foreign language. This study suggests the implementation of podcast in speaking classroom as it gives concrete and useful input related to the native-speaker performance in using English. The result of this study also finds that the implementation of podcast can make the activities conducted in the classroom motivating and challenging, so it can attract the students' attention and influence the students to be actively involved in doing the activities. However, the current study is only conducted in one school, the result of this study could not be generalized to a broader scope. Thus, further research involving greater respondents is required to find better understanding on the implementation of podcast in speaking classroom. Further, it is suggested for future researchers to conduct a further research dealing with the implementation of podcast on the other English language skills, viz.: listening, reading, and writing across other disciplines.

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