

Exploration Of Students' and Lecturers' Perceptions Towards the Utilization of Generative Artificial Intelligence

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Abstract: The development of artificial intelligence (AI) tools such as Perplexity AI has been shown to improve self-confidence, academic achievement, and motivation to learn. This study aims to determine the understanding, benefits, challenges, and application of generative AI (GenAI) in education. Mixed research methods were used, with surveys and interviews involving students from Jenderal Soedirman University and Widya Mandala University. Results showed that most students understood and recognized the benefits of Perplexity AI in lectures, despite concerns over ethics, human interaction, and technology management. The implications of this study emphasize the importance of in-depth learning about the principles and ethics of AI use as well as the need for clear standards to ensure the responsible use of AI in education.

Keywords: Artificial Intelligence, Perplexity, Education, Benefit

INTRODUCTION

Artificial Intelligence tools such as ChatGPT and Perplexity are among the most popular search engines in the field of modern education. Perplexity AI itself is a search engine powered by artificial intelligence and uses large language models to provide accurate answers to complex questions. Perplexity AI was founded in August 2022 by Denis Yarats, Aravind Srinivas, Johnny Ho, and Andy Konwinski, who previously worked at Google AI (Crompton & Burke, 2023). This search engine allows users to cut through the noise and get credible and up-to-date answers directly. Perplexity AI also features tools like Perplexity Copilot, which uses AI models such as GPT-4 and Claude 2 to help users find accurate and current answers. In addition, Perplexity also has a mobile application that can be downloaded from the Google Play Store. Although Perplexity AI is relatively new, it has become a useful tool for finding accurate and reliable information.

One of the main uses of GenAI in higher education is to enhance the student learning experience through its ability to respond to user requests and generate highly original output. AI text generators can provide writing assistance to students, especially non-native English speakers (Chan & Lee, 2023), by enabling them to brainstorm ideas and receive feedback on their writing through applications like ChatGPT (Atlas, 2023). Meanwhile, AI text-to-image generators like DALL-E and Stable Diffusion can serve as valuable tools for teaching technical and artistic

concepts in art and design (Dehouche & Dehouche, 2023). GenAI tools are also considered useful research aids for generating ideas, synthesizing information, and summarizing large amounts of text data to help researchers analyze data and compose their writing (Berg, 2023; Chan & Zhou, 2023), contributing to efficiency in publishing. (Kitamura, 2023; van Dis et al., 2023). Another opportunity where GenAI can bring benefits is in learning evaluation. (Crompton & Burke, 2023). Tools like the Intelligent Essay Assessor are used to evaluate students' written work and provide feedback on their performance. (Landauer, 2003).

The limitations of GenAI, as well as issues of ethics, plagiarism, and academic integrity, are problems. An analysis conducted by Kumar (2023) of the responses generated by artificial intelligence to academic writing prompts shows that they do not always meet the criteria of the desired text. Although mostly original and relevant to the subject, inappropriate references and personal perspectives cannot be created by AI. For learners, building appropriate prompts is a challenge in itself as it requires certain linguistic skills. In the end, this can lead to excessive dependence on GenAI tools, which can jeopardize students' genuine efforts to improve their skills. According to Warschauer et al., 2023, in addition, if these elements are found in the dataset trained by the model, the content generated by GenAI can be biased, inaccurate, or harmful. (Harrer, 2023). For example, images created by artificial intelligence can be used for criminal purposes, such as deepfakes, and may contain nude or vulgar images.

According to Maerten & Soydaner (2023), the use of GenAI tools requires human oversight because they cannot assess the validity of content and determine whether their output contains lies or misinformation. (Lubowitz, 2023). Moreover, it is difficult to determine whether a particular piece of writing is the original work of the author because the output generated by AI cannot be detected by most plagiarism checkers. (Peres dkk., 2023). Chan (2023) states that it raises questions about what constitutes unethical behavior in academic writing, including plagiarism, attribution, copyright, and authorship in the context of AI-generated content. Zhai (2022) warns that the use of text generators like ChatGPT can undermine the validity of assessment practices, especially those involving written submissions. Therefore, the widespread use of GenAI can jeopardize the academic quality in higher education institutions. The development of holistic skills such as creativity and critical thinking is highly emphasized in the research by Chan and Tsi. (2023). While the advantages of GenAI show that technology can be a beneficial learning tool for students, the shortcomings and obstacles indicate that research must be conducted on how GenAI can be effectively used in the educational process.

User acceptance is key to the successful implementation of technological innovations. (Davis, 1989). John Biggs (2011) emphasizes the importance of student perception in the 3P (Presage-Process-Product) teaching and learning model. According to Biggs, students' perceptions

of their learning environment, their abilities, and the teaching strategies used have a significant impact on their approach to learning (Biggs, 1999), which in turn affects their learning outcomes. Students who view the learning environment (such as curriculum content, teaching methods, evaluation methods, learning resources, learning context, student support services) positively and feel confident about their abilities are more likely to adopt a deep approach to learning, which involves seeking understanding and making connections between concepts.

How students perceive technological innovations like GenAI in the classroom can influence their willingness to use the tool, as well as their opinions about it. Most of the research in this field on student perceptions focuses on AI in general and chatbots that are not always supported by GenAI, but students' views and experiences with GenAI tools specifically are still relatively underexplored. Research typically examines students' attitudes, their experiences with AI, and variables that influence their behavior, such as gender, discipline, age, and year of study.

As shown in the current study review in this section, many studies have been conducted on AI in general. Similar research is focused on teacher education students in Indonesia who still have limited information. (Salmi et al., 2023). However, teachers' understanding of the use of technology like chatGPT during their teaching practice is greatly influenced by their experiences and beliefs during their student years. (Ajlouni et al., 2023; Escalante et al., 2023; Limna et al., 2023; Teng et al., 2022; Yang & Chen, 2023; Zhang et al., 2023). However, given the unprecedented interest in GenAI at present, it is necessary to conduct research on university students' attitudes towards GenAI and their experiences using it to understand how GenAI can be utilized in education.

On the other hand, students who have a negative perception of their learning environment or doubt their own abilities may adopt a surface approach to learning, where they tend to focus on memorizing facts and meeting minimum requirements. (Biggs, 2011). In a learning environment, students' awareness of technological innovations such as GenAI, as well as their views, concerns, and experiences with technology, can impact their tendency to use these tools, and as a result, it can be observed how well these tools are integrated into the learning process. Gen AI or generative artificial intelligence, encompasses a series of machine learning algorithms designed to generate new data examples that mimic an existing dataset. (Chan, 2023). Most research on student perceptions in this field focuses on AI in general and chatbots that are not always supported by GenAI, while students' views and experiences with GenAI tools specifically remain relatively unexplored. Research on student perceptions of AI/GenAI typically investigates students' attitudes, their experiences with AI, and factors influencing their behavior such as gender, discipline, age, and year of study.

Thus, the problem formulation in this study is to determine how familiar students are with

GenAI technology such as Perplexity AI, as well as to identify the potential benefits and challenges associated with the use of GenAI like Perplexity AI in the teaching and learning process as perceived by students.

METHOD

This study uses a mixed methodology by combining quantitative and qualitative data. The mixed method is considered very helpful in obtaining broader insights from participants and improving the accuracy of interpreting their responses. (Berg & Smith, 2016). One type of mixed methodology is the sequential explanatory design, which can also be referred to as the sequential explanatory design. This design can be used to enhance the understanding of quantitative data obtained from surveys. This method involves combining quantitative data from surveys with qualitative data from interviews. (Creswell & Plano, 2018). With the use of this design, it is possible to detail relationships in quantitative data and gain a deep understanding of the development of those relationships. The qualitative phase also provides an opportunity to explore and verify data comprehensively.

Next, the instrument used is a survey conducted through an online questionnaire consisting of closed and open-ended questions, which is used to manage a large population of respondents filled out by students from various disciplines at the universities of Jenderal Soedirman and Widya Mandala. The questionnaire was distributed to prospective participants through WhatsApp groups, as well as through individual conversations or private messages. In this instrument, a ten-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree" is used. In addition, three open-ended questions were also used to gather additional information and perspectives from the respondents. The survey covers what they know about GenAI technology, such as Perplexity; how AI technology is integrated into higher education; potential issues with AI technology; and how AI affects teaching and learning. Finally, the data were analyzed using a sequential explanatory design, where the initial analysis focused on quantitative data before the qualitative data analysis was conducted. At the quantitative stage, descriptive statistics are used to examine questionnaire data to determine the mean and standard deviation.

RESULTS and DISCUSSION

We analyzed students' understanding and attitudes towards the use of Perplexity and Artificial Intelligence (AI) in the learning and lecture process. This survey was conducted to gain insights into the extent to which students understand Perplexity, their opinions on its usage, and their concerns and support regarding the implementation of this technology in the learning curriculum. The following section reports the participants' responses to each of the eight questionnaire items as well as the interviews.

Result

Quantitative

The results in *figure 1* show a total of 32 respondents, consisting of 6 male students and 26 female students from Jendral Soedirman University and Widya Mandala University.

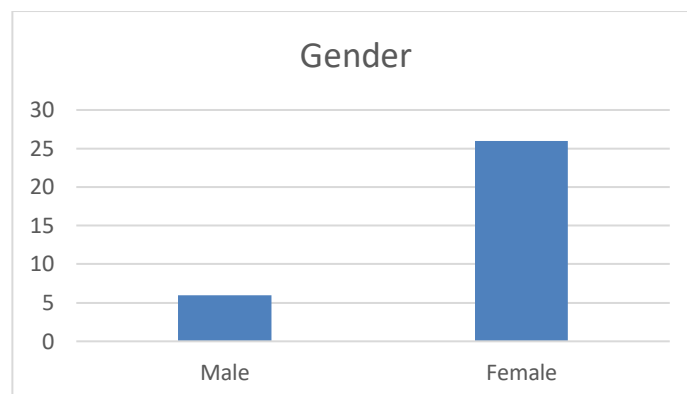


Figure 1. Gender

Based on *figure 2* data from 32 respondents, 4 respondents were 18 years old, 12 respondents were 19 years old, 5 respondents were 20 years old and 21 years old respectively, and the remaining 6 respondents were over 22 years old.

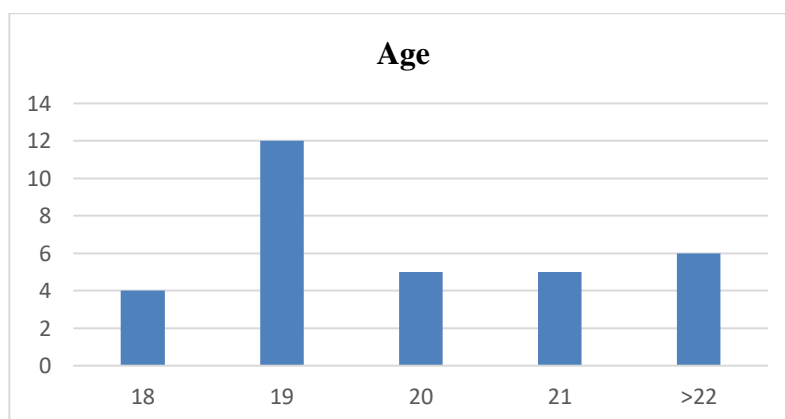


Figure 2. Respondent Age

1) Definition of *Perplexity*

The data in *figure 3* shows that out of 32 respondents, most respondents stated that they knew about perplexity and could explain its meaning. Only 19% or 6 students mentioned that they did not know *Perplexity*.

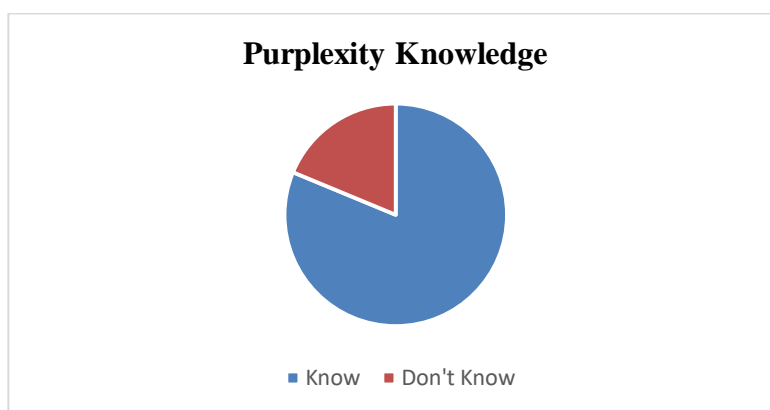


Figure 3. Definition of Perplexity

2) The Benefits of *Perplexity* in College Education

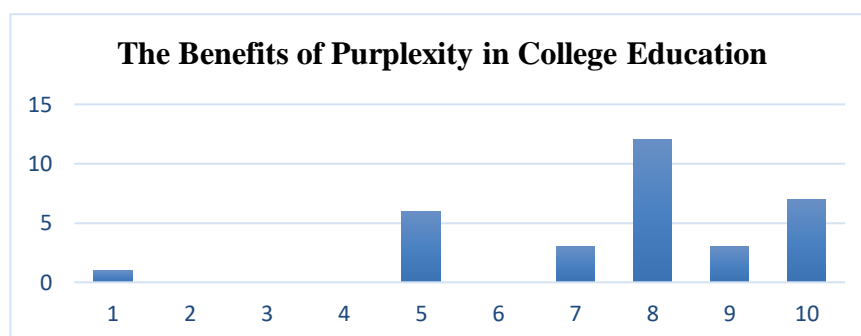


Figure 4. The Benefit Perplexity in College Education

The results of *figure 4* show respondents' confidence in *Perplexity* in helping the lecture process. There were 12 respondents who 'Agree', followed by 'Strongly Agree' with 7 respondents, then 6 respondents chose 'neutral', 3 respondents chose 'Somewhat Agree' and 'Strongly Agree', and there was only 1 respondent who chose 'Strongly Disagree'. This data shows that the majority of students believe that *Perplexity* technology provides a useful source of information in their lecture process..

Table 1. Descriptive Statistical Data of Student Perspectives on Knowledge Perplexity

Descriptive Statistics					
		Minimu	Maximu		Std.
	N	m	m	Mean	Deviation
SAI 1	32	1	10	7.66	2.073
Valid	N 32				
(listwise)					

In the first statement "*I believe Perplexity can help me in the lecture process* " stated in code SAI 1 in *table 1* , it was found that the average value was 7.66 and the standard deviation was 2.073 from a total of 32 respondents.

3) The Importance of Learning the Basics of *Perplexity*

Figure 5 shows the respondents' perspective on the importance of students learning the basics of

using Perplexity. Out of 32 respondents, 10 of them chose '*Strongly Agree*', followed by 8 respondents who chose '*Agree*', 7 respondents '*Neutral*', 3 respondents '*Somewhat Agree*', 2 respondents '*Strongly Agree*' and there was 1 respondent who each chose '*Slightly Agree*' and '*Strongly Disagree*'.

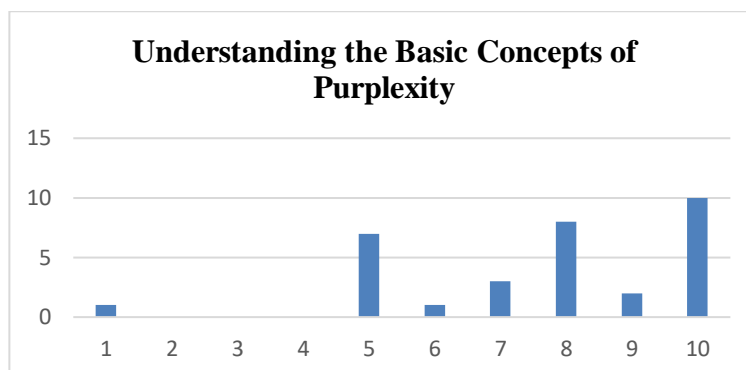


Figure 5. The Basic Concepts of Perplexity

Table 2. Descriptive Statistical Data on Student Perspectives on the Importance of Learning the Basics of Using Perplexity

Descriptive Statistics					
		Minimu	Maximu		Std.
	N	m	m	Mean	Deviation
SAI 2	32	1	10	7.66	2.252
Valid (listwise)	N 32				

Table 2 descriptive statistics on statement 2 "*I believe students in my study program need to learn the basics of using Perplexity*", shows the same mean value as shown in table 1, namely 7.66 and a standard deviation value of 2.252.

4) Understanding the Ethnics of Using Perplexity

The level of respondents' understanding of the ethics of using Perplexity in lectures is shown in Figure 6, where it can be seen that there are 11 respondents who '*Strongly Agree*', 6 respondents who each chose '*Strongly Agree*' and '*Agree*', then 4 respondents chose '*Neutral*', 2 respondents chose '*Slightly Disagree*', and the remaining 1 respondent each chose '*Somewhat Agree*', '*Slightly Agree*', and '*Strongly Disagree*'. Most respondents have realized the importance of ethics in using Perplexity, but there are also respondents who feel that they do not fully understand the ethics of using Perplexity in lectures.

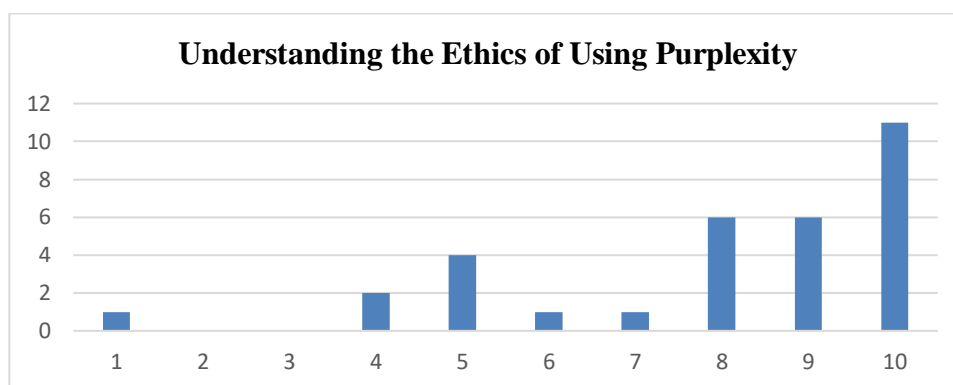


Figure 6. Understanding the Ethics of Using Perplexity

Table 3 shows that the descriptive statistical data from 32 shows an average value of 7.94 on the statement “I understand the ethics of using Perplexity in the lecture process” with a standard deviation value of 2.355.

Table 3. Descriptive Statistical Data on the Ethics of Using Perplexity in Lectures

Descriptive Statistics					
		Minimu	Maximu		Std.
	N	m	m	Mean	Deviation
SAI 3	32	1	10	7.94	2.355
Valid	N 32				
(listwise)					

5) The impact of using *Perplexity* in lecture

Table 4. Descriptive Statistics on the Impact of Using Perplexity in Lectures

Descriptive Statistics					
		Minimu	Maximu		Std.
	N	m	m	Mean	Deviation
SAI 4	32	1	10	7.94	2.299
Valid	N 32				
(listwise)					

In table 4 shown with the statement “I understand the impact of using Perplexity in the lecture process” or SAI 4 displays a mean value of 7.94 which is also displayed the same as in table 3, but displays a different standard deviation value, which is 2.299.

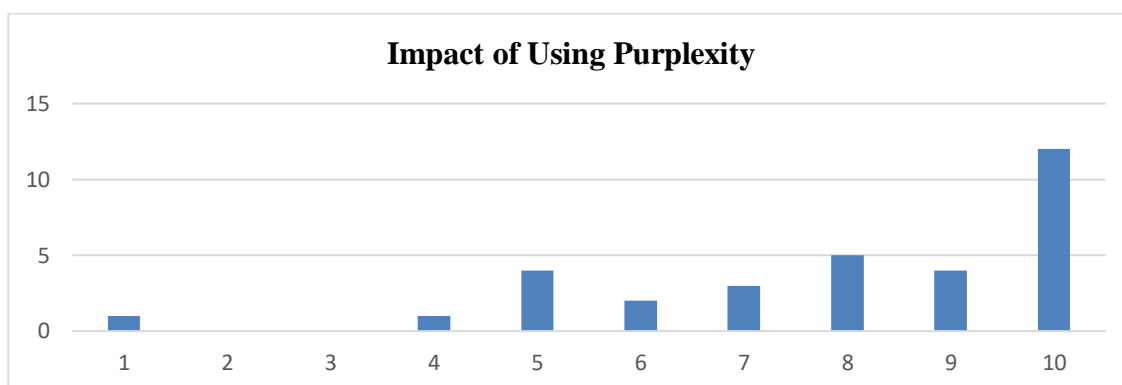


Figure 7. The Impact of Using Perplexity

Figure 7 shows the level of understanding of respondents about the impact of using Perplexity in lectures. 'Strongly Agree' is the scale with the highest number of respondents, namely 12. Then 5 respondents chose 'Agree', 4 respondents each chose 'Strongly Agree' and 'Neutral', 3 respondents chose 'Somewhat Agree', then 2 respondents 'Slightly Agree', and 1 respondent each chose 'Slightly Disagree' and 'Strongly Disagree'. Respondents showed a diverse understanding of the impact of using Perplexity in lectures.

6) The Trustworthiness of Using Perplexity in Education

The extent to which respondents feel confident if they can use Perplexity for lecture purposes is shown through the data in Figure 8. A total of 10 respondents who each chose 'Strongly Agree' and 'Agree', then 5 respondents chose 'Strongly Agree', followed by 3 respondents who each chose 'Slightly Agree' and 'Neutral', and finally 'Strongly Disagree' was chosen by 1 respondent. Most respondents stated that they were greatly helped by the existence of Perplexity which was very useful in student lectures.

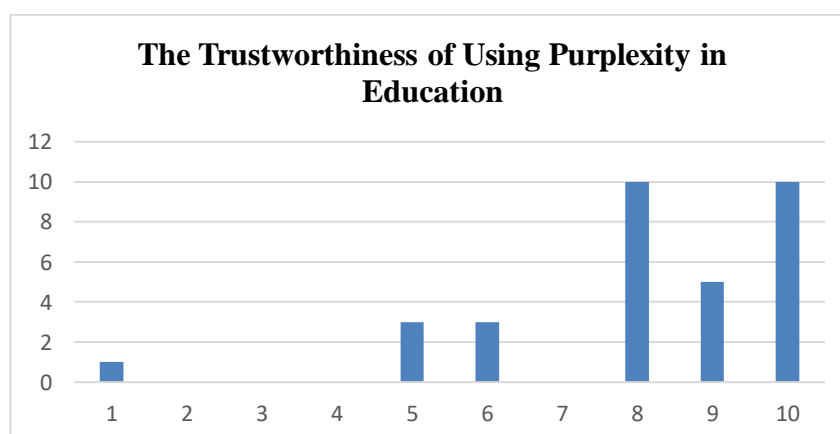


Figure 8. The Trustworthiness of Using Perplexity

Furthermore, table 5 shows a mean value of 8.09 and a standard deviation of 2.069 on statement SAI 5 which states "I believe the use of Perplexity helps me for the purpose of the lecture".

Table 5. Descriptive Statistical Data on Student Trust in the Use of Perplexity in Lectures

Descriptive Statistics

		Minimu	Maximu		Std.
	N	m	m	Mean	Deviation
SAI 5	32	1	10	8.09	2.069
Valid	N 32				
(listwise)					

7) Concerns of Using *Perplexity* in Education

Figure 9 shows the level of concern of respondents if Perplexity is involved in the lecture process, and there are various answers. The highest answer was chosen by 7 respondents who each chose 'Somewhat Agree' and 'Neutral', then 6 respondents chose 'Agree', 5 respondents chose 'Strongly Agree', 3 respondents chose 'Slightly Agree', then 2 respondents chose 'Strongly Disagree', and the remaining 1 respondent each chose 'Somewhat Disagree' and 'Strongly Agree'. There are a number of respondents who feel worried if Perplexity is involved in the lecture process.

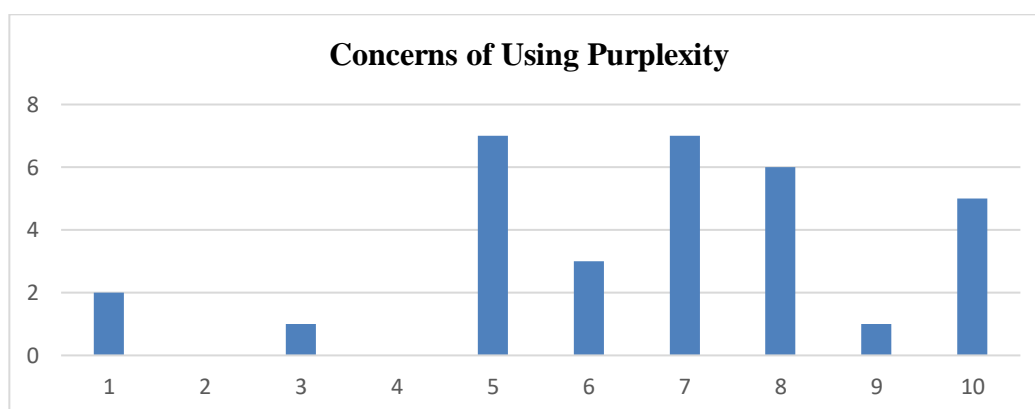


Figure 9. Concerns of Using *Perplexity*

Table 6. Descriptive Statistical Data on Student Concerns about the Use of *Perplexity* in Lectures

Descriptive Statistics					
		Minimu	Maximu		Std.
	N	m	m	Mean	Deviation
SAI 6	32	1	10	6.69	2.348

Valid N 32
(listwise)

In table 6, it is found that the average score is 6.69 on the SAI 6 statement “*I feel worried if Perplexity is involved in the lecture process*” with a standard deviation score of 2.348.

8) Perplexity Management Perspective

The data in table 7 refers to the next statement, namely statement SAI 7 “*I believe the use of Artificial Intelligent such as Perplexity needs careful management*” with an average score of 8.41, and 2.212 as the standard deviation score of the statement.

Table 7. Statistical Data on Student Perspectives on Perplexity Usage Management

Descriptive Statistics					
		Minimu	Maximu		Std.
	N	m	m	Mean	Deviation
SAI 7	32	1	10	8.41	2.212
Valid	N 32				
(listwise)					

The level of respondents' belief that the use of AI such as Perplexity requires careful management is also shown in graph 10 which shows 16 respondents chose 'Strongly Agree' to the management of AI (Perplexity), followed by 4 respondents who each chose 'Strongly Agree', 'Somewhat Agree', and 'Neutral'. Furthermore, 3 respondents chose 'Agree' and 1 respondent chose 'Strongly Disagree'.

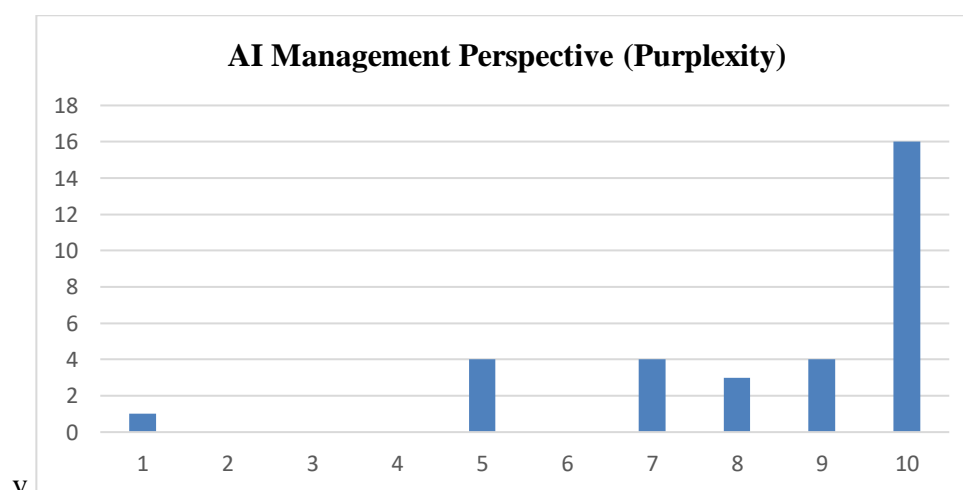


Figure 10. The Importance of Perplexity Usage Management

9) Support the use of Artificial Intelligence (AI) in the learning process

Figure 11 shows the respondents' support score (from 1-10) for the use of AI or Perplexity in the learning process and lectures. The data shows 8 respondents supported the use of AI in lectures by choosing 'Strongly Agree', 7 respondents 'Somewhat Agree', followed by 6 respondents choosing

'Neutral', 5 respondents 'Agree' , 3 respondents 'Strongly Agree ' and finally 1 respondent 'Strongly Disagree'. On a scale of 1-10, the level of support for the use of AI or Perplexity in the learning process and lectures varied.

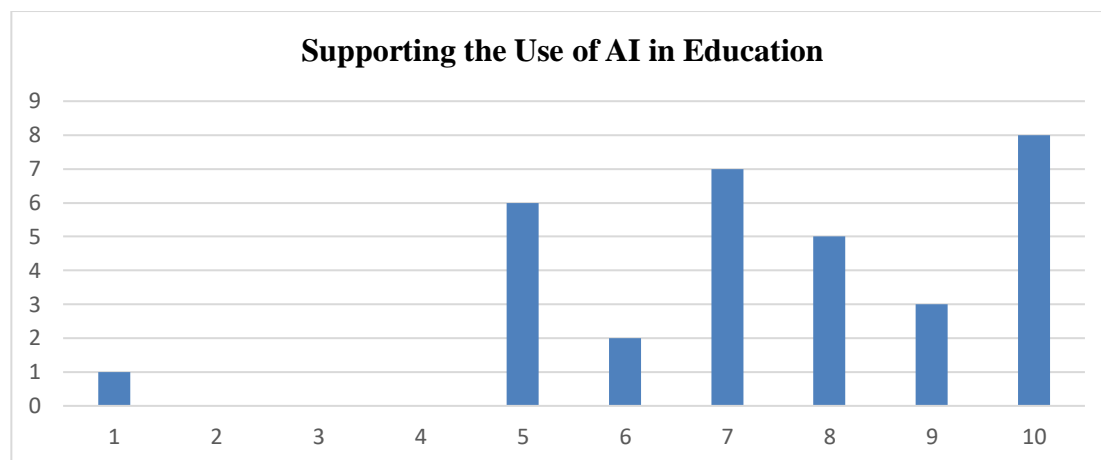


Figure 11. Supporting the Use of AI in Education

Table 8. Descriptive Statistical Data on Student Support for the Use of Perplexity in Lectures

Descriptive Statistics					
		Minimu	Maximu		Std.
	N	m	m	Mean	Deviation
SAI 8	32	1	10	7.47	2.155
Valid	N 32				
(listwise)					

The data in Table 8 shows an average score of 7.47 on the question “From a scale of 1-10, how much do you support the use of Artificial Intelligence or Perplexity in the learning process and lectures?” (SAI 8), with a standard deviation value of 2.155.

Qualitative

Opinions on the Use of Perplexity in Lectures

Through interviews, respondents gave various opinions regarding the use of Perplexity. The majority of respondents stated that Perplexity is very helpful in their lectures such as understanding difficult concepts that are often a challenge in the teaching and learning process, one student said:

“Perplexity is very helpful in understanding complex concepts, as well as finding the answers I need quickly” (P1).

One respondent also supported the same statement, saying:

“Perplexity provides quick and real-time feedback which is very helpful to improve student understanding” (P2).

Of the 32 respondents, there were also students who did not fully agree with the use of *Perplexity* for several reasons, one of which said:

“The use of the Perplexity website is quite helpful for me in lectures, but I think we also need to keep filtering the information provided, whether it is in accordance with the understanding we need” (P3).

Other respondents also stated almost the same thing:

“Perplexity has both positive and negative impacts, so as students we must also be smart in choosing sources of information, and not just copy existing answers” (P4).

The most important basic purpose of using *Perplexity*

Through interviews, respondents were asked to choose 3 objectives that they think are most important if *perplexity* is applied in lectures, and almost most of them chose *perplexity* as a tool for learning objectives or learning media, translation tools and writing tools, one respondent said:

“The use of perplexity as a learning tool is very important because it can increase interactivity and student involvement in the learning process.” (P1)

Perplexity is also utilized as a writing tool by one respondent, who stated:

“College assignments often require me to write papers, articles, and theses. But I am also often limited in ideas, so I use Perplexity to write.” (P2)

Furthermore, one of the respondents' statements supporting the use of *Perplexity* as a tool for translators was also delivered:

“....when using google translate there are still many grammar errors and inappropriate translation contexts. But with Perplexity I can ask the application to use prompts to revise my English sentences” (P3).

***Perplexity* Learning Position in the Education Curriculum**

Most respondents agreed that *Perplexity* should be included in the educational curriculum of their study program. In the interview, they said:

“Incorporating Perplexity into the curriculum will provide a solid foundation for students to utilize AI technologies in learning...” (P3)

However, there were also respondents who felt that *Perplexity* should remain outside the curriculum, one respondent said:

“Perplexity should be used as an optional additional tool, it does not need to be part of the core curriculum,” (P4).

DISCUSSION

Based on the research results above, out of 32 respondents, a good understanding of AI perplexity was demonstrated. As many as 81% of respondents were able to explain the concept of perplexity well, while the rest had a limited or even no understanding. The high percentage of

understanding indicates that students have been sufficiently exposed to and comprehend AI technologies like perplexity within their educational context. This is a positive indicator that this technology can be further integrated into the curriculum without having to start from basic understanding. Yang & Chen (2023) also conveyed the same sentiment, expressing a desire to integrate AI into educational and professional environments in the future, as some students agree that artificial intelligence has a significant impact on education. Then, in *figure 4*, it depicts the level of student approval regarding the benefits of perplexity in lectures, where the majority of respondents acknowledge the advantages of using perplexity AI. This indicates that this technology has the potential to be a useful tool in helping them understand lecture materials and complete academic assignments. In line with these findings, *table 1* shows the results of the statistical analysis, which confirm that the majority of students were helped by the presence of perplexity. The benefits of perplexity AI have also proven capable of enhancing their language proficiency, supporting various areas such as grammar, facilitating idea development, and strengthening their ability to communicate effectively in the desired language. (Chan & Lee, 2023). Next, the results in *figure 5*, which show the respondents' perspectives on the importance of learning the basics of perplexity, also indicate that students recognize the importance of these basics to maximize their benefits in academic activities. Additionally, it emphasizes the need for integrating this learning into the curriculum to maximize the benefits of using AI. This is also supported by the average score of 7.66 and a standard deviation of 2.25 2 found in *table 2*, indicating consistency in students' views. The ethics of using perplexity in the lecture process also demonstrate a good understanding, as indicated by the results shown in *figure 6* and supported by the descriptive analysis in *table 3*, with an average score of 7.94 and a standard deviation of 2.355. The high percentage of agreement on the importance of AI usage ethics indicates students' awareness of the potential misuse of technology. This underscores the need for comprehensive ethics education to ensure responsible use. Then, the findings on the impact of using perplexity in lectures are also presented in *figure 7*, which shows diverse understanding with most acknowledging its positive impact.

However, there are also those who feel that the use of perplexity requires careful management to minimize negative impacts. The data in *figure 8* is also supported by *table 4*, which shows good understanding with an average score of 7.94 and a standard deviation of 2.299, which is consistent with the average score on ethical understanding. Next, the level of student confidence in the use of perplexity shows a very high average value with a low standard deviation, which means it indicates almost uniform confidence among respondents, with the majority feeling that this technology is very beneficial for them.

On the other hand, concerns about the use of perplexity have also come under scrutiny.

There are concerns among some students regarding the use of perplexity in lectures. Although the average score indicates a moderate level of concern, the larger standard deviation suggests a wider range of perspectives. This concern is likely due to a lack of understanding or clarity about how this technology will be used in the curriculum; additionally, the misuse of this technology is also a factor in the students' worries. This shows the need for further clarification and education regarding this technology. Next, the perspective of students on the management of perplexity also received agreement from the majority of students. The high average score emphasizes the importance of clear regulations and guidelines in the use of this technology, as well as responsible usage. In the final statement, the majority of students agreed and also supported the application of this technology in the educational sphere, provided that its management is carried out responsibly. Through the data in *table 8*, it is known that the average students show positive support, although there are some variations in views among the respondents. This reflects a positive attitude towards technology, provided it is well-managed. The results of the interviews with respondents regarding the use of perplexity in lectures show various opinions and perspectives. The majority of students stated that perplexity is very helpful in the teaching and learning process, especially in understanding difficult concepts. Other respondents also expressed similar opinions, indicating that many students feel real benefits from the use of perplexity, particularly in terms of learning efficiency and effectiveness. However, not all students fully agree with the use of perplexity; some students highlight the need to filter the information provided by perplexity to ensure its suitability for their academic needs. This difference in perspective indicates an awareness among students about the importance of critically evaluating the information obtained from perplexity.

Next, when asked to choose the most important primary purpose in using perplexity, most respondents selected it as a learning aid, a translation aid, and a writing aid. The opinions of the respondents expressed in the interview highlight the flexibility and various functions of perplexity that support various academic aspects of students.

Lastly, regarding the position of perplexity learning in the education curriculum, most respondents agreed that perplexity should be included in their study program curriculum, but there were also those who felt that perplexity should remain outside the study program curriculum. This shows a difference of opinion among students regarding the extent of integrating perplexity into formal education.

Overall, the data above shows that students generally support the use of Perplexity in lectures with a high awareness of the associated benefits and risks. Ethical awareness and the importance of careful management have become crucial aspects highlighted by students in the application of this technology in the academic environment. The integration of quantitative and

qualitative data provides a comprehensive picture of students' perceptions of Perplexity AI. Interview results also show that despite variations in opinions, the majority of students feel they benefit from using Perplexity in their studies. They acknowledge the potential of Perplexity to enhance learning, while remaining cautious and critical of the information provided. The integration of Perplexity into the education curriculum is also considered important by many students, although some prefer its use as an optional tool.

CONCLUSION

This study emphasizes that artificial intelligence (AI) technologies such as ChatGPT and Perplexity are crucial for enhancing students' language proficiency and communication skills. In addition, the tools available in AI enhance their confidence, academic achievement, positive learning attitudes, and motivation to learn. Most respondents acknowledge the significant impact of AI on the prospects of education in various fields. They also said they want to incorporate AI into their education in the future.

However, there are concerns about ethical issues, lack of human interaction, potential data breaches, and the impact of AI on the education sector. AI users, especially students, must embrace technology so that educational innovations can be successfully implemented. Students' perceptions of the learning environment and technology like GenAI influence how they learn and their academic outcomes. This research also highlights that the use of GenAI in education has many benefits, such as assisting in information synthesis, writing, and learning evaluation, but there are also issues and concerns related to ethics, plagiarism, and academic integrity.

Survey results show that the majority of students understand Perplexity AI well and acknowledge that it is beneficial for the college process. Although the majority of respondents support the use of AI in education, there are also concerns about its management and potential misuse. However, there is a need for deeper learning about the principles and ethics of using this technology.

This research emphasizes that further studies should be conducted to understand how students perceive GenAI. Additionally, it is important to create clear plans and standards to ensure that this technology is used responsibly in the educational process.

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