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The Correlation between The Use of Power Point as Learning Media and Student's English Reading Comprehension in Grade XI at Vocational High School of PGRI Pekanbaru

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Abstrak

Penelitian ini bertujuan untuk menyelidiki hubungan antara penggunaan PowerPoint sebagai media pembelajaran dan pemahaman membaca siswa kelas XI di SMK PGRI Pekanbaru. Penelitian ini menggunakan metode kuantitatif dengan desain korelasional untuk mengetahui apakah terdapat hubungan antara kedua variabel tersebut. Teknik pengambilan sampel yang digunakan adalah simple random sampling dari total populasi sebanyak 163 siswa kelas XI. Dari populasi tersebut dipilih 32 siswa yang berasal dari dua kelas sebagai sampel penelitian. Pengumpulan data dilakukan melalui dua instrumen, yaitu kuesioner untuk mengukur penggunaan PowerPoint dalam proses pembelajaran dan tes membaca untuk mengukur tingkat pemahaman membaca siswa. Seluruh instrumen diberikan secara langsung kepada responden. Data yang diperoleh kemudian dianalisis menggunakan analisis korelasi untuk mengetahui tingkat hubungan antara kedua variabel penelitian. Hasil analisis menunjukkan bahwa tidak terdapat korelasi yang signifikan antara penggunaan PowerPoint dan pemahaman membaca siswa. Hal ini ditunjukkan oleh nilai signifikansi sebesar 0,201 yang lebih besar dari 0,05 serta koefisien korelasi yang rendah sebesar 0,232. Dengan demikian, hipotesis alternatif (H_1) ditolak dan hipotesis nol (H_0) diterima. Penelitian ini menyimpulkan bahwa penggunaan PowerPoint tidak memiliki hubungan yang signifikan dengan pemahaman membaca siswa. Oleh karena itu, penelitian selanjutnya disarankan untuk meneliti faktor-faktor lain yang dapat mempengaruhi kemampuan pemahaman membaca siswa.

Kata kunci: PowerPoint, media pembelajaran, pemahaman membaca.

Abstract

This study aims to investigate the relationship between the use of PowerPoint as a learning medium and the reading comprehension of eleventh-grade students at SMK PGRI Pekanbaru. This research employed a quantitative method with a correlational design to determine whether there is a relationship between the two variables. The sampling technique used was simple random sampling from a total population of 163 eleventh-grade students. From this population, 32 students from two classes were selected as the research sample. Data were collected using two instruments: a questionnaire to measure the use of PowerPoint in the learning process and a reading comprehension test to assess the students' level of reading comprehension. All instruments were administered directly to the respondents. The collected data were analyzed using correlation analysis to determine the level of relationship between the research variables. The results of the analysis indicate that there is no significant correlation between the use of PowerPoint and students' reading comprehension. This is shown by the

significance value of 0.201, which is higher than 0.05, and a low correlation coefficient of 0.232. Therefore, the alternative hypothesis (H_1) is rejected, while the null hypothesis (H_0) is accepted. In conclusion, the use of PowerPoint does not have a significant relationship with students' reading comprehension. Therefore, further research is recommended to investigate other factors that may influence students' reading comprehension.

Keywords: PowerPoint, Learning Medium, Reading Comprehension

1. Introduction

One of the most widely spoken languages in the world is English [1]. Proficiency in English opens up chances for individuals to connect with people from diverse countries and cultures, access a large range of resources and information, and engage in global conversations. In order to communicate internationally, people whose first languages are not English can do so more easily while using English as a global language [2].

In education, English learning can take place through different means, including formal instruction in schools, language classes, online platforms, self-study with textbooks or language apps, and language exchange with native speakers. Learning the English language requires a variety of talents and aids in the development of fundamental skills such as speaking, listening, writing, and reading.

Reading is the most significant of the four abilities in language learning since it provides information, knowledge, and ideas to be utilized in speaking and writing. Students can learn ideas, concepts, and attitudes by reading. Meanwhile, reading comprehension is an active thinking process that does not rely solely on comprehension to understand what has been read [3].

Teaching reading in English is one of the most common issues in the learning process. There misconception and presumption for many years that reading ability develops spontaneously without the need for explicit instruction. This perspective led to an educational paradigm where students are allowed to struggle, as action is not taken until they begin falling behind [4]. Moreover, challenges in teaching reading are often connected to the techniques and media used for teaching. Technology enables teachers to adapt classroom activities in ways that enhance language learning [5].

The use of technology in English education has become increasingly prevalent in recent years. It is generally accepted that utilizing current technology in the classroom entails the creative use of techniques, apparatus, materials, systems, and strategies that are specifically relevant to the instruction of the English language and result in the achievement of desired objectives [6]. Through the application of technology, various real materials can be supplied to learners, and they can be motivated to learn languages. One of the greatest modern technological techniques for language learning, especially to instill and strengthen the opportunities to achieve the goals of language pedagogy, is the use of multimedia in teaching English.

PowerPoint is one of the most common multimedia instructors use in teaching and learning. PowerPoint works to deliver a learning experience and eliminates the problems of passive knowledge communication. The application of PowerPoint improves teaching and makes it more effective. Proper use excites the teacher as it allows freedom from standard, repetitive instructional activities. It enhances the professionalism and quality of their training.

Consequently, it can be concluded that the utilization of technology and media is crucial to the ongoing nature of teaching and learning. Teachers need to be creative about the way they use media and the idea of multimedia presentations, thus facilitating teachers' and students' easier achievement of learning objectives. PowerPoint is the medium used in this instance. Teachers can encourage students to improve their English reading comprehension and create a fun learning environment by utilizing PowerPoint in the right ways. But it's crucial to make sure

PowerPoint is used as a tool rather than in place of face-to-face communication and debate during the learning process.

The Vocational High School of PGRI supplies printed books as the primary instructional material for teachers to use in explaining lessons. The school also provides technology resources like internet networks, computers, and projectors that teachers utilize as extra media to present learning materials. Based on the results of observations made by researchers, it found the primary technology-based supplementary medium used by teachers is PowerPoint presentations.

2. Research Method

This study used a quantitative research method. Quantitative research as the process of collecting numerical data and applying mathematically based techniques (particularly statistics) to analyze it in order to understand phenomena [7].

The type of this research is classified as quantitative correlational. Correlations studies are designed to look in the nature and strength of each functional relationship between the variables that the researcher desires to investigate in [8].

The quantitative correlational approach was chosen for this research to investigate the presence of a positive and significant relationship between two variables. In this research, the correlation between PowerPoint as learning media, indicated as "X," is the independent variable, while students' reading comprehension, indicated as "Y," is the dependent variable.

2.1 Data Collection Method

1) Questionnaire

A questionnaire is a type of research instrument that consists of a list of inquiries or prompts intended to collect data from respondents. The questionnaire is a commonly used and helpful instrument for collecting data from surveys [9].

In this research, the data of use PowerPoint as learning media were collected by using questionnaire. The result of the questionnaire is a score. The score was correlated with the students' reading comprehension test score. This research adopted a questionnaire from Oommen (2012), which consisted of 15 statements. The following table shows the indicators of PowerPoints:

Table 1. The Indicators of PowerPoint

Indicators	Items	Total number
Using PowerPoint can increase students' activeness in english language teaching	1, 2, 3, 4, 5, and 6	6
Using PowerPoint can improve students' motivation in english language teaching	7, 8, 9, 10, and 11	5
Using PowerPoint can affect students' english competence in english language teaching	12, 13, 14, and 15	4
Total		15

The questionnaire records and measures participants's agree or disagree answers using a Likert scale that includes five categories: strongly agree, agree, neutral, disagree, and strongly disagree [10]. For the purpose of quantitative analysis, the answer can be scored as follows:

Table 2. Scores of the PowerPoint as Media Learning Questionnaire

Categories	Statements
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	Positive	Negative
Strongly Agree	5	1
Agree	4	2
Neutral	3	3
Disagree	2	4
Strongly Disagree	1	5

2) Reading Comprehension Test

During the data processing stage of this research, the researcher first administered a reading test to the students before analyzing the results. A test as a tool or procedure that employs specified methods and guidelines in order to verify or quantify something [11]. Student reading comprehension data is collected by a test. The reading comprehension test consists of 20 multiple-choice questions adopted by [12] To analyze students' reading comprehension test scores, the researcher used a formula from [13] as follows: Students'

$$\text{score} = \frac{\text{Students' correct answer}}{\text{Total items}} \times 10$$

2.2 Data Analysis Technique

1) Normality Test

Normality test is used to determine whether or not the independent variables and dependent variables are distributed normally [14]. The Shapiro-Wilk test is a formula or method for calculating data distribution developed by Shapiro and Wilk, according to Statistikian in [15]. For the normality test, the researcher followed the instruction of [16], If the probability or Sig. (Shapiro-Wilk) > 0,05, then the data had a normal distribution.

2) Linearity Test

A linearity test is often conducted to assess the linear relationship between variables, particularly in the context of regression analysis. For the purpose of determining the relationship model, a linearity test is used to assess whether or not there is a linear relationship between the independent and dependent variables. For the guidelines, the researcher followed from [17], If the Sig. deviation from linearity is more than 0.05, the dependent and independent variables have a linear connection.

3) Hypothesis Test

Hypothesis testing improves the scientific methodology of the research process and assists researchers in deriving reliable and valid conclusions from their data. In this study, a simple correlation analysis was employed to determine whether a significant relationship exists between PowerPoint as a learning medium (X) and reading comprehension (Y).

3. Finding And Discussion

3.1 Result

The research was carried out in January 2024 at the Vocational High School of PGRI Pekanbaru. This school is located at Brigjen Katamso Street Number 46, Tangkerang Utara, Bukit Raya District, Pekanbaru City, Riau Province. This research used a quantitative method and collected data from 32 eleventh grade students at the Vocational High School of PGRI Pekanbaru.

Data was gathered through questionnaires and reading tests distributed directly to students's. The students' answers on the questionnaire and reading test were tabulated and analyzed to determine the correlation between the use of PowerPoint as a learning medium and

students' reading comprehension, as determined by several tests such as the normality test, linearity test, and hypothesis test.

1. The Description of Research Data

1) The Result of PowerPoint as Media Learning Questionnaire

The data result of 32 students as sample, and the descriptive statistic of it is presented in table below:

Table 3. Descriptive Statistic of PowerPoint as Media Learning

Statistics									
PowerPoint as Learning Media									
N	Valid	32							
	Missing	0							
Mean	Std. Error of Mean	Median	Mode	Std. Deviation	Variance	Range	Min	Max	Sum
51.94	1.147	51.00	49	6.490	42.125	28	37	65	1662

Based on the descriptive statistics for the 32 participants (N) shown in Table 3, it can be concluded that the PowerPoint scores cluster around a mean of 51.94, with a median score of 51.00 and a mode of 49 being the most frequent value. The data suggests that PowerPoint scores are centered around these central tendency measures.

Furthermore, the standard deviation of 6.490 indicates that the data points were relatively clustered around the mean, suggesting consistent responses across participants. The maximum score of 65 shows that some individuals demonstrated engagement with using PowerPoint as an effective instructional tool, while the minimum score of 37 reveals there is potential for improvement. The sum of 1662 represents the combined performance of all participants in utilizing PowerPoint.

2) The Result of Reading Comprehension Test

The data collected from the reading test was intended to measure the students' ability to comprehend English text. The score of student's are as follows:

Table 4. Descriptive Statistic of Student's Reading Comprehension Test

Statistics									
Student's Reading Comprehension									
N	Valid	32							
	Missing	0							
Mean	Std. Error of Mean	Median	Mode	Std. Deviation	Variance	Range	Min	Max	Sum
70.00	3.557	70.00	65	20.121	404.839	85	15	100	2240

Table 4 shows there was significant variation in reading comprehension scores among the students. The data show a wide range of achievement levels on the reading evaluation among students. Based on the presented data for reading comprehension scores, with a sample size of 32 students, it is possible to conclude that the overall performance has a moderate level of variability.

The mean and median of 70.00 show an almost balanced distribution, while the mode of 65 indicates a concentration around that score value. However, the standard deviation of 20.121 suggests student performance varies significantly. The highest score of 100 demonstrates a ceiling effect, suggesting that chosen individuals have an excellent understanding of reading. In contrast, the lowest score of 15 indicates the existence of students who may require extra support or resources to improve their reading comprehension.

The total of all scores is 2240. These data suggest a wide range of performance levels among students, suggesting additional research into potential factors influencing reading comprehension.

2. Prerequisite Test

1) Normality Test of The Data

The researcher employed Shapiro-Wilk's test of normality table to assess normality of the data. This test indicates that if the significance value was more than 0.05, the data is normally distributed, and if the significant value was less than 0.05, the data is not normally distributed. In this study, the normality test is as follows:

Table 5. Result of Normality Test

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PowerPoint as Media Learning	.138	32	.127	.953	32	.175
Student's Reading Comprehension	.121	32	.200*	.947	32	.118

According to table 5, the significance value of the Shapiro-Wilk variable PowerPoint as Media Learning (X) was 0.175 higher than 0.05, and the significance value of Student's Reading Comprehension (Y) was 0.118 higher than 0.05. It signifies that all the collected data was normally distributed. As a result, all of the data matched the normality assumption and could be used for data analysis.

2) Linearity Test of The Data

The linearity test can be determined using SPSS version 21 by examining the significance of the deviation from linearity. If the probability of linear deviation (sig. deviation from linearity) was larger than 0.05, the data has a linear pattern. In contrast, if the probability of linear deviation (sig. departure from linearity) was smaller than 0.05, the data is not linear. The whole linearity test table is provided below.

Table 6. Result of Linearity Test

ANOVA Table							
			Sum of Squares	df	Mean Square	F	Sig.
Student's Reading Comprehension * PowerPoint as Media Learning	Between Groups	(Combined)	8039.583	17	472.917	1.468	.237
		Linearity	676.634	1	676.634	2.100	.169
		Deviation from Linearity	7362.949	16	460.184	1.428	.254
	Within Groups		4510.417	14	322.173		
	Total		12550.000	31			

From the linearity test shown the table above, the significance values (sig. departure from linearity) for variables X and Y are $0.254 > 0.05$, implying that the correlation between variables X (PowerPoint as Media Learning) and Y (Reading Comprehension) was linear patterned data.

3. Hypothesis Test

1) Correlation Analysis

This hypothesis employed simple correlational analysis to examine the relationship between PowerPoint as media learning and reading comprehension; the data calculated were as follows:

Table 7. Result of Correlation Analysis

Correlations			
		PowerPoint as Media Learning	Student's Reading Comprehension
PowerPoint as Media Learning	Pearson Correlation	1	.232
	Sig. (2-tailed)		.201
	N	32	32
Student's Reading Comprehension	Pearson Correlation	.232	1
	Sig. (2-tailed)	.201	
	N	32	32

Table above showed the correlation analysis between PowerPoint as a media learning and students' reading comprehension, which gave a Pearson correlation coefficient of 0.232. The related significance value (sig. 2-tailed) was 0.201. Then the hypothesis was tested with an alpha value of 0.05. The score significance obtained was $0.201 > 0.05$, then H_1 is rejected and H_0 is accepted, meaning that there was “no a significant correlation” between two variables.

3.2 Discussion

This study aimed to determine whether there is a relationship between the use of PowerPoint as a learning medium and student's reading comprehension in grade XI at Vocational High School PGRI Pekanbaru. The data were collected through questionnaires and reading tests that were randomly distributed to two eleventh-grade classes, involving a total of 32 students. The data collection process was conducted by distributing the questionnaires directly to the students in their classrooms.

Based on the results of the analysis using SPSS version 21, a significance value of 0.201 and a Pearson correlation coefficient of 0.232 were obtained. Since the significance value is greater than 0.05, it can be concluded that there is no statistically significant relationship between the use of PowerPoint as a learning medium and students' reading comprehension. Therefore, the alternative hypothesis (H_1) was rejected, and the null hypothesis (H_0) was accepted. The correlation coefficient of 0.232 falls into the category of a low positive relationship, indicating that although there is a tendency toward a positive relationship, the effect is very weak and not statistically significant.

The findings of this study are supported by the results of [18] which indicate that the use of PowerPoint does not always lead to better learning outcomes compared to instruction without PowerPoint. However, these findings differ from those of [19], who reported positive student perceptions regarding the use of PowerPoint as a learning medium in English language teaching. The differing results of these previous studies motivated the researcher to investigate the relationship between the use of PowerPoint as a learning medium and students' reading comprehension. Nevertheless, the results of the present study indicate that there is no statistically significant relationship and only a low positive correlation between the two variables.

2) Conclusion

Based on the results of the data analysis, it can be concluded that the use of PowerPoint as a learning medium does not have a statistically significant relationship with students' reading comprehension. The significance value of 0.201 ($p > 0.05$) and the Pearson correlation coefficient of 0.232 indicate a low positive correlation between the two variables. Accordingly, the alternative hypothesis (H_1) is rejected, while the null hypothesis (H_0) is accepted. These findings indicate that, although PowerPoint has the potential to support the teaching and

learning process, its use does not produce a statistically meaningful effect on the improvement of students' reading comprehension.

Overall, this study concludes that the use of PowerPoint as a learning medium exerts a minimal influence on students' reading comprehension. Therefore, factors beyond the use of PowerPoint are likely to play a more substantial role in enhancing students' reading comprehension. Further research is recommended to investigate these factors and to examine the role of PowerPoint more comprehensively within the context of reading instruction.

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