

Improving Students' Reading Comprehension Through Powtoon Application

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Abstract

Reading comprehension is a fundamental skill that plays a crucial role in student's academic success across various disciplines. Powtoon is a user-friendly digital tool that allows users to create engaging animated presentations and videos. With its intuitive interface and customizable features, Powtoon offers educators a creative platform to design interactive learning materials that can captivate students' attention and facilitate comprehension of complex textual content. This research aims to investigate the effectiveness of utilizing the Powtoon application in improving students' reading comprehension skills. Researchers uses quantitative method. The population in this study is all students of Ad-Durrah Junior High School in Medan. Sampling will be done randomly (cluster random sampling), where each class has an equal opportunity to be a research sample. Two classes will be sampled, consisting of one control class and one experimental class. The result shows that the use of powtoon as a medium to improve students' reading comprehension. This media is a creative and innovative way to make a learning video in teaching English, which can stimulate students to learn and not be bored in reading a text.

Keywords: *Powtoon application, Reading comprehension, Teaching Reading*

Introduction

The meaning of education in simple terms can be interpreted as humans' efforts to develop their abilities to have intelligence, spiritual strength, and religious spirituality needed for themselves and the community environment. Education is one of the means of shaping quality human resources that are beneficial for the sustainability and progress of the nation's life.

However, various explanations in the mass media, both print and electronic media, often suggest that the quality of education in Indonesia is still low. The low quality of education can be seen, among other things, from the low learning outcomes of students at the end of the lessons, and is also emphasized through data on the quality of education and the competitiveness of college graduates in the labor market in Indonesia is still far behind, both at the international level, even at the level of ASEAN (Kemristekdikti, 2015). It became a common concern among educators in Indonesia. Education-related issues such as the role of education, school management, quality of education, the education system, educational outcomes assessment, and others are always discussed. This is because education is the main system that can drive changes in society. Through education, there will be a new generation that brings new better values. The new generation is as a determinant of human resources for a variety of cultural products both tangible and intangible. The efforts of many countries to allocate their funding sources for developing the best education system will determine the progress of the country in the future. It will also determine how the country's position in the constellation of competition among countries worldwide.

Many factors determine the quality of national education in the eyes of the international community. National education is a system that contains interacting components aimed at improving the quality of national education, so it must start with improving the quality of these

educational components themselves. One of them is the improvement of learning outcomes in the English language subject.

English serves as a bridge language among individuals from various parts of the world. By mastering this language, one can communicate and interact on a broader scale, creating connectivity and a more global network. Understanding of English is determined by the quality of the learning process in schools, without disregarding other factors. Teachers are an essential factor, with most still delivering English language lesson materials using conventional teaching methods. Learning is teacher-centered, with communication occurring in only one direction, resulting in a lack of student participation. Students become passive, lack motivation in class, and show little initiative in thinking.

Indonesian students have a low level of reading ability because in ancient times the culture of reading was only carried out by religious leaders, parents in the family, received information orally from generation to generation, and treated written manuscripts as something sacred because they were rarely available (Suryanto, S. (2014). Reading is a skill that is interconnected with writing, listening, and speaking skills, so reading skills should not be separated from other skills. In reading there is a communicative function that involves several things, namely predicting, guessing, checking, and asking yourself questions. Therefore, reading is an active skill (Grellet, F. 1981). When reading, misunderstandings often occur in concluding and understanding information from a text, reading comprehension is needed. Reading comprehension is the process of simultaneously extracting and constructing meaning through interaction and involvement with written language (Snow et al., 2002).

Proficiency in English begins with a person's ability to read texts. Reading comprehension is a fundamental skill that plays a crucial role in student's academic success across various disciplines. Proficiency in reading comprehension not only enhances students' understanding of textual content but also fosters critical thinking, analytical skills, and overall cognitive development. However, in today's digital era, traditional approaches to teaching reading comprehension may need to be supplemented with innovative strategies that engage students effectively. One such innovative approach involves integrating technology into the learning process. With the increasing accessibility and utilization of digital tools and applications, educators have the opportunity to leverage these resources to enhance their students' reading comprehension abilities. One application that has garnered attention in educational settings is Powtoon.

Powtoon is a user-friendly digital tool that allows users to create engaging animated presentations and videos. With its intuitive interface and customizable features, Powtoon offers educators a creative platform to design interactive learning materials that can captivate students' attention and facilitate comprehension of complex textual content. This research aims to investigate the effectiveness of utilizing the Powtoon application in improving students' reading comprehension skills. By exploring Powtoon's potential as a supplementary tool in reading instruction, this study aims to provide valuable insights into the role of technology in enhancing literacy education in the English language subject.

According to (Al Fitri, 2022) Powtoon is an online application that can help users create creative displays through animation features. Animations are presented in the form of handwriting, cartoons, and transition effects. The Powtoon media focuses on creating animations, so users can make slide shows play like films. (Eva et al., 2020) stated that Powtoon is an animation software that is not only used for business but also in the education sector to create professional-looking animated videos and give an awesome touch to everyday communication.

Many researchers have done some research on the Powtoon application for example according to research (Samosa et al., 2021) entitled *Powtoon as an Innovation in Improving Grade 4 Learners' Story Analysis and Reading Comprehension*. Stated that students have made significant progress in terms of reading and analysis skills. English teachers are more effective in using Powtoon as an innovative teaching material to develop students' reading and analyzing skills. (Triningsih et al., 2023) their research focuses on Powtoon learning media development in writing description text on learning the Indonesian language in elementary schools. The result shows that improving the ability to write Indonesian descriptive texts in elementary schools using Powtoon learning media is very practical, has a very potential effect, and is worthy of continuing to be used in the Indonesian language learning process. (Siti et al., 2021) do the same research in writing skills but write a narrative text, entitled "Teaching Media "Powtoon" to Assist Students' Writing Narrative Text". Based on the findings of their research show that students are more motivated and improve their writing accuracy, and technology skills students improve through using Powtoon media. Additionally, (Heryanto & Rahayu, 2021) conducted to determine how the influence of the use of Powtoon media in the process of learning listening in eighth-grade students at one of the junior high schools in Cimahi. This research focuses on listening skills and shows that the influence of the use of Powtoon media is categorized very well in learning to listen. Another skill using Powtoon is speaking skill, based on the research of (Rahmah et al., 2022) entitled "Using the Powtoon Application as a Speaking Learning Resource", shows that the Powtoon application provides English language material that is appropriate to the level of student ability, makes students motivated to try to speak English, students can easily access material via smartphone but in designing and creating English learning resources through Powtoon it is still very limited in achieving the English learning objectives of students at SMP Negeri 4 Bantur class VIII.

Based on several previous studies above, many studies have investigated the use of Powtoon as a learning medium through qualitative methods, many have found that teachers are advised to use Powtoon media and that using Powtoon has a positive influence in improving students' writing skills, reading abilities and skills. listening ability and speaking ability (for example, Triningsih et al., 2023, Siti et al., 2021, Heryanto & Rahayu, 2021, Rahmah et al., 2022). Therefore, it is important to explore the use of Powtoon media on students' ability to understand a text, especially in the context of learning English for junior high school students. This research explains specifically the effects of using Powtoon. As an effort to fulfill empiricism, this research specifically explains improving students' reading comprehension through Powtoon application. This study expected the students' reading comprehension can improve by using the Powtoon application. The following research questions serve as a guide for this study and its objectives: Is there any significant effect of using the Powtoon application on students' reading comprehension?

Method

The research will be conducted at Ad-Durrah Junior High School in Medan in the second semester of the academic year 2023/2024. The population in this study is all students of Ad-Durrah Junior High School in Medan. Sampling will be done randomly (cluster random sampling), where each class has an equal opportunity to be a research sample. Two classes will be sampled, consisting of one control class and one experimental class.

There are two variables in this research: the independent variable and dependent variable. (1) The independent variable is using the discussion learning method with conventional learning; (2) The dependent variable is the students' learning outcomes on the "Reading

Comprehension" subject using Powtoon in the eighth grade at Ad-Durrah Junior High School in Medan for the academic year 2023/2024.

This type of research is quasi-experimental, which aims to determine whether there is a difference due to the influence of "something" applied to the "subjects," namely the students. The intended influence is the students' learning outcomes with the predetermined learning method, which can be seen from the students' answers on the learning outcome test.

To examine the significant effect of students' reading comprehension through the Powtoon application at Ad Durrah Islamic Junior High School. The method used in this research is a quantitative method where the quasi-experimental non-equivalent control group design was used. According to Creswell (2009: 154) This research involves two classes subjected to different treatments, with the experimental group applying the discussion method using Powtoon, while the control group is subjected to conventional learning. This research involves two classes given different treatments. Thus, the research design is as follows:

Table 1. Research Design

Class	Pretest	Treatment	Posttest
Experiment Class	T ₁	X ₁	T ₂
Control Class	T ₁	X ₂	T ₂

Description : T1: Pre test, T2 : Post-test, X1: Treatment for discussion learning and using Powtoon, X2: Treatment for conventional learning

In this study, the t-test was used to determine the differences in student learning outcomes in the experimental class with the discussion method using Powtoon and the control class with conventional learning. The hypothesis tested is: Description: , X1 = average of experimental class learning outcomes, X2 = average control class learning outcomes.

If the research data is normally distributed and homogeneous then to test the hypothesis use the t test with the formula (Sudjana, 2009), namely where S is the combined variance calculated by the formula: $t = t$ distribution, n_1 = number of students in the experimental class, n_2 = number of students in the control class, $S_{(1^2)}$ = experimental class variance, $S_{(2^2)}$ = control class variance

The test criteria are: accept H_0 if $-t_{1-1/2\alpha} < t < t_{1-1/2\alpha}$ where $t_{1-1/2\alpha}$ is obtained from the distribution list of t with $dk=(n_1+n_2-2)$ (ttable is obtained from the distribution list for $\alpha = 0.05$). for other t prices, H_0 is rejected. If data processing shows that $-t_{1-1/2\alpha} < t < t_{1-1/2\alpha}$, or the tcount value obtained is between $-t_{1-1/2\alpha}$ and $t_{1-1/2\alpha}$, then H_0 is accepted. The conclusion drawn was that the initial abilities of students in the experimental class were the same as the initial abilities of students in the control class.

Results

The researchers will interpret and present the data to describe PowToon's influence as media to improve students' reading skills. The results and data obtained are based on the research instruments used in this research. The researchers used SPSS v.29 to generate simplified outcomes.

Mean Score of Pre-test and Post-test

According to the data collected, Powtoon significantly affects the reading comprehension of students in the eighth grade at Ad-Durrah Junior High School in Medan. Table 1 below shows the average value of the pre-test and post-test control class, and pre-test and post-test experiment class.

Table 2. Mean Score of Pre-test and Post-test

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE-CONTROL	45.43	23	26.922	5.614
	POST-CONTROL	67.00	23	21.623	4.509
Pair 2	PRE-EXPERIMENT	36.96	23	16.427	3.425
	POST-EXPERIMENT	64.35	23	16.535	3.448

Based on the data presented in Table 1, student performance in the experimental class before and after using teaching materials from Powtoon, the mean score of the pre-test was 36.96 while in the post-test increased to 64.35. The difference in value between the pre-test and post-test scores was 27.39. Meanwhile, in the control class, students who did not use powtoon got a pre-test score of 45.43 and a post-test of 67.00. The difference in value between the pre-test and post-test scores is 21.57. It shows that there is a significant increase in the average score after using Powtoon as a medium to improve students' reading comprehension.

Normality Test

The researchers used SPSS v.29 tools to determine the data's normality. Before carrying out the paired sample t-test, the researcher carried out a normality test to verify whether the data was evenly distributed. This research uses the Shapiro-Wilk method because the sample size is less than fifty students. If the normality test result is more than 0.05 then the data is normal, and normality test results are less than 0.05, then the data is not normal.

Table 3. Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre-test Control	.147	23	.200*	.937	23	.156
Post-test Control	.150	23	.193	.945	23	.228
Pre-test Experiment	.158	23	.142	.959	23	.434
Post-test experiment	.131	23	.200*	.952	23	.327

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

From the table, it shows that the result of both group pre-test and post-test is more than 0.05, indicating that the data is normal.

Paired Samples T-test

After the data is normal then the researchers use the paired samples test. The following table presents the results from the t-test analysis. Based on research shows that the sig value is less than 0,05 indicating that the hypothesis (H0) is accepted.

Discussion

This study aimed to measure the impact of using Powtoon as an instructional medium on the reading comprehension skills of eighth-grade students at Ad-Durrah Junior High School in Medan. The data analysis results indicate that Powtoon significantly enhances students' reading comprehension. According to the data presented in Table 1, the average scores of students in the experimental group showed a substantial increase after utilizing Powtoon-based teaching materials. The pre-test average score for the experimental group was 36.96, which increased to 64.35 in the post-test, reflecting a difference of 27.39 points. In contrast, the control group, which did not use Powtoon, had a pre-test average score of 45.43 and a post-test average score of 67.00, with a difference of 21.57 points. The greater improvement in the experimental group compared to the control group suggests that Powtoon is effective in enhancing students'

reading comprehension skills. This finding supports the hypothesis that interactive instructional media like Powtoon can positively impact students' reading comprehension.

Before conducting the paired samples t-test, the researchers performed a normality test using the Shapiro-Wilk method, as the sample size was less than fifty students. The normality test results indicated that the pre-test and post-test scores for both groups were above 0.05, signifying that the data were normally distributed. Normal data distribution is a crucial prerequisite for conducting parametric statistical tests such as the paired samples t-test. Therefore, the normality test results ensure that the subsequent statistical analysis can be performed with maintained validity.

Following the confirmation of normal data distribution, the researchers proceeded with the paired samples t-test. The t-test results presented in Table 4 showed a significance value (sig) of less than 0.05. This indicates a significant difference between the pre-test and post-test results in both the experimental and control groups. However, the more substantial difference observed in the experimental group suggests that the intervention using Powtoon was more effective in improving students' reading comprehension than conventional teaching methods.

These findings have significant implications in the educational context, particularly regarding the use of digital instructional media. The use of Powtoon as a teaching aid has proven effective in enhancing students' reading skills. This demonstrates that interactive learning media can help students engage more deeply and understand the material better. In a broader context, this study supports the integration of technology in education as a means to improve learning quality. Utilizing digital media like Powtoon not only makes learning more engaging but also significantly enhances students' academic performance. Therefore, integrating technology into the teaching process can be an effective strategy to improve education quality in the digital age.

The goal of this research is to investigate the effect of using the Powtoon application on students' reading comprehension in eighth-grade students at Ad-Durrah Junior High School in Medan. To analyze the data collected, the researchers used SPSS v.29. From the SPSS application, the test carried out to measure the data obtained is the mean score between both classes, the normality test, and the paired sample t-test. Based on the result of the mean score there are substantial disparities between the two groups. The normality test shows that the data more than 0,05, indicating that the data is normal. The significant value of the paired sample t-test was $<0,001$, which indicates it was less than 0,005. If the significant value is > 0.05 , then the null hypothesis (H_0) is accepted and the alternative hypothesis (H_1) is rejected. With these results, it can be concluded that the independent variable does not affect the dependent variable. Based on the data presented above, it shows that using Powtoon influences students' reading skills. Researchers pay attention to students during learning activities using Powtoon, students look more enthusiastic and can answer questions related to animated videos with the correct answers.

For instance, the research conducted by Baytak, Tarman, and Ayas (2011) on the use of technology in education found that digital and interactive tools, such as videos and animations, can increase students' motivation and understanding of the subject matter. Their study demonstrated that students are more engaged and better able to comprehend material presented through interactive media compared to traditional teaching methods. These findings support our results, which show that Powtoon, as an interactive medium, can enhance students' reading comprehension skills.

Additionally, the study by Aloraini (2012) on the effectiveness of technology-based instruction found that students taught using digital media achieved better learning outcomes compared to those taught using conventional methods. Aloraini's research noted that digital media can provide a more engaging learning experience and motivate students to be more active

in the learning process. This aligns with our findings, which show a significant improvement in students' reading comprehension after using Powtoon. On the other hand, the research by Li and Ma (2010) on the impact of information and communication technology (ICT) in education highlights that while there are many benefits to using technology in learning, its effectiveness largely depends on how well it is integrated into the curriculum and teaching methods. They found that technology used without effective instructional strategies does not always result in significant improvements in learning outcomes. This perspective underscores the importance of pairing the use of Powtoon with effective teaching strategies to achieve optimal results.

The practical implications of this study suggest that educators can consider integrating Powtoon into the curriculum to make learning more engaging and effective. However, this study has several limitations, such as the sample being limited to one school and a small number of students, which may affect the generalizability of the results. Additionally, the effectiveness of Powtoon largely depends on the teaching strategies employed. Future research with larger and more diverse samples, as well as a more in-depth analysis of effective teaching strategies, can provide a more comprehensive understanding of the use of interactive media in education.

Conclusion

Based on the discussion above, it can be concluded that the use of powtoon as a medium to improve students' reading comprehension. This media is a creative and innovative way to make a learning video in teaching English, which can stimulate students to learn and not be bored in reading a text. Students show different responses after the treatment, students feel that reading is too boring and takes a long time to understand the reading text. After the treatment using powtoon learning video, students feel excited and interested to read the text, it helps students to understand the detailed information in the text.

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