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The Impact of Lumi Interactive on Students' Achievement in Reading Comprehension

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Abstract

This research aims to explore the effectiveness of teaching reading comprehension using two different learning media: Lumi Interactive and PowerPoint. This quantitative research approach focuses on comparing reading comprehension abilities between the experimental group and the control group. This study investigates whether students who teach using Lumi Interactive media show superior reading abilities compared to those using Powerpoint media. Data were analyzed using the Independent Sample T-Test. The results of data analysis from the experimental and control groups show the results of Sig. (2- tailed) 0.039 is lower than the alpha value of 0.05. It can be concluded that the null hypothesis (Ho) is rejected, which means the alternative hypothesis (Ha) is accepted. There is a significant difference in reading comprehension (reading perception) between students taught using interactive Lumi and those not using interactive Lumi. The average value of the experimental group was 82.00 while the average value of the control group was 77.90. Based on this analysis, it can be concluded that students in the experimental group showed higher skills than those in the control group, indicating that Lumi Interactive media in learning reading comprehension is effective.

Keywords : Reading comprehension, Student's achievement, Lumi Interactive

INTRODUCTION

English is a global language spoken by millions of people around the world, serving as a common medium for communication in various fields such as business, education, science, and technology. Its widespread use makes it a key tool for accessing knowledge, building international relationships, and advancing in globalized industries. Mastering English can open doors to numerous opportunities, from higher education to professional growth, and it enhances one's ability to participate in cross-cultural interactions. In today's interconnected world, proficiency in English has become an essential skill for personal and professional development.

English plays a crucial role in the field of Primary Teacher Education as it is not only an essential communication tool but also a gateway to a vast array of educational resources. For future primary school teachers, proficiency in English equips them with the ability to access global knowledge, educational theories, and best practices from various parts of the world. It enhances their teaching abilities, especially in non-English-speaking countries, where English may be a

second or foreign language. Additionally, English competence enables teachers to foster a more engaging and inclusive learning environment, making it easier to connect with diverse students and communicate effectively with colleagues, parents, and the global education community.

There are four skills in English, one of the most important skills is Reading comprehension. Reading comprehension is the ability to understand, interpret, and analyze written texts. It is similar with Takaloo & Ahmadi (2017) stated that Reading comprehension is the organization of meaning of a written or spoken communication by a reciprocal, holistic exchange of ideas between the interpreters and the message in a specific communicative context. In addition fahrurozi in fitria (2019) Reading is an activity which needs a skill to interpret the message which sent by the writer with their own purposes. As an educator, the teacher has to point out their skill on comprehending the texts. It needs to motivate and help the students to develop their ability in reading comprehension. Reading comprehension is the basic decoding skill that serves the meaning of the written texts, but it is also included the prior knowledge of the reader in addition to this skill. It involves not only recognizing words and sentences but also grasping the meaning behind them and connecting them to prior knowledge or experiences. Effective reading comprehension requires critical thinking, inference, and the ability to synthesize information from various parts of a text. Reading is a skill that every individual must understand (Ariawan, 2018). The results of this research are in line with the statement of Humairoh & Rahman (2016) who explained that students' low reading comprehension skills are indicated by the large number of students who still do not understand the content of the reading they read, and students cannot find the main sentences in the reading. It could be found in the class of Primary Teacher Education Departmen where the students' ability in comprehending the text was categorized enough and the method used was still book and presentation. In addition, the students' participating was still lack in teaching learning process. The students looked passive not active. It was a big problem for their career because they would be a primary teacher in the future. As we know that, this skill is essential for academic success, professional growth, and personal development, as it enables individuals to engage with diverse types of content, from textbooks and research articles to news reports and literature, in a meaningful way.

There are many media which can be done to treat students in improving their reading comprehension skill such as the implementation technology in the teaching learning process. Technology has played an important role in modern education.Technology is an effective tool for learners. Learners must use technology as a significant part of their learning process. Teachers should model the use of technology to support the curriculum so that learners can increase the true use of technology in learning their language skills (Ahmadi, 2018). The use of digital tools such as applications and interactive platforms has been proven to increase student engagement and motivation. Technology-based learning theory emphasizes the importance of interaction, real-time feedback, and personalized learning as key factors that can improve learning outcomes. With the development of digital technology, teaching and learning methods have undergone significant transformation, including teaching reading comprehension. One of the technological innovations that has emerged is the use of interactive platforms such as Lumi Interactive.

Lumi Interactive is a desktop application designed for creating interactive teaching materials, offering a comprehensive selection of content types, and can be accessed free of charge (Engineering & Ogris, 2022). Lumi Education features several tools, including interactive videos, quizzes, games, course presentations, and more. Lumi Interactive can construct effective and interesting learning resources that are specific to the topic matter with requiring all students used these applications. This platform is designed to increase student engagement in the learning process through engaging and interactive content. Recent insights into how today's students prefer to use technology and the impact it has on their learning reveal that the use of modern technological tools and equipment enhances both their learning experience and interactivity (Raja, 2018).

Lumi Interactive is a digital platform designed to facilitate interactive learning. This platform provides a wide range of learning activities designed to support reading comprehension through a fun and participatory approach. The previous studies have shown that the use of interactive technology such as Lumi can increase students' attention and engagement, which in turn can improve their reading comprehension. Learning media in the form of interactive multimedia can be developed from applications such as Lumi (Oksaviona, 2023). Besides using for teaching learning process, Lumi has many advantages such as Easy to use,No coding required, Versatility, Desktop-based, Portability,and Free access. From the usage, it can be construct the students' active in learning especially in reading comprehension skill. Constructivist learning theory states that learning is an active process in which students build new understanding based on the experiences and knowledge they already have. Platforms like Lumi Interactive support constructivist learning by providing an environment where students can actively engage in the learning process and build their own knowledge through interactions with content.

From the explanation above, the researchers were interested in conducting a research with a title " *The Impact of Lumi Interactive on Students' Achievement in Reading Comprehension* ". This research aimed to see the impact of Lumi Interactive in improving the students' achievement in reading comprehension. This finding of this research was useful for increasing the quality of Education in teaching reading comprehension to students and encourage the students to participate in learning process discusssion.

RESEARCH METHODOLOGY

This study employed a quantitative research approach with a quasi-experimental design. The objective of this research was to compare the effectiveness of two different learning media between Lumi Interactive and PowerPoint on students' reading comprehension abilities. The study was conducted over a predetermined period, with one group of students serving as the experimental group and the other as the control group.

The participants of this study consisted of 86 students of Primary Teacher Education department. These students were randomly assigned to either the experimental group, which used Lumi Interactive media, or the control group, which used PowerPoint presentations. Both groups were matched for similar reading proficiency levels at the start of the study to ensure comparability. The primary instrument used to assess reading comprehension was a standardized reading test

administered to both groups before and after the intervention. This test measured various aspects of reading comprehension, including understanding of main ideas, details, inference, and vocabulary.

The study was carried out in two, namely the experimental group received instruction using Lumi Interactive media, while the control group was taught using traditional PowerPoint presentations. The intervention lasted for one week, with both groups covering the same reading material. Post-Test: After the intervention, a post-test identical to the pre-test was administered to both groups to measure any changes in reading comprehension.

The data collected from both the pre-tests and post-tests were thoroughly analyzed using an Independent Sample T-Test. This statistical method was employed to compare the reading comprehension scores of the experimental group, which received instruction through Lumi Interactive media, against those of the control group, which was taught using traditional PowerPoint presentations. A significance level of 0.05 was established for this analysis, allowing for the assessment of any statistically significant differences between the two groups regarding their reading comprehension performance after the intervention.

RESULT AND DISCUSSION

This research seeks to examine the effectiveness of teaching reading comprehension by utilizing two different learning media: Lumi Interactive and PowerPoint. Adopting a quantitative research approach, the study compares the reading comprehension abilities of students in the experimental group with those in the control group. The null hypothesis (Ho) states that there is no significant difference in reading comprehension abilities between students taught using Lumi Interactive media and those taught using PowerPoint media. Conversely, the alternative hypothesis (Ha) posits that there is a significant difference in reading comprehension abilities, with students taught using Lumi Interactive demonstrating superior skills. The data collected from the pre- and post-tests were analyzed using the Independent Sample T-Test to compare the reading comprehension scores between the experimental and control groups. The significance level was set at 0.05. A result of Sig. (2-tailed) 0.039 indicated a statistically significant difference between the groups, leading to the rejection of the null hypothesis (Ho) and acceptance of the alternative hypothesis (Ha).

Table. 1 The students' achievement in Reading Comprehension

Group	Mean of Pre Test	Mean of Post Test
Experimental	79.5	82,00
Control	77.7	77,90

The table showed the mean scores of pre-test and post-test results for both experimental and control groups. The experimental group, which likely underwent a specific intervention or treatment by Lumi Interactive, had a pre-test mean score of 79.5, and this improved to 82.00 in the post-test. This increase indicates a positive effect of the intervention, suggesting that the treatment or learning strategy applied had a beneficial impact on the participants' performance.

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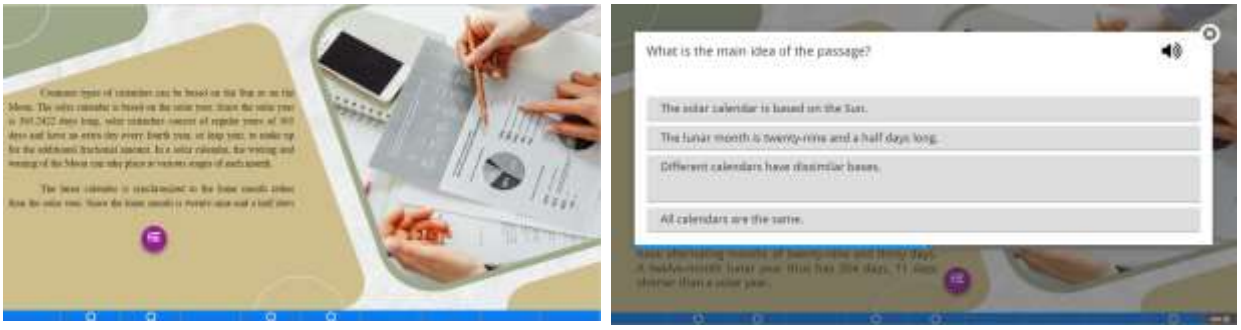
The students' achievement in experimental group increased because of Lumi Interactive applied in the class. The material taught by using interactive features of Lumi. It can be seen from the picture below :

Picture 1. Multiple Choice Feature

The picture above showed that the researcher used the Multiple Choice Features to check the students' comprehending before the material given. The students looked so enthusiastic in taking a part in answering the question stated.

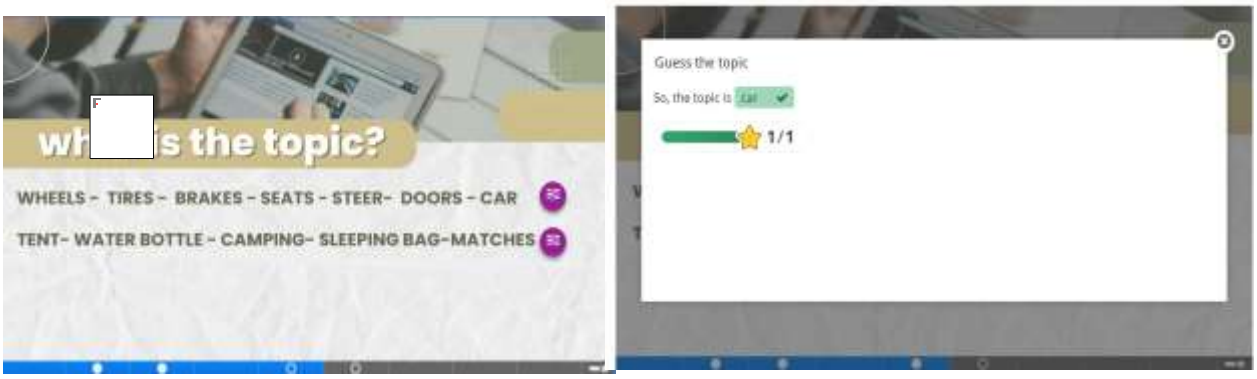
Picture 2. Text and Picture Feature

The picture above showed that the researcher used Text and Picture Features to insert the material. This feature made the material more interesting and eye catching.



Picture 3. One Choice Feature

The picture 3 showed a presenting a single question at a time, which makes it less overwhelming for users. Additionally, the use of large click able areas for each option enhances accessibility and ease of use.The small sound icon next to the question suggests that users can listen to the question being read aloud, which is a helpful feature for auditory learners and those with visual impairments.



Picture 4. Fill In the Blanks Feature

The picture 4 showed that the researcher examined the students' comprehending by giving fill in the blanks features. The students could see their comprehending directly by clicking the answer.The feature is so interesting and easy to use and made the students were spirit in the taking a part in the learning process.

Picture 5. Insert Link and Video Features

The Picture 5 showed that the researcher insert link and video to give the completely comprehending to students. It could attract of the students' attention because they could watch and got the material fully.

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Picture 6. True and False Features

The Picture 6 used for giving quiz with true and false features designed to enhance the students' engagement and feedback. The main feature allows students to select either "True" or "False" as the answer to the question presented. This is the core interactive component, providing users a simple way to engage with the content.

In contrast, the control group, which presumably did not receive the same intervention by PowerPoint, started with a mean pre-test score of 77.7 and saw only a slight increase to 77.90 in the post-test. This minimal improvement could imply that traditional methods or the lack of intervention did not significantly contribute to the participants' learning outcomes. The larger difference in improvement in the experimental group compared to the control group suggests that the intervention was effective in enhancing performance, possibly by addressing specific learning challenges or offering more engaging, interactive learning opportunities.

This finding supports the idea that innovative teaching strategies, involving technology or other active learning techniques, can lead to better comprehension and retention, as evidenced by the more substantial improvement in the experimental group.

CONCLUSION

In conclusion, this study demonstrates that Lumi Interactive media is more effective than PowerPoint in enhancing students' reading comprehension abilities. The significant difference in performance between the experimental group, which used Lumi Interactive, and the control group, which used PowerPoint, highlights the superior impact of interactive learning tools. With the experimental group achieving a higher average score (82.00) compared to the control group (77.90), it is evident that Lumi Interactive media significantly improves students' reading comprehension skills, making it a valuable tool for educational practices.

The students thought that Lumi interactive was a good interactive platform. Many students find that the platform enhances their learning experience through its interactive features, which promote active participation and foster a deeper understanding of the material. However, there are areas for improvement, including technical issues such as occasional glitches and the need for more personalized content. Overall, the platform's ability to facilitate collaboration and provide

immediate feedback contributes to its favorable reception, suggesting its potential as an effective tool in educational settings.

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