

## The Effect of Artificial Intelligence on Student Reading Interest in Indonesian History Lessons at SMA ST. Antonius Medan

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### Abstract

*Artificial intelligence is a technology designed to help humans with their work. This technology is sophisticated and as similar as possible to how humans work. Artificial intelligence now plays an important role in all areas of life, including education. The world of education and artificial intelligence is closely tied because of its effective and efficient nature in assisting teaching and learning activities. Not only teachers, but students are also increasingly using artificial intelligence to help solve problems and even do assignments. With the existence of artificial intelligence, students are increasingly facilitated in getting information about lessons, one of which is in history lessons. So it is not uncommon for students to prefer to find information through artificial intelligence applications rather than reading books. This study was conducted to measure how influential artificial intelligence is in reducing students' interest in reading.*

**Keywords:** artificial intelligence, technology, reading interest, students, history

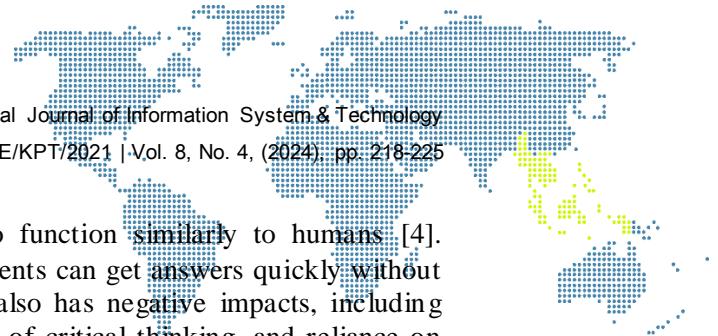
### 1. Introduction

Along with the advancement of the digital era and the rapid development of information technology, especially in artificial intelligence, which has penetrated and changed the perspective of students, including high school students, in both aspects of life and education. Therefore, many interesting questions arise regarding the effect of student interest in reading with the widespread use of AI, especially in the subject of Indonesian History. The focus of this research discusses the influence of the use of artificial intelligence on students' reading interest in learning Indonesian history, given the importance of history in shaping our identity and understanding of the world. We hope this article helps you develop more effective learning strategies.

Artificial intelligence (AI) is hardware or software that incorporates technology that exhibits intelligent (human-like) behavior. The goal of AI is to create computer systems that can mimic human intelligence so that AI-based devices can function with minimal human intervention [1]. The utilization of AI is inseparable from technological developments and current circumstances that require continuous innovation in problem solving. Information technology that continues to develop is important in every field and aspect of life, including business, economics, and education [2].

Education is a very important field in the development of a country. With the presence of artificial intelligence, education has the potential to experience revolutionary changes in terms of providing teaching materials, assessments, and curriculum development. According to Sagihartono (2020), the development of artificial intelligence technology has greatly changed the worldview of education. By using AI, students can gain new and more modern learning experience [3]. This increases the effectiveness of the learning process and allows students to learn more efficiently.

The use of AI technology is attracting more and more attention. One of the major impacts that needs to be considered is the impact on students' interest in reading. Artificial



intelligence (AI) is computer science designed to function similarly to humans [4]. Therefore, information is easily accessible, and students can get answers quickly without having to read the text in depth. In addition, AI also has negative impacts, including reduced competition among students, lower quality of critical thinking, and reliance on relatively quick solutions. The use of AI to retrieve information alone has had a negative impact on students' interest in reading. Before the spread of AI, Indonesia was already a developing country, and people's interest in reading was still low.

Published on March 17, 2017, *Mind of the People* magazine ranked Indonesia in terms of reading interest, according to the 2016 "Most Littered Nation In the World" study conducted by Central Connecticut State University. It said that Indonesia ranked 60th out of 61 countries [5]. The Organization for Economic Cooperation and Development runs the PISA program, or what is commonly called the Program for International Student Assessment. Based on the 2022 PISA results, Indonesia's reading score decreased by 12 points compared to the 2018 PISA results. The results also explained that Indonesian students' reading comprehension was 117 points behind the global average. Unfortunately, only 25.46% of Indonesian students met the PISA minimum reading standard [6]. To overcome the problem of reading enjoyment quickly, special attention must be given from all aspects.

The presence of AI has led to increasingly sophisticated and creative innovations, which have a significant impact on every aspect of life, including education. On the other hand, AI can serve the needs and tasks of students, but on the other hand, AI can also pose a threat to the declining interest in reading among students, especially children in Indonesia. This research aims to analyze the impact of the introduction of AI in education. Through this research, we hope that students can make the most of AI in their learning process and utilize AI in a balanced way in all aspects of their lives.

## 2. Research Methodology

Reference data is obtained from various sources such as magazines, e-books, and other relevant internet sources. Quantitative research provides a strong foundation for in-depth understanding of phenomena that can be measured numerically [7]. Quantitative methods are research methods used to study populations or samples. This research is a compilation of information collected from several respondents using a questionnaire. The subject of this research is St. Antonius Medan, which amounted to 57 students. The sample is all St. Antonius Medan high school students who study the field of Indonesian history. The research tools used were Google Forms questionnaires and observation and documentation as data collection techniques. According to Istijanto (2005), a survey can be interpreted as a list of questions used to collect data directly from respondents through questions. This study uses a closed questionnaire [8]. With a Likert scale of 1 to 4 (1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree) to determine individual perceptions and assess attitudes or evaluate opinions and group assessments. This allows respondents to complete their answers more easily and accurately [9].

The following are the details of the stages carried out in the study of the effect of the use of AI on students' reading interest in Indonesian history lessons at SMA ST. Antonius Medan.

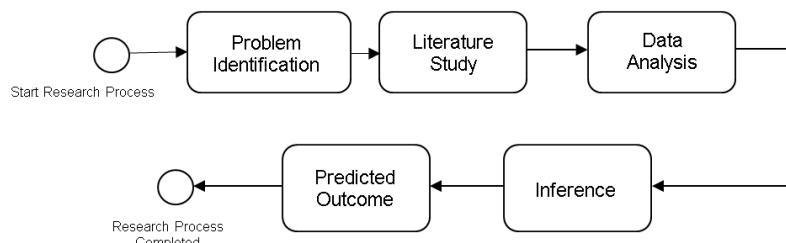


Figure 1. Pie chart of results



The figure above is a flowchart used as a guide in the research process. Based on this picture, there are several stages, namely:

**a) Problem Identification**

This stage aims to describe the problem to be studied in detail to find out the effect of using artificial intelligence on students' reading interest in Indonesian history lessons at SMA ST. Antonius Medan.

**b) Literature Study**

Reference data was obtained from various sources such as magazines, e-books, and other relevant internet sources.

**c) Data Analysis**

Data collection was carried out using direct observation and closed questionnaires distributed directly to students of SMA ST. Antonius Medan. The data generated from the questionnaire uses multiple choices, namely: Strongly disagree if the value is 1, Disagree if the value is 2. Agree if the value is 3, and strongly agree if the value is 4.

**d) Predicted Outcome**

This stage uses quantitative methods in analyzing data to determine how much influence AI has on the aspects under study.

**e) Inference**

The following conclusions summarize the information from the review of the research that has been conducted.

### 3. Results and Discussion

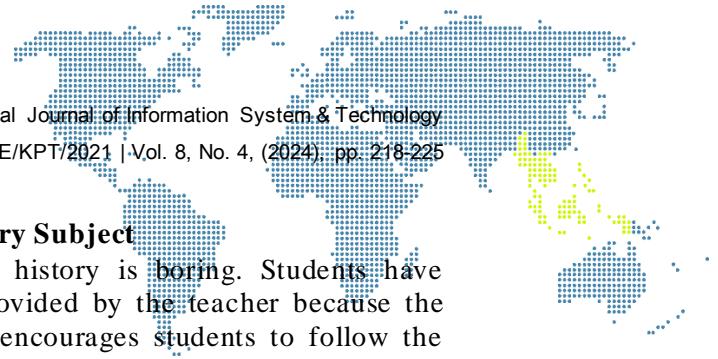
Artificial Intelligence (AI) is a branch of computer science that aims to develop systems and machines that can perform tasks that usually require human intelligence. AI uses algorithms and mathematical models that allow computers and other systems to learn from data, recognize patterns, and make intelligent decisions. There are several important concepts in the context of AI, including machine learning, neural networks, and natural language processing. The development of AI has a huge impact on various areas of life.

#### 3.1. Artificial Intelligence in Education

Education is one of the main pillars of human development, and the ever-evolving the digital age is undergoing fundamental changes in the way we learn and teach. With the development of technology, people have easier access to information. One of the rapid developments in technology is artificial intelligence. By using artificial intelligence, educational institutions can collect and analyze a large amount of data about students and the learning process.

This data can be used to identify trends and patterns that can improve educational decision-making. For example, you can use this data to predict student performance and success, or to identify factors that affect student retention. In addition, artificial Intelligence can also contribute to educational research and development. By using AI data analysis tools, researchers can analyze data quickly and efficiently and gain valuable insights that can help develop new educational technologies. The use of artificial Intelligence methods in the development of educational technology can bring innovation in the learning process and improve the efficiency of education [10].

Artificial intelligence technology makes learning and teaching more adaptive. It uses machine learning algorithms to analyze student performance data and adapt learning content in real time. Adaptive learning aims to optimize the learning path by tailoring teaching to individual strengths and weaknesses. The adaptability of these tools is expected to enable them to meet the challenges of a diverse student population and provide a dynamic and responsive educational experience [11].



### 3.2. Artificial Intelligence on Indonesian History Subject

There is a stigma that studying Indonesian history is boring. Students have difficulty understanding the history material provided by the teacher because the teacher only focuses on storytelling skills and encourages students to follow the teacher's example and take notes, listen, and answer questions. This tends to lead to passive student behavior and ultimately causes students to understand the lesson less [12]. Due to difficulties in understanding the history material provided by the teacher, students also rely more on AI in doing assignments. With AI they find easier to work on problems so they don't need to read long passages to get answers to the questions asked. This shows that the role of AI in learning history is so high that all students depend on the information presented by AI rather than the explanations that teachers and reading books provide.

### 3.3. Research Results

The use of AI in the teaching and learning process can have an impact on students' motivation and interest in reading. AI makes it easy, effective and interesting for students to access learning materials. In addition, AI's ability to provide instant feedback can also help students speed up the process of answering questions from teachers. AI can be used to identify students' learning needs and preferences, provide immediate feedback, and provide customized learning materials. This improves learning efficiency, optimizes student engagement, and increases learning satisfaction.

While the use of AI in learning has significant benefits, it also faces important challenges and considerations. The use of AI in student learning is not considered a replacement for the role of regular textbooks. While AI can provide quick feedback, books can help form reading habits, minimize distractions, and maintain stable knowledge retention.

The results of research data analysis on the use of Artificial Intelligence in high school students of ST. Antonius Medan by using questionnaires and direct observation to assess how much influence AI has on learning activities. So that the data analysis can be seen from the following table:

**Table 1. Data Analysis on the Use of Artificial Intelligence on Student Reading Interest**

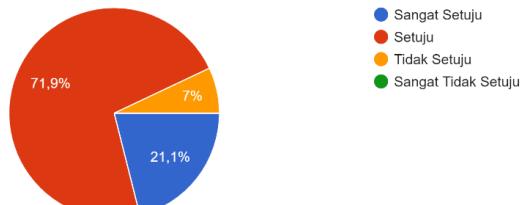
No	Assessment Aspect	Percentage	Criteria
1.	More Effective Information	93%	Very High
2.	Intensity of Use	94,7%	Very High
3.	Declining Interest in Reading	49,1%	Simply
4.	An Essential Part of Education	78,9%	High

Of the 57 students of SMA ST. Antonius Medan who have filled out the questionnaire, the data obtained is as shown in the table above. In the research that has been conducted, almost all students use AI in doing Indonesian history assignments given by the school. As many as 49.1% of students felt that they relied more on the information provided by AI than the reading books they had received from school. This suggests that the role of AI has a significant influence on each aspect that makes the decline in students' interest in reading at St. Antonius High School Medan increase. In fact, in the aspect category, the intensity of AI use reached 94.7%, which made students become less interested in reading textbooks.

Based on survey data distributed to 57 people, 21.1% or 12 people answered "Strongly Agree" 71.9% or 41 people answered "Agree," and 7% or 4 people answered, "Disagree."



Artificial Intelligence lebih efektif dalam memberikan informasi dan menjawab pertanyaan anda terkait Sejarah?  
 57 jawaban

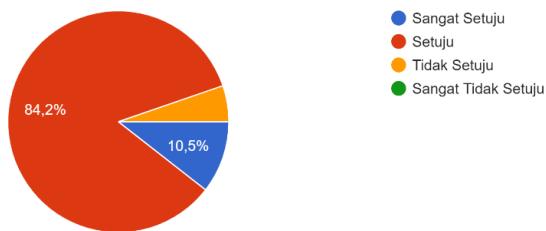


**Figure 2. Pie chart of results**

It can be concluded that the majority of St. Antonius Medan High School students feel AI is more effective in providing information and answering their questions related to Indonesian history in their daily academic activities. Most students who answered "Agree," felt that the use of AI in academic activities was more helpful in finding the answers and information they needed. AI helps in finding more accurate information as well as increasing efficiency in doing assignments. Students who answered "Disagree" felt that sometimes the information generated by AI is not necessarily correct. Some felt that the information provided by AI was different from that written in the Indonesian History textbook.

Based on survey data distributed to 57 people, 10.5% or 6 people answered "Strongly Agree," 84.2% or 48 people answered "Agree," and 5.3% or 3 people answered "Disagree."

Intenskah anda menggunakan Artificial Intelligence untuk mengerjakan tugas yang diberikan oleh guru Sejarah Indonesia?  
 57 jawaban



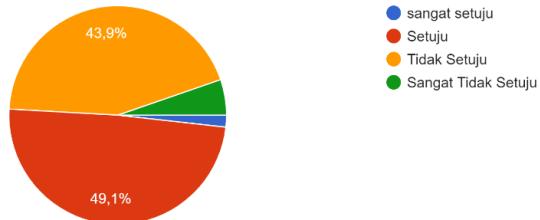
**Figure 3. Pie chart of results**

It can be concluded that the majority of students find AI technology helpful in their daily academic activities. The majority of students chose "Agree" because AI technology makes it easier for them to complete assignments given by teachers, AI can speed up information searches, and is more helpful in lessons that are difficult to understand since knowing artificial intelligence. Students who answered "Disagree" felt that AI can cause excessive dependence, make them less willing to read books when doing assignments, trust AI too much and do not ensure the correctness of the answers given by artificial Intelligence and AI are not able to replace direct interaction with teachers or peers.

Based on survey data distributed to 57 people, 1.8% or 1 person answered "strongly agree," 49.1% or 28 people answered "agree," and 43.9% or 25 people answered "disagree," 5.3% or 3 people answered "strongly disagree."



Anda merasa kurang tertarik dan mengalami Penurunan minat untuk membaca buku sejarah Indonesia Sejak menggunakan Artificial Intelligence ?  
 57 jawaban

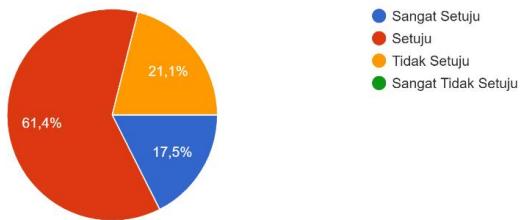


**Figure 4.** Pie chart of results

The majority of students chose "Agree" because they felt that over time, AI could replace history textbook assignments. Students felt that the answers provided by AI were clearer and not as saturated as those in textbooks. Students who chose "Disagree" felt that their interest in reading books remained the same even after the AI. They believe that AI is not satisfied with only the information that AI provides, so they still need to look for additional sources from books. In addition, regular textbooks can never be replaced by AI.

Based on survey data distributed to 57 people, 17.5% or 10 people answered "Strongly agree," 61.4% or 45 people answered "Agree," and 21.1% or people answered "Disagree."

Artificial Intelligence sudah menjadi bagian penting dalam aspek pendidikan  
 57 jawaban



**Figure 5.** Pie chart of results

It can be concluded that the majority of St. Antonius Medan High School Students feel that AI has become an important part of their daily academic aspects. Many students who answered "I agree" felt that the use of AI in academic activities has become an important part of their daily lives. AI helps in completing various tasks, such as research, writing, and data analysis, making them more productive and efficient. Students who answered "No" felt uncomfortable or distrustful of AI. Some feel that AI cannot fully replace direct interaction with teachers or textbooks, or that AI has limitations in understanding complex academic contexts.

### 3.4. Positive Impact of Artificial Intelligence in Learning

Based on the results of the questionnaire data analysis on St. Antonius High School Medan students, it is found that students get a positive impact received while using artificial intelligence in learning activities, as follows:

- With the help of AI, students find it easier and more practical to get information in doing assignments given by the school.



- b) The more sophisticated AI technology is, the faster students can find information and help students in doing assignments without wasting a long time.
- c) Make it easy for students to solve difficult questions. With AI, students feel that they get more answers than they can find from reading books.
- d) Students feel that with AI they can get the information they need anywhere, anytime, without having to borrow books from the library or spend money to buy books.

### 3.5. Negative Impact of Artificial Intelligence in Learning

In addition to the positive impacts, the results of the questionnaire data analysis on students of St. Antonius High School Medan found that there are negative impacts experienced by students in using artificial intelligence in learning activities, as follows:

- a) As time goes by, students increasingly find AI more practical and easier, so they prefer to seek information from AI rather than reading books from school.
- b) Students rely more on the information provided by the AI without checking first, whether the information they get is correct or incorrect.
- c) The decline of critical thinking skills in students caused by dependence on AI technology.

## 4. Conclusions

Based on research that has been conducted from the results of the questionnaire, the intensity of the use of Artificial Intelligence (AI) at St. Antonius High School Medan is quite high, where AI is a tool in the learning process of Indonesian History, which is considered boring and difficult to understand, so that they rely more on AI than reading books or material delivered by the teacher. Almost all students use AI in doing the assignments given. As many as 49.1% of students felt that they were more dependent on the information provided by AI. This suggests that the role of AI has had a significant impact on the decline in students' interest in reading at St. Antonius High School in Medan.

But the use of artificial intelligence technology also presents various challenges and problems in education, especially in maintaining a balance between technology and the development of students' analytical skills. As students' dependence on AI in the learning process and declining interest in reading and declining ability to think critically in class because the presence of technology makes students more often look for instant answers without exploring the material more thoroughly, it is necessary to combine traditional learning methods that still encourage students to think more critically and also be able to develop analytical skills.

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