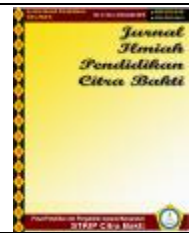




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THE IMPACT OF CHAT GPT ON KNOWLEDGE SHARING AMONG LANGUAGE RESEARCH STUDENTS

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Abstract

This study investigates the effect of using Chat GPT on students' ability to share knowledge in a Language Research class at the English Language Education Study Program, Nias University. The research gap lies in the lack of understanding of the specific impact of GPT Chat on knowledge sharing practices in a classroom environment. This study used a correlation quantitative method that used a research instrument which was a 5-point Likert scale questionnaire as distributed to 20 fourth semester B students. Data analysis showed a very strong correlation ($r = 0.971$) between the use of Chat GPT (mean score 17.4) and knowledge sharing ability (mean score 16.6). Hypothesis testing yielded a value of 0.9735, indicating a statistically significant result. These findings suggest that Chat GPT has a significant influence on students' knowledge sharing ability in Language Research classes, which has important implications for the integration of AI technology in learning. Further research is needed to investigate other aspects of the use of Chat GPT in educational contexts and to develop effective guidelines for its use.

Keywords: English language learning, GPT chat, language research, knowledge sharing

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Abstrak. Penelitian ini meneliti pengaruh penggunaan Chat GPT terhadap kemampuan siswa untuk berbagi pengetahuan di kelas Penelitian Bahasa di Program Studi Pendidikan Bahasa Inggris Universitas Nias. Kesenjangan penelitian terletak pada kurangnya pemahaman tentang dampak spesifik GPT Chat terhadap praktik berbagi pengetahuan di lingkungan kelas. Penelitian ini menggunakan metode kuantitatif korelasional yang menggunakan instrumen penelitian berupa angket skala likert 5 poin yang dibagikan kepada 20 mahasiswa semester empat B. Analisis data menunjukkan korelasi yang sangat kuat ($r = 0,971$) antara penggunaan Chat GPT (skor rata-rata 17,4) dan kemampuan berbagi pengetahuan (skor rata-rata 16,6). Pengujian hipotesis menghasilkan nilai 0,9735, yang menunjukkan hasil yang signifikan secara statistik. Temuan ini menunjukkan bahwa Chat GPT mempunyai pengaruh yang signifikan terhadap kemampuan berbagi pengetahuan siswa di kelas Penelitian Bahasa, yang mempunyai implikasi penting bagi integrasi teknologi AI dalam pembelajaran. Penelitian lebih lanjut diperlukan untuk menyelidiki aspek lain penggunaan Chat GPT dalam konteks pendidikan dan untuk mengembangkan pedoman yang efektif untuk penggunaannya.

Kata-kata Kunci: Berbagi pengetahuan, *GPT Chat*, Penelitian bahasa, Pembelajaran Bahasa Inggris

Background

In the era of digital transformation, technology has penetrated into every aspect of human life, including education. Chat GPT is one such technology, which is characterized as a large language model (Kasneci Etal., 2023; Perkins, 2023). Chat Pre-trained Transformer (GPT) generators are AI technologies that seamlessly interact with consumers while providing relevant and informative responses (Nufus, 2024). Chat GPT has a great influence in its use, especially in education. In education, Chat GPT reduces writing and thinking skills and increases the risk of plagiarism (Suharmawan, 2024).

Chat GPT is one of the artificial intelligence that is often used by students in doing assignments in lectures. In the research results of Rizki O.F., et al. (2024) it is said that students utilize Chat GPT as a source of additional information and a tool in completing their assignments. *Hasim S.*, et al. (2023) said that Chat GPT is a tool that really helps users in getting various information and references easily and quickly. So it is not surprising that many students use Chat GPT. This is also supported by Faiz A. et al. (2023), In his journal it is defined that *ChatGPT* Is a robot or chatbot that uses artificial intelligence to interact and assist humans in completing various tasks. In the journal Jusman, et al. (2024) said that the use of Chat GPT can be very helpful in the learning process and makes it very easy to get information. From the results of the above research, we can conclude that students use Chat GPT a lot because information is easy to obtain and easy to understand.

GPT Chat developed by Open AI relies on a deep learning approach known as transformers. This allows the model to understand and produce natural and responsive text (Setiawan D., et al. 2023). This is evidenced when we use Chat GPT understanding of the results given is easy to understand and understand so that it can improve critical thinking skills, users become happy to learn and are able to improve learning and this competency is also supported by Afriansyah, W. and Matondang M.A. (2024) in his journal entitled *Analysis*

of Chat GPT to Support the Learning Process of Communication Science Students in the Final Semester of UIN North Sumatra Medan.

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The utilization of Chat GPT in the world of education has been very widely used in all fields and types of learning. In the journal Suharmawan w. (2023: 158) said that Chat GPT is often used as a tool in research activities. Supriyadi E. (54:2022) also said that Chat GTP is used to help create articles. And in the journal Sinurat J.M., (2024) said that Chat GPT is used by students to do assignments. From the results of this study, it gives us information that the use of Chat GPT among students has become one of their needs in doing college assignments. This is not something we can stop because nowadays the use of AI can no longer be stopped in today's digital era. One of the uses of Chat GPT that Researcher found in class B Semester 4 students of English education study program, Nias University is the use of Chat GPT when they do Knowledge Sharing in Language Research courses. They search for the information they want to share using Chat GPT then copy it and read it out in the Knowledge Sharing session, so this results in minimal use of books and journals. So in this study, Researcher wants to examine whether the use of Chat GPT has an effect on students' ability in Sharing Knowledge so that we can make a decision whether the use of Chat GPT has a positive or negative impact.

Knowledge sharing is a critical process in supporting skills enhancement, collaboration and innovation in various contexts. Especially in the world of education. According to Panahi et al. 2020, knowledge sharing facilitates joint problem solving and strengthens adaptability in a dynamic environment. Panahi and colleagues emphasize that this process allows group members to complement each other and generate more innovative solutions. (Panahi et al., 2020).

Lopes and Nogueira (2021) have stated that knowledge sharing in an organization is an effective way to strengthen the culture of collective learning. They consider collaboration in sharing information can improve understanding of complex issues and strengthen commitment to common goals (Lopes and Nogueira, 2021). Moreover, research by Zhang and Zhang (2022) states that knowledge sharing can broaden individuals' understanding of a

topic and stimulate critical thinking, especially when they are confronted with different viewpoints (Zhang and Zhang, 2022). In the realm of education, knowledge sharing is vital. It allows all students to share their ideas, understanding and knowledge with each other. Thus, there is an interaction of complementary thoughts, leading to new scientific findings.

Research by Garcia et al. 2023 highlights the importance of technology in supporting knowledge sharing, especially in global organizations. Along with that, Kumar and Khan (2021) also noted that digital platforms, such as knowledge management systems, are helpful in the process of documenting and disseminating information efficiently in organizations (Kumar and Khan, 2021).

According to Lin and Cheng (2020), the success of knowledge sharing in groups is greatly influenced by a culture of mutual trust. They believe that when organizational members feel safe to share information and ideas, the quality of collaboration and creativity will increase significantly. (Lin and Cheng, 2020) Meanwhile, Pereira et al. (2023) stated that knowledge sharing not only enriches information, but also forms empathy and respectful understanding within multicultural groups, which is invaluable in an increasingly diverse modern work environment (Pereira et al., 2023). Therefore, the source of knowledge shared must also be correct and expertly sourced, especially in education. Brown and Taylor (2023) emphasized the significance of sharing knowledge as a valuable skill for navigating the complexities of the modern world. They explained that in organizations, individuals who share information effectively can help others overcome challenges faster and increase overall team productivity (Brown and Taylor, 2023).

Choosing Chat GPT as a source of information to be shared in Language Research class has become a common practice among 4th semester B students of English Education program at the University. The use of Chat GPT is not wrong but students do not use books or other references as a source of information, they only rely on Chat GPT. This is due to the use of Chat GPT which is more practical and easier so that it is more favored by students.

Therefore, the use of Chat GPT poses pedagogical challenges that need to be managed wisely. Although this technology facilitates understanding and knowledge sharing, other factors also play an important role in students' learning experience.

This research was conducted because many students, especially students of Nias University class B semester 4 English Education Study Program who use Chat GPT in sharing knowledge in Language Research class. The researcher wants to examine whether the use of Chat GPT can help and facilitate students in sharing knowledge and make it easier to understand the material or on the contrary cause dependence and more plagiarism.

Method

This study uses a type of quantitative research with a correlation approach. Creswell (2018) stated that quantitative research is a strategy to assess objective theory by looking at the relationship between variables. The correlation approach was chosen to determine the relationship between the use of GPT chat and knowledge sharing in language research classes.

For this study, the sample was selected using the convenience sampling method, which means that the respondents were most easily contacted or contacted by the researcher. This method was chosen because it is easy and does not require much time or cost, and is suitable for use in situations where the researcher needs to collect data quickly or when it is difficult to access the entire population. The number of samples used in this study was 20 people because only 20 respondents took language research courses in class B and were available at the time of the study.

The research instrument used in this study was a questionnaire with a Likert scale. One of the most basic and widely used psychometric instruments in social science and education research is the Likert scale. (Joshi et al.; Erwita, Lase & Waruwu, 2024). A questionnaire is a research tool in the form of a series of questions presented to respondents with the aim of obtaining the required data. Questionnaires are generally used to assess the views, opinions, and attitudes of respondents on specific topics in research. According to some recent studies, questionnaires are often used in various quantitative data collection methods. This questionnaire is generally applied in surveys to evaluate the level of satisfaction or effectiveness of a program. (Simamora, 2023; Sugiyono, 2022).

Likert scales typically contain a statement followed by a series of attitudinal options, ranging from "Strongly Agree" to "Strongly Disagree". The use of Likert scales allows researchers to capture the intensity of respondents' opinions and provide a quantitative assessment of their attitudes. For example, Likert scales are often used in research to evaluate satisfaction levels or perceptions in areas such as tourism, education, and marketing (Simamora, 2023; Sugiyono, 2022). The Likert Scale questionnaire consists of 10 question items divided into two dimensions, namely Dimension 1 on the influence of Chat GPT (5 statements) and Dimension 2 on students' ability in language research classes (5 statements). Each statement item has five answer options, namely strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5).

Internal validation techniques were used for questionnaire validation. Internal questionnaire validation is an evaluation process to determine the extent to which the questionnaire can measure the variables under study consistently and accurately on the instrument or internal scope itself before it is used to involve a wider range of respondents. This validation process is carried out to ensure that each item in the questionnaire has

construct validity (the suitability of the item to the variable being measured) and reliability (consistency between items). According to Sugiyono (2017) in his book *Quantitative, Qualitative, and R&D Research Methods*, testing construct validity and reliability can be used for internal questionnaire validation. Construct validity determines whether the questionnaire items actually measure the desired elements, while reliability determines whether the results of items measuring the same elements are consistent. According to Sekaran and Bougie (2016) in *Research Methods for Business: A Skill-Building Approach*, instrument validity consists of internal validation. They say that reliability and validity can be tested using reliability coefficients such as Cronbach's Alpha. The validity test can be done by conducting an item-total correlation analysis to determine the relationship between each item and the total score.

The data collection technique used in this research is an online survey. The online survey was conducted by distributing questionnaires through Google Form to students who took language research classes. The correlation analysis technique used in this study is the Pearson correlation coefficient. Gay, L.R. (2012: 114) states that when measuring data with an interval or ratio measurement scale, the Pearson product moment correlation coefficient-often abbreviated as r Pearson-is used.

Results and Discussion

Result

Based on the results of the questionnaire that was delivered to students in University of Nias, there were several characteristics of the respondents who participated in filling out the questionnaire, consisting of gender, age, study program and current semester. In the following table 1 shows the characteristics of respondents.

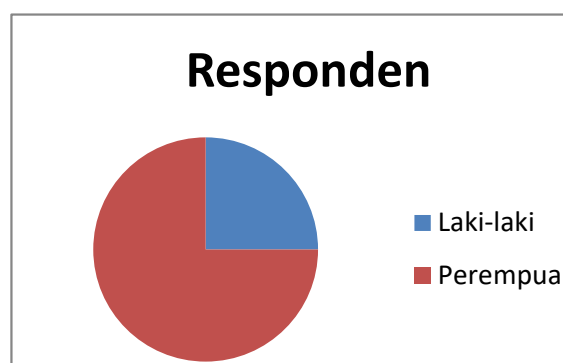


Diagram 1. Percentage of Respondent Data

The number of female respondents was more dominant than the number of male respondents. There were 15 (75%) female respondents and 5 (25%) male respondents. The age range of students who participated in the questionnaire ranged from 18-22 years. All

respondents who participated were students of the English Language Education study program, semester 4 class B who took the Language Research course.

The questionnaire as a research instrument in this study used Likert scale, which had 5 answer choices that showed how much they agree or disagree with each question given.

There were 2 divisions of questions in the questionnaire used, the first was about the use of GPT Chat in knowledge sharing activities in the Language Research Class which consisted of 5 questions and the second is about Knowledge in the Language Research class which also consisted of 5 questions. In the table 2, the percentage of students answers in Part 1

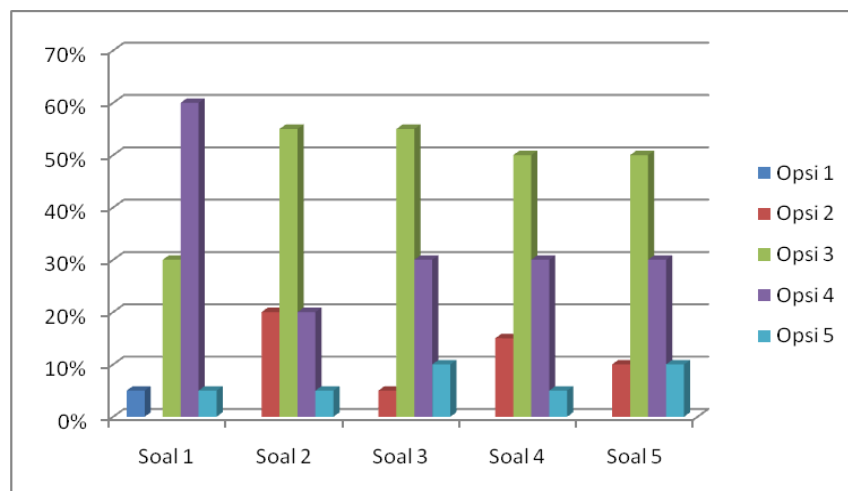


Diagram 1. Percentage of student answers in Part 1

In the first part (Use of Chat GPT in sharing knowledge in Language Research Class) on the first question 20% (4 people) chose option 3, 25% (5 people) chose option 4 and 55% (11 people) chose option 5. In the second question 10% (2 people) chose option 2, 40% (8 people) chose option 3 and 50% (10 people) chose option 4. Third question 10% (2 people) chose option 2, 55% (11 people) chose option 3, 35% (7 0 people) chose option 4. Fourth question 5% (1person) chose option 2, 60% (12 people) chose option 3, 35% (7 people) chose option 4. In the last question of this section 20 % (4 People) chose option 2, 50% (10 People) chose option 3, 25% (5 People) chose option 4 and 5% (1 person) chose option 5. In the table 2, the percentage of students answers in Part 2.

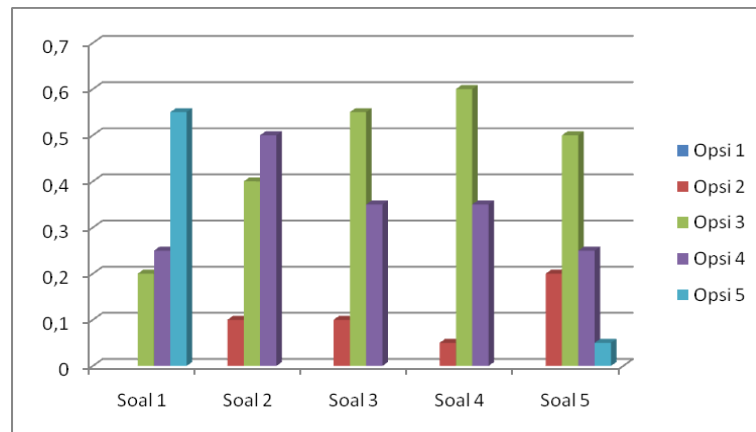


Diagram 2. Percentage of student answers in part 2

In the second part (sharing Knowledge in Language Research class) on the first question, 5% (1 person) chose option 1, 30% (6 people) chose option 3, 60% (12 people) chose option 4 and 5% (1 person) chose option 5. In the second question 20% (4 people) chose option 2, 55% (11 people) chose option 3, 20% (4 people) chose option 4 and 5% (1 person) chose option 5. Third question 5% (1 person) chose option 2, 55% (11 people) chose option 3, 30% (6 people) chose option 4 and 10% (2 people) chose option 5. Fourth question 15% (3 people) chose option 2, 50% (10 people) chose option 3, 30% (6 people) chose option 4 and 5% (1 person) chose option 5. In the last question 10% (2 people) chose option 2, 50% (10 people) chose option 3, 30% (6 people) chose option 4 and 10% (2 people) chose option 5.

The first step taken when analyzing data was to calculate the average value of the questionnaire results that have been obtained. Based on the results total amount of the averages, the results obtained are as in the following table.

Table 3. Mean

Variabel	Average
The effect of Chat GPT	17,4
The students' ability in Language Research class	16,6

Based on the Table 4, it can be seen that there are 2 research variables, where the first is "Effect of Chat GPT" which has an average value of 17.4 and the second variable is "Students ability in sharing knowledge" which has an average value of 16. 6.

To determine whether there was a correlation between the 2 variables, whether there was a relationship and influence one another, a test was carried out using the correlation coefficient formula between the 2 variables X and Y, with a formula that used standard deviation.

The first step to take was to find the average value of the next step was to calculate the deviation of individual values from the average value, by subtracting the X_i value from the

average value. After getting the deviation value for each value, the next step was to calculate the square of the average $X1-X$ and average $Y1-Y$. The next step was to look for the value $\Sigma(X1-X \text{ average})(Y1-Y \text{ average})$ which obtained a result of 201.84, $\Sigma(X1-X \text{ average})$ obtained a result of 210.8 and $(Y1-Y \text{ average})$ average) got a result of 204.8. Finally, researchers calculated the correlation coefficient r and obtained a result of 0.971... where the correlation coefficient was 0.971, indicating that there is a very strong relationship between the two observed variables. In particular, the value of 0.971 was close to the maximum possible value of the positive correlation coefficient, namely 1. This showed that there is a very strong relationship between these 2 variables.

In other words, the closer the correlation coefficient value is to 1, the stronger the positive linear relationship between these variables.

Next, carrying out hypothesis testing, carried out to test the truth of the assumptions that arise in this research problem, wherein there were 2 hypotheses, namely the Null Hypothesis (H_0) and the alternative hypothesis (H_1). Hypothesis testing was carried out using the "Pearson r formula" to find out whether it is reliable or unreliable. As seen in the table 5 below.

Table 4. Hypothesis testing result

Responden	ΣX	ΣY	ΣX^2	ΣY^2	ΣXY
20 orang	348	332	6266	5716	5979

After getting the results as in the table above, researchers then carried out hypothesis testing using the Pearson r formula and got the final result of 0.9735... which was seen in the table of Product Moment Values for a total of 20 respondents, the results are reliable at better than 5%.

Discussion

Similarly, research conducted by Syahri, A. et al. showed that the application of ChatGPT proved to have a significant effect on students' mindset about learning, especially about research methodology courses. Research by Hakiki et al. (2023) supports this finding by emphasizing the importance of ChatGPT in improving students' understanding and their mindset about educational technology. Similar research results show that the use of ChatGPT as a tool in the learning process can increase student engagement and their critical thinking skills. This suggests that the use of AI technology such as ChatGPT can greatly help the cognitive development and mindset of students in secondary schools.

Therefore, the findings of this study strengthen the argument that AI-based technologies can be used as effective learning tools to broaden students' horizons and improve their analytical abilities. These positive results also pave the way for a wider incorporation of technology into technology-based education.

According to Lin and Cheng (2020), the success of knowledge sharing in groups is greatly influenced by a culture of mutual trust. They believe that when organizational members feel safe to share information and ideas, the quality of collaboration and creativity will increase significantly. (Lin and Cheng, 2020) Meanwhile, Pereira et al. (2023) stated that knowledge sharing not only enriches information, but also forms empathy and respectful understanding within multicultural groups, which is invaluable in an increasingly diverse modern work environment (Pereira et al., 2023). Therefore, the source of knowledge shared must also be correct and expertly sourced, especially in education. Brown and Taylor (2023) emphasized the significance of sharing knowledge as a valuable skill for navigating the complexities of the modern world. They explained that in organizations, individuals who share information effectively can help others overcome challenges faster and increase overall team productivity (Brown and Taylor, 2023).

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Several studies reveal the impact of using Chat GPT on students: first, student reading interest: (Hasim et al., 2023) Research at Universitas Pendidikan Indonesia shows that the use of Chat GPT has a positive influence on students' reading interest. Although this influence is relatively small, other factors such as content preference, individual needs, and motivation also affect students' reading interest. Second, student engagement: the use of GPT Chat in higher education increases student engagement in terms of skills, collaboration and creativity. However, ethics and data privacy need to be considered in the development of AI models. Third, productivity in assignments: Surabaya State University students use GPT Chat to work on assignments such as essays. Chat GPT helps to find information, answers, and sentence organization thus increasing productivity in completing assignments. And the last is the mindset of students: another study examined the effect of Chat GPT on the mindset of students. The results showed a relationship between the use of Chat GPT and the mindset of students in research methodology courses.

The recommendation for future researchers is to expand the scope of the study to the use of other tools besides ChatGPT in knowledge sharing activities in language research classes. Based on the findings in this study, in addition to ChatGPT, students also utilized the CICI application in the knowledge sharing process. This shows that there is a tendency to use a variety of applications in supporting collaboration and information exchange. Future research could focus on comparing the effectiveness of various AI-based tools, such as

ChatGPT and CICI, to improve knowledge sharing skills among university students. In addition, future researchers could also examine the factors that influence students' preference for a particular application, including user interface, ease of access, and support for collaborative features. It is hoped that future research will provide a more complete understanding of the contribution of various AI technologies in supporting learning and collaboration in the language research domain.

Conclusion

The purpose of this study was to investigate how Chat GPT affects the knowledge sharing ability of Nias University students enrolled in the Language Research course in the English Education Study Program. The results showed that students' ability to share knowledge and the use of Chat GPT had an excellent relationship ($r = 0.971$), suggesting that Chat GPT and other AI tools can greatly enhance collaborative learning and knowledge sharing in language research courses. The potential of Chat GPT as an educational tool is highlighted by the statistically significant results ($p < 0.05$), which support the hypothesis that Chat GPT has a favorable impact on students' capacity to participate in knowledge sharing activities. These findings have important consequences for curriculum developers and teachers. A more dynamic and collaborative learning environment can be created by incorporating Chat GPT and related AI tools into language research programs. This will encourage critical thinking and a better understanding of the research problem. In addition, this study shows that integrating AI-based platforms can help close the current gap in knowledge sharing practices with students, which will ultimately result in better learning outcomes.

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