STUDENTS' LIVED EXPERIENCES IN UTILIZING ARTIFICIAL INTELLIGENCE FOR THESIS WRITING

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ABSTRACT

This research report investigates students' experiences using Artificial Intelligence (AI) in the thesis writing process. Data collection was carried out by means of in-depth interviews with 6 undergraduate students at Sanata Dharma University. Transcendental phenomenology was used in this research to dig deeper into how they interacted with AI and how AI influenced their thesis writing process. This research displays three emerging themes:1) AI improved students' motivation in writing a thesis, 2) AI fosters decision-making to solve problems, 3) AI promotes students' self-confidence and shifting attitudes. This research contributes to understanding how the use of AI affects students' experiences and their thesis writing process. Further research is needed to understand the long-term impact of using AI in the thesis writing process and higher education as a whole.

Keywords: Artificial Intelligence, Academic Writing, Thesis Writing, Lived Experiences

INTRODUCTION

In the digital era that continues to develop, artificial intelligence (AI) technology has become a topic of conversation in various areas of life, including in the world of higher education. Even in many universities, AI has been used in academic and administration activities (Ahmad et all., 2023). AI has increased in educational use in recent years, mainly due to advances in technology, which implies that technology can be used to improve learning and research (Alzahrani, L, 2023). Students' writing habits in the fields of academic writing and language learning are changing as a result of new technological developments. One aspect that is affected is the academic writing process.

Academic writing is one of the most important types of writing to learn. Academic writing can also be interpreted as a formal writing style used by students, instructors and researchers (Aldabbus & Almansouri, 2022). It is different from ordinary writing because it has a certain format and words, uses more academic words and complicated sentences, and makes logical arguments with the reader in mind. (Aldabbus & Almansouri, 2022). Apart from that, the language used in academic writing must also be clear and precise so that readers understand the meaning (Pratiwi, 2016).

To be successful in higher education, undergraduate students are required to write academic assignments, namely theses, with a thorough understanding of the systematics of academic writing. Whereas, (Lin & Morrison, 2021), emphasized that writing a thesis is difficult because students are required to think critically and have high-quality writing skills. Therefore, undergraduate students studying English as a foreign language (EFL) often encounter significant challenges in writing their theses (Lestari., 2020). In the research conducted by, (Fauzan, Hasanah, & Hadijah,.2022; Aldabbus & Almansouri,.2022; Fitria, TN, 2022) found that students have difficulty in developing paragraphs and writing topic sentences due to limited vocabulary, lack of ideas, confusion at the beginning of the paragraph, students' lack of ability to understand the systematics of writing a thesis, tend to use translation tools, difficulties in grammar and punctuation the right way to write a thesis correctly.

Previous research conducted by (Lestari, 2020) which examined how challenging writing a thesis was seen by students at Muhammadiyah University of Bengkulu, showed that the most challenging aspects of writing were the ability to paraphrase sentences, determine topics, difficulties in determining research methodology, and experiencing thought barriers. so they feel stuck and find it difficult to develop their ideas. This is similar to what is experienced by students at universities (Dwihandini et all., 2013) shows several factors, including psychological factors such as lack of self-confidence in determining the title of a thesis, sociocultural factors such as knowledge of appropriate lexical elements and language units, and linguistic factors.

With the development of AI technology, undergraduate students are helped in writing their theses. Artificial intelligence applications in education (AIEd) refers to the use of various artificial intelligence technologies, such as chatbots, tutoring systems, and automated digital assignment assessments that help improve the educational process (Chiu et al., 2023). Burkhard, M. (2022) states that this AI-powered writing tool can be used, among

other things, for text translation (e.g., www.deepl.com,https://translate.google.com), to improve spelling (eg, https://mentor.duden.de), for text analysis (e.g., https://hemingwayapp.com), for rewriting and summarizing texts (e.g., https://quillbot.com) or for plagiarism checks (e.g., https://www.grammarly.com/plagiarism-checker). With the various AI technologies available, students find it helpful to understand theoretical concepts, assist during the writing process, and helps students learn grammar and vocabulary in writing (Sumakul, 2022; Alkaissi & McFarlane, 2023).

However, with many studies showed that the use of AI provides many benefits for students, it is still widely believed that the use of AI in academic settings is unacceptable due to the possibility of AI replacing humans. The underlying reason, as revealed by logistic regression, is that the main causes are a lack of regulatory policies and a lack of awareness of AI technology, coupled with the fear that AI will replace human labor (Roganović t all., 2023). More specifically, not much research has looked at how students' lived experiences of using AI in English academic writing affect their writing processes at the undergraduate level. That is what this research is intended for to fill the existing empirical gap by examining undergraduate students' experiences they had and the actions they took when using Artificial Intelligence (AI) to assist their English thesis writing process. The results of this research aim to gain something valuable, insight into how students interact with AI and how it affects their thesis writing process. This also aims to broaden the insight of teachers, lecturers, instructors and the wider community regarding the use of AI which is often considered detrimental to students. Artificial Intelligence (AI) will be beneficial for students if students can understand the limitations of using AI in their thesis writing process. Therefore, this study aims to answer two research questions:

What are the students' lived experience in using AI in their thesis writing process?

RESEARCH METHOD

This research was intended to explore a deeper understanding of students' experiences with Artificial Intelligence (AI) in thesis writing. To explore students' experiences, a qualitative approach was used with the phenomenological method. Creswell (2022) explains that phenomenology is used to explore the experiences of individuals in society by collecting data through interactions with them and exploring their views on certain issues. In other words, phenomenology is a method used by researchers to explain the basis of a phenomenon by identifying individuals who experience the experience (Neubauer et al., 2019). Besides that, the qualitative approach aims to obtain a detailed picture and understand the phenomenon being studied in great detail and according to the context (Hennink et al., 2022). In this research, researchers focused on understanding more deeply about students' experiences in using artificial intelligence (AI) in thesis writing. Therefore, researchers used a qualitative transcendental phenomenological research design for this qualitative study.

This transcendental phenomenological approach was suitable for this qualitative research because participants shared their experiences in using artificial intelligence (AI) in their thesis writing. Consequently,

the goal of phenomenology is to gain a better understanding of phenomena or things seen or experienced by other people (Farrell, 2020). The qualitative transcendental phenomenological research design was chosen to allow the research to get to the heart of the phenomenon.

This research not only looks at descriptions of experiences, but also finds out how and what the impact of using artificial intelligence (AI) is in writing a thesis. This transcendental phenomenological approach was developed by Clark Moustakas (1994). There are four stages of data analysis in transcendental phenomenological research by Clark Moustakas (1994): Moustakas claims that Epoche is a stage in which academics put aside people's opinions, assumptions, and judgments regarding various topics. At this point, the researchers will use bracketing, whereby assumptions and past information are arranged in "brackets." The researchers must put aside their preconceptions, prejudices, and expectations. This eliminates the impact of prior knowledge or opinions and helps the researchers to observe the phenomena, events, and people as they are for the first time. Epoche is helpful for study since it removes bias and helps uncover things' genuine core and purpose.

At this heart of Phenomenical reduction, the participant interview answer data that has been transcribed will be analyzed by the researcher by eliminating similar values, irrelevant statements, overlaps and taking important statements from the participant answers and then grouping them based on themes. (Clark Moustakas., 1994).

The next stage is Imaginative variations. In this stage the researcher obtains structural themes from the textual description obtained previously (Moustakas, 1994). Furthermore, to arrive at a synthesis of meaning and textural-structural essence of the phenomenon or experience under study, the structural essence of the imaginative variation is finally combined with the textural essence of transcendental-phenomenological reduction (Moustakas, 1994). Then, the researcher developed a textural description of students' life experiences regarding the use of AI in writing a thesis and a structural description of the students' experiences and the influence of artificial intelligence (AI) on students' personal development in writing their theses. The Textural-structural synthesis comes after imaginative variation. At this stage the researcher combines structural and textual descriptions to obtain students' overall experience in using AI in thesis writing.

The respondents in this study consisted of 6 students who were selected using purposive sampling based on certain criteria, namely the respondent was writing a thesis, students of the English language education study program batch 20, and the respondent used artificial intelligence (AI) in the thesis writing process. By using a purposive sampling method (Andrade, 2021), the respondents approached have basic knowledge about the phenomenon discussed by the researcher and can only be accessed by the researcher after the respondent voluntarily agrees to participate (Badil et al., 2023).

Data collection was carried out through in-depth interviews as the main data source. To understand more deeply students' experiences in using AI for thesis writing, researchers can use open questions and following up on participants' answers to obtain as much information as possible and

explore ideas expressed during the interview (Badil et al., 2023., Elhami & Khoshnevisan, 2022). This method allows researchers to gain a better understanding of how students perceive, understand, and interpret the use of artificial intelligence in thesis writing because it allows students to explain their experiences in detail and freely. Interviews were conducted individually for 30 minutes. Thus, it is hoped that this research will increase our understanding of how students feel and understand the use of AI in their thesis writing.

FINDINGS AND DISCUSSIONS

This section focuses on the data results and research findings conducted on six students majoring in English education who involved AI in their thesis writing process. After analyzing the data that has been collected, the results are then grouped into three themes as follows: 1) Improve students' motivation in writing a thesis, 2) The decision-making to solve problems, 3) The emergence of self-confidence and shifting attitudes.

Theme 1: AI improved students' motivation in writing a thesis

With the involvement of AI in the thesis writing process, ELESP students feel more encouraged to understand their research topic in depth. Additionally, AI technology helps students see their progress in real time through fast and relevant feedback. This increases their sense of accomplishment and encourages them to continue improving. Some of them reported that through the sense of accomplishment and support provided by AI tools they became motivated:

I also feel that the use of AI can increase my experience in writing a thesis

and I feel more motivated because I see significant progress in my research process (Participant 1)

As my first experience writing a thesis, I felt hopeless because this was a difficult task for me. However, when I started involving AI to create background drafts and look for references, I felt more motivated because I saw AI's ability to overcome difficulties that arise in the process of writing a thesis (Participant 4)

And I feel more enthusiastic about working on my thesis because I get a lot of inspiration to continue writing from AI (Participant 6)

With the emergence of this motivation, students feel the benefits of AI in their personal abilities as thesis writers. Students can improve their personal abilities to think critically, creatively and analytically. This ability is critical to their progress as a thesis writer.

For me, AI has improved my research abilities because this is my first experience writing a thesis, so I have little insight into the thesis and with AI I have gained various knowledge about the thesis and my thinking abilities have become more developed (Participant 2)

My writing skills are also improving, I think the style of language I use and also my skills in putting together words from human thought and technological thought have improved (Participant 3)

…, because I see now that my ability to think critically and analytically has increased because I often read texts via AI which present a scientific and high language style so that it requires broad thinking and insight to understand it (Participant 6)

Based on these findings, the integration of AI in thesis writing has a positive impact on students' motivation and

assisted them to show more interest (Khasawneh et al., 2023) and helps them develop personal abilities as a thesis writer.

Theme 2: AI fosters decision-making to solve problems

This section examines the ways identified by ELESP students in solving problems and supporting their theses as well as the difficulties in writing theses. It was found that ELESP students had problems with grammar. These issues were identified as problematic for the ELESP students who participated in this study. On many occasions these students find that they seem confused about the correct use of grammar in their theses:

I'm not very confident about my grammar skills because I don't really understand it (Participant 1)

Apart from that, I have doubts about my grammar and spelling skills because the grammar I use to write my thesis is not correct, so that is my current challenge (Participant 5)

On the other hand, there are also students in research who express confusion in determining their thesis topic. This confusion arises partly because they feel that every thesis topic they want to research has already been researched before (Puspita, C., 2021). From the experience of ELESP students it was found that:

Determining the topic was my toughest challenge at the beginning of writing my thesis because I saw that all the topics had already been researched before (Participant 4)

I have difficulty determining a topic because I find it difficult to find new interests in phenomena or facts in the field of English that I can use as research (Participant 6).

Apart from determining the topic, ELESP students also experience difficulty in paraphrasing sentences or quotations. This is one of the difficulties experienced by students paraphrase the sentences in the theory (Rizwan et all., 2022), so they just copy-paste the theory without providing a sentence. That's why there are many student theses that are sometimes said to be plagiarized (Lestari, 2020).

I thought at that time I had problems paraphrasing sentences or quotes. In this case, I often forget to create my own sentences and just copy-paste them (Participant 1)

Another difficulty experienced by ELESP students is difficulty in developing ideas. As a result, students often get stuck in writing their thesis so that the processing time becomes inefficient.

Often when I'm writing I get stuck in my thoughts and don't know what to write. As if he couldn't think and was confused. That's one of the things that I often experience and it's very disturbing for me (Participant 2)

It seems that these findings indicate that ELESP students face various unexpected problems during the writing process. In this case, writing a thesis is a complicated process. On the other hand, ELESP students showed several ways to overcome the challenges of writing a thesis. Some ELESP students stated that with the help of Artificial Intelligence they knew what was right and what needed to be improved. (Huang, J., &Tan, M.,2023) states that AI tools, for example ChatGPT, can improve efficiency and quality, speed up writing and help improve writing style. There are many AI functions, not all AI can be used to write theses, there are several AI tools that can be used, including: Perplexity, ChatGPT, Grammarly, Quillbolt, Elicit, Research Rabbit. AI can make it easier for

students to complete their theses and this was also felt by the ELESP students who participated in this research. This is also explained in the following quote:

I use AI like Quill bolt to help me paraphrase sentences or quotes from previous research but I also keep researching again and don't just copy and paste (Participant 1)

Finding journals that are relevant to the thesis topic is challenging. I use Elicit, Perplexity, and Google Scholar to look for references (Participant 3)

For me, I use ChatGPT and Bard to create backgrounds and look for inspiration and I use them for discussions when I feel confused. So I found a way out. (Participant 4)

I am not too confident about my grammar skills, so I involve AI, namely grammarly, to check my writing (Participant 5)

ELESP students in this study saw improvements when they found several solutions, corrections, and input from artificial intelligence technology. This feedback is a way to improve their writing skills. These findings also show that ELESP students have several difficulties in writing a thesis such as grammar, determining the thesis topic, paraphrasing sentences, and developing ideas. In this case, ELESP students do not only rely on their own writing skills but involve sophisticated AI technology so that they are able to solve problems that occur while writing their thesis.

Theme 3: AI promotes students' self-confidence and shifting attitudes

The way students write theses has been greatly influenced by the use of AI. At first, many students were hesitant and not confident in using AI to support research and writing. However, as they experience and understand the potential of AI, there is a change in their views. Students are starting to feel more confident in their ability to integrate AI tools into their research frameworks, and they are also starting to develop more positive attitudes about AI than before.

At first, I was hesitant to use AI in my research because I wasn't sure if the technology could really help. However, after passing a few days and seeing the results, I started to believe that AI could be a very helpful tool in writing my thesis (Participant 1)

The first time I used AI, I felt very enthusiastic and curious about AI offering a lot of help in my thesis. However, I felt anxious and unsure because this was my first time writing a thesis and using AI and my knowledge about writing a thesis was still very lacking. However, as time went by I became comfortable using AI because it really helped me and made me more confident in writing my thesis (Participant 2)

I was initially skeptical about my ability to use AI in my thesis writing. However, after learning firsthand how AI can help optimize my time and can solve my thesis writing problems, I am now more confident in my ability to use this technology (Participant 5)

Students' experiences using artificial intelligence (AI) to write their theses shows a major shift in their views and attitudes towards this technology. From a hesitant start, they became more confident and open to the possibility that AI could help them in their education. These changes represent a major shift in academic culture, which is increasingly integrating new technologies as essential tools for academic research and writing.

CONCLUSION

This research describes students' lived experiences in utilizing artificial intelligence (AI) to write their theses. This research uses a qualitative approach involving in-depth interviews to describe how they experienced the process and how AI influenced their experience in writing their thesis. Based on the results of interviews with six students from the English education study program, it shows that the use of AI in writing theses has a significant impact on students. Several themes that emerged from the results of data analysis were improving students' motivation in writing a thesis, the decision-making to solve problems, and the emergence of self-confidence and shifting attitudes.

The use of Artificial Intelligence (AI) has proven to be beneficial for students in the thesis writing process. First, students were significantly more motivated to complete their academic assignments when the thesis was written with AI. Fast and relevant AI feedback not only makes students feel better about their achievements, but also encourages them to continue improving and discovering more about what they are learning. Second, the experience of using AI impacts students' personal development as thesis writers; it helps them overcome problems such as paraphrasing sentences, determining a thesis topic, grammatical difficulties, and developing ideas. Students are becoming more confident and open to the possibility that AI can help them in their education after initially being hesitant.

Therefore, this research contributes to understanding how the use of AI affects students' experiences and their thesis writing process. It also shows the challenges and opportunities associated with incorporating AI into higher education. However, further research is needed to understand the long-term impact of using AI in the thesis writing process and higher education as a whole.

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