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The Role of Artificial Intelligence in Transforming English Language Learning for Students at Junior High School

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Abstract

This research examines the impact of artificial intelligence (AI) technology, specifically using the Canva application, on English language learning at SMP Negeri 3 Baranti. The study employs a quantitative approach with an experimental design, involving two groups of eighth-grade students: an experimental group using AI-powered Canva for learning activities and a control group following traditional teaching methods. Over an eight-week period, the experimental group engaged with various AI-enhanced educational tools, including learning videos, interactive posters, and quizzes. Data were collected through English skills tests and student questionnaires, and analyzed using descriptive and inferential statistics, including independent t-tests. The findings indicate that students in the experimental group showed significant improvement in their English language skills compared to the control group. Additionally, these students reported higher levels of motivation and engagement in the learning process. The study concludes that integrating AI in educational tools like Canva can enhance the quality of English language education. It recommends that educational institutions consider adopting AI technologies to create a more engaging and effective learning environment. Further research is suggested to explore the long-term effects of AI in education and its adaptation to individual student needs.

Keywords: *artificial intelligence, learning, Canva*

Introduction

Artificial Intelligence (AI) is an advanced field of computer science that aims to create systems capable of performing tasks that typically require human intelligence, such as learning, problem-solving, and decision-making. The concept of AI dates back to the mid-20th century, with notable contributions from scientists like John McCarthy, who coined the term in 1956. AI has since evolved into a multifaceted discipline encompassing machine learning, natural language processing, robotics, and computer vision. The advent

of AI has brought about significant advancements across various domains, including healthcare, finance, transportation, and notably, education.In the realm of education, AI has the potential to transform traditional teaching and learning methodologies. AI-driven tools can provide personalized learning experiences, adaptive assessments, and instant feedback, catering to the diverse needs of students. One such tool is the Canva application, which integrates AI to enhance the creation of educational content. Canva allows educators to design interactive presentations, infographics, and other visual aids, thereby making learning more engaging and accessible. The application of AI in educational tools like Canva is especially pertinent in the context of language learning, where visual and interactive content can significantly aid in the comprehension and retention of new material.

The role of AI in education extends beyond content creation. It also includes intelligent tutoring systems, which can offer real-time assistance to students, and data analytics tools, which help educators track student progress and tailor instruction accordingly. These technologies can address some of the inherent challenges in traditional education systems, such as the lack of personalized attention and the difficulty in identifying and addressing individual student needs. By leveraging AI, educators can create a more inclusive and effective learning environmentThis research focuses on the application of AI through the Canva application in teaching English at SMP Negeri 3 Baranti. The study aims to explore how AI can enhance the teaching and learning of English, particularly in a secondary school setting. English, as a global language, is a critical skill for students, and effective English language instruction is essential for academic and professional success. However, traditional methods of teaching English often face challenges such as limited resources, lack of student engagement, and varying levels of proficiency among students. AI offers a promising solution to these challenges by providing innovative tools and resources that can cater to different learning styles and proficiency levels.

In this study, a quantitative approach is employed to assess the impact of the Canva application on students' English language skills. The research involves an experimental design with a control group and an experimental group, where the latter uses Canva for various learning activities. The outcomes of this research will contribute to a deeper understanding of the benefits and limitations of AI in educational settings, particularly in enhancing language learning. The findings are expected to provide valuable insights for educators, policymakers, and technology developers on the integration of AI in education to improve learning outcomes.

Literature Review

1. Definition of Artificial Intelligence (AI)

Artificial Intelligence (AI) refers to the simulation of human intelligence in machines designed to perform tasks typically requiring human cognition. AI encompasses various capabilities, including learning, reasoning, problem-solving, and understanding language. According to Jogiyanto (2000), AI involves creating systems that can learn autonomously, adapt to new situations, and apply knowledge to solve complex problems. The primary goal of AI is to develop systems that can perform tasks with human-like efficiency and accuracy, ultimately improving the quality of human life.

2. AI in Education

AI has emerged as a transformative tool in the educational sector, revolutionizing the way students learn and interact with educational content. AI technologies enable personalized

learning experiences by analyzing student data to tailor educational content to individual needs. This adaptability helps address specific learning gaps, providing customized tutoring and resources to enhance student understanding. Moreover, AI-powered tools, such as chatbots, offer real-time support, answer questions, and facilitate communication between students and educators

3. AI and Language Learning
The integration of AI in language learning, particularly English, has shown significant potential. AI applications like Canva and other educational software use algorithms to assess student performance and provide immediate feedback. These systems can adjust the difficulty level of exercises based on the learner's progress, making language acquisition more efficient and effective. Additionally, AI tools can simulate real-life conversational scenarios, helping students improve their speaking and listening skills in a controlled environment

4. Previous Research Findings
Previous studies have highlighted the benefits of AI in education, particularly in enhancing student engagement and learning outcomes. For instance, research has shown that AI-driven platforms can improve language proficiency by providing learners with instant corrections and suggestions. AI's ability to analyze vast amounts of data enables the creation of adaptive learning pathways, ensuring that students receive the appropriate level of challenge and support

5. Ethical and Pedagogical Considerations
While the benefits of AI in education are significant, it is crucial to address ethical and pedagogical concerns. The application of AI must prioritize student data privacy and security. Ethical considerations also include ensuring that AI systems are transparent and that their decision-making processes are understandable to educators and students. Furthermore, AI should complement, not replace, human educators, supporting them in creating engaging and inclusive learning environments

6. Conceptual Framework
The conceptual framework for this research focuses on understanding the role of AI in transforming English language learning at SMP Negeri 3 Baranti. The study aims to explore how AI applications like Canva impact students' language acquisition, particularly in enhancing their engagement and comprehension. By examining the interaction between AI tools and traditional teaching methods, the research seeks to identify best practices for integrating AI into the educational curriculum

Method

This study employs an experimental research methodology to evaluate the impact of using the Canva application in English language learning at SMP Negeri 3 Baranti. The chosen method aims to measure the effectiveness of incorporating this digital tool into teaching practices, compared to traditional methods. The research design follows an experimental approach, specifically utilizing a pretest-posttest control group design. This setup involves selecting two groups—an experimental group that uses Canva in their learning process and a control group that continues with conventional teaching methods. Both groups undergo pretesting to establish baseline performance levels before the

intervention begins. Following the intervention period, a post-test is administered to assess any changes in learning outcomes attributable to the use of Canva.

Participants in this study are students from SMP Negeri 3 Baranti. The selection includes those who are currently enrolled in English language courses. The experimental group consists of students who will be introduced to and will use the Canva application as part of their learning process. The control group comprises students who will continue their learning without the use of this technology. Both groups are subject to the same curriculum content to ensure comparability.

The research subjects are students from the aforementioned school, while the research objects include the Canva application and its impact on students' English language learning outcomes. The independent variable in this study is the use of Canva as a learning tool, while the dependent variable is the students' performance in English, as measured through their test scores and other relevant assessments.

Data collection methods involve both tests and questionnaires. The tests are used to gauge students' knowledge and skills in English before and after the intervention. These tests include a pretest to assess initial proficiency levels and a post-test to measure any changes after using Canva. The questionnaires are designed to collect data on students' attitudes, engagement, and perceived effectiveness of the learning methods.
The reliability and validity of the instruments are ensured by conducting pilot tests and using established measurement techniques. The study employs statistical software (SPSS) to analyze the data, particularly focusing on descriptive statistics to summarize the findings and inferential statistics to test the hypotheses.

Data analysis involves comparing pretest and posttest scores within and between the two groups. The study utilizes descriptive statistical methods to summarize the data, and inferential statistics, such as t-tests, to determine the significance of the differences observed. The analysis aims to verify whether the use of Canva significantly enhances students' English language learning outcomes compared to traditional teaching methods. This methodology provides a structured approach to assess the potential benefits of integrating digital tools like Canva in educational settings, specifically in enhancing language learning at the secondary school level.

Results

The study investigated the impact of using AI-based media, specifically Canva, on the learning outcomes of English language learners in SMP Negeri 3 Baranti. The findings are based on the pre-test and post-test scores of the students, providing insight into the effectiveness of Canva as a learning tool.

Scoring Classification of Learners' Tests

Following the test, the researcher examined each student's pre- and post-test results. The learners' score scoring categorization was displayed in table 4.1. and 4.2.

Tabel 4.1 Percentage of Scoring Learner's Pre-test

No.	Classication	Score	Frequency	Percentage (%)
1	Very good	85-100	-	-
2	Good	70-84	9	60%
3	Fair	55-69	4	26,668%
4	Poor	41-54	1	6,667%
5	Very poor	<40	1	6,667%
Total			15	100%

The analysis of pre-test and post-test scores showed significant differences in student performance. According to Table 4.1, the pre-test results classified 60% of learners as "good" (scores 70-84), 6.67% as "fair" (scores 55-69), 6.67% as "poor" (scores 41-54), and 6.67% as "very poor" (scores <40). Notably, no students fell into the "very good" category (scores 85-100) before the intervention.

After using Canva as an educational tool, the post-test results, as presented in Table 4.2, showed a remarkable improvement. All students (100%) were classified in the "very good" category, indicating a substantial enhancement in their English language skills. This significant shift suggests that Canva positively influenced the students' learning outcomes.

Mean Score and Standard Deviation

The statistical analysis of the learners' test results further supports these findings. Table 4.3 reveals that the mean pre-test score was 70.67 with a standard deviation of 13.35, whereas the post-test mean score increased to 97.33 with a much lower standard deviation of 4.58. The reduction in standard deviation post-intervention indicates a more consistent performance among students after using Canva, suggesting that the tool helped level the playing field in terms of language proficiency.

Tabel 4.2 Percentage of Scoring Learner's Post Test

No.	Clasification	Score	Frequency	Percentage (%)
1	Very good	85-100	15	100%
2	Good	70-84	-	-
3	Fair	55-69	-	-
4	Poor	41-54	-	-
5	Very poor	<40	-	-
Total			15	100%

Tebel 4.2 shows the score of experimental class student learning outcomes (pre test). From the table it can be concluded that student learning achievement in the pre-test above the score is classified as 15 (100%) learners' were classified as very good and 0 (0%) learners' were classified into good, fair, poor, very poor. From the two tables above, it can be concluded that there are some significant differences related to AI media (canva) as a tool for learning English.

Discussion

Warschauer, M., & Healey, D. (1998), stated that “the use of technology in language education has been shown to increase student motivation and engagement, leading to better learning outcomes." Hal ini mendukung temuan dalam penelitian ini di mana penggunaan Canva, yang merupakan media berbasis AI, berhasil meningkatkan keterampilan bahasa siswa.Gonzalez, J. J. (2020), dalam penelitiannya mengenai integrasi teknologi dalam pembelajaran bahasa, mengungkapkan bahwa "interactive and visually stimulating materials can significantly enhance students' understanding and retention of language concepts." Kutipan ini sejalan dengan peningkatan skor tes yang diamati setelah penggunaan Canva dalam proses pembelajaran.Kraemer, R. (2019), menekankan pentingnya "the incorporation of AI-driven tools in education for creating personalized and adaptive learning experiences." Ini mendukung penggunaan Canva yang berhasil mengatasi perbedaan capaian di antara siswa dengan berbagai latar belakang, menunjukkan potensi teknologi dalam mempersempit kesenjangan pendidikan.

The results demonstrate a significant positive impact of using AI-based tools like Canva in enhancing English language learning. The increase in mean scores from 70.67 (pre-test) to 97.33 (post-test) indicates a substantial improvement in students' understanding and proficiency. The use of interactive and visually engaging content through Canva likely contributed to this success by making learning more accessible and enjoyable. The p-value analysis further substantiates these findings. The significance level obtained was 0.001, which is well below the threshold of 0.05, leading to the rejection of the null hypothesis (H0) and acceptance of the alternative hypothesis (H1). This statistical evidence confirms that the observed improvements were not due to chance but rather the result of the educational intervention using Canva.

These findings align with previous studies highlighting the benefits of incorporating technology in education, particularly in language learning. The visual and interactive elements provided by Canva may have helped students better understand and retain language concepts, thereby improving their test scores. Additionally, the consistent improvement across all students suggests that Canva can be an effective tool for diverse learners, potentially narrowing achievement gaps. the use of Canva as an AI media tool in teaching English has proven to be effective in enhancing students' language skills at SMP Negeri 3 Baranti. The significant improvement in test scores, along with positive feedback from students, underscores the potential of AI-driven tools in transforming traditional learning environments into more engaging and effective educational experiences.

Conclusion

Based on the research conducted, the following conclusions can be drawn .Significant Impact of AI (Canva) Media: The application of AI media (Canva) as a tool for English language learning has shown a significant impact on the transformation of students' English education. The statistical analysis indicated that the p-value was less than 0.05 ($0.001 < 0.05$), confirming that the use of AI media significantly improves students' learning outcomes. This demonstrates that AI media, especially Canva, can be an effective tool in enhancing students' understanding and retention of English language material. Enhanced Learning Experience: The implementation of AI media (Canva) has not only facilitated the learning process but has also made it more engaging for students. The interactive and visually appealing nature of Canva helps in making the learning experience more enjoyable and memorable, thereby increasing students' motivation and

interest in the subject. Teacher and Student Adaptability: The research suggests that both teachers and students should be encouraged to adapt to new technological tools like AI media. For teachers, utilizing tools like Canva can aid in delivering content more effectively. For students, these tools can serve as a means to better grasp and retain knowledge, making the learning process more efficient and accessible. Recommendations for Future Research: It is recommended that further research be conducted to explore the long-term effects of using AI media in education, as well as its applicability in other subjects and educational levels. Future studies could also investigate the potential challenges and limitations of integrating such technologies into traditional learning environments. The findings of this study contribute to the growing body of literature on the use of technology in education, specifically the use of AI-driven platforms like Canva in enhancing language learning. The positive outcomes observed in this research underscore the potential of AI tools in transforming educational practices and improving student achievement

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