

Student's Experiences Using ChatGPT for Academic Purposes

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Abstract. The presence of technology has made our lives more convenient, especially as it advances and develops over time. Compared to previous generations, it is evident that technology has greatly aided humans in reducing the number of tasks. However, the use of technology comes with great responsibility. Technology's convenience can sometimes be misused, leading to overuse. This can result in humans relying on artificial intelligence instead of using their natural intelligence. The main objective of this qualitative study is to explore the important insights of senior high school students using ChatGPT in their academics and the meanings ascribed to their experiences. Data was generated from in-depth semi-structured interviews utilizing the transcendental phenomenological design and analyzed through thematic analysis. The analysis revealed that as students become more familiar with ChatGPT, their perspectives change, recognizing its importance and limitations. They acknowledge ChatGPT's potential as the future of education, but caution against excessive reliance and potential loss of essential learning experiences. They now accept it as a helpful guide, not a means of cheating. The findings suggest that students should use ChatGPT, as a supplement to their thinking and learning process, balancing technology with personal experiences. Moreover, educators and school administrators should promote responsible use of AI tools like ChatGPT. Students to critically evaluate information and cross-reference it with reliable sources.

Keywords: Academic journey; Artificial Intelligence; Ascribed experiences; ChatGPT; Technology education.

1.0 Introduction

Imagine a world where students can instantly access information, generate essays, and even write code with the help of a powerful AI language model. The presence of technology has made our lives more convenient, especially as it advances and develops over time. Compared to previous generations, it is evident that technology has greatly aided humans in reducing the number of tasks as it does not require much effort. However, the use of technology comes with great responsibility. Technology's convenience can sometimes be misused, leading to overuse. This can result in humans relying on artificial intelligence instead of their natural intelligence, causing potential harm to our daily lives.

Undeniably, AI technology affects several aspects of human society, specifically in the education sector. The integration of AI technology into the education of students is already present in the concept of educational technology. AI can be beneficial for students in the teaching-learning process. Thus, students must become aware of this technology to benefit from its applications while also remaining informed on the fatal flaws that these

technologies can bring, such as factual inaccuracies (Stanford University Human-Centered Artificial Intelligence, 2023). Wentworth and Middleton's (2014) research highlights the impact of technology on student academic performance. As technology advances, its use in educational settings becomes more prevalent.

The rise of artificial intelligence (AI) on the internet has significantly impacted various communities, particularly in the educational sector (De Mántaras, 2017), and improved human life by managing tasks and calculations beyond human capability (Psychology Today, 2021). The rapid and unprecedented development of AI technology has led to an AI boom during the pandemic that has accelerated the adaptation of analytics and AI (McKendrick, 2021); current AI technologies still lack the adaptability of human cognition, limiting their flexibility and contextual judgment across varied contexts (Psychology Today, 2021).

One of the prominent AI tools, ChatGPT, has sparked debate about the potential impact on student learning and academic integrity. ChatGPT is an artificial intelligence made by OpenAI that can provide quick and well-formulated answers to a given question by the user (Coursera, 2023). This technology emphasizes the creation of works over the learning experience. However, ChatGPT's academic usage has flaws, as it offers a singular response to inquiries and lacks mechanisms to detect and prevent factual inaccuracies (Kool, 2023). Wu (2023) also posited that a flaw in the current model of ChatGPT is that it is prone to providing biased and factually inaccurate information. This reality is emerging, raising critical questions about the future of education.

Moreover, Kool (2023) mentioned that ChatGPT affects critical thinking; an overreliance could lead the students to abuse the software for exams, adversely affecting their critical thinking and writing skills. However, AI technology is not inherently negative or positive because how people use these technologies determines its effects on society. The author does not advocate for ChatGPT in academics; however, Kool further mentioned the integration of AI technology in the education of students, stating that teachers can use ChatGPT to generate closed exam questions. ChatGPT simplifies information gathering and organization for students and teachers (Dilmegani, 2023), and it also has the potential for producing inaccurate data and spreading misinformation due to overreliance on the software, requiring careful human oversight to mitigate potential harms (Vanian, 2023).

Furthermore, improper use of ChatGPT can lead to misinformation and plagiarism, as students may use information without proper citations (Baidoo-Anu *et al.*, 2023). Lack of AI technology teaching methods can also affect students' ability to analyze and filter information, affecting their ability to think critically and assess information. There is a lack of awareness of the proper utilization of AI technology due to its rapid development (Ali & Brunton, 2023). According to Myers (2022), only two-thirds of individuals surveyed know about artificial intelligence in society. Hence, AI technology, including voice assistants, image recognition, Google search, and social media, is already present in human society, and awareness of its advancements can lead to their benefits.

The theory of learning constructivism by Piaget, as mentioned by Brau (2020), states that humans create knowledge through a combination of experiences and ideas and how individuals use knowledge to give meaning based upon these experiences. The notions of Piaget's theory of learning constructivism focus on individuals as the center of the knowledge creation and acquisition (McLeod, 2020). Learning constructivism enables personalized learning experiences for students using AI technology to form knowledge and meaning (Grubaugh, 2023). The effectiveness of AI in education depends on students' usage, identifying factual inaccuracies and skepticism, and adjusting knowledge frameworks to prevent misinformation and mistakes (Halkiopoulos & Gkintoni, 2024).

Piaget identifies two elements of Research on children's cognitive development: accommodation and assimilation (Brau, 2020). Accommodation involves adjustments made within an individual's knowledge to cope with concepts that do not fit their existing framework, transforming their current interpretation of reality. Assimilation involves interpreting new knowledge within an existing understanding framework (Cherry, 2022). These concepts are crucial for research, as students use ChatGPT as a source of information to form a basis of knowledge on technical or general concepts.

Furthermore, the Cognitive Load Theory by Sweller (1988) states that humans have a working memory, which refers to the limited capacity of information that a person can carry in mind at a given time (Loveless, 2023). The

Cognitive Load Theory focuses on maximizing learning methods by avoiding an overload of working memory, as it affects a human's ability to store information (Likourezos, 2021). The theory discusses how people store information through short-term and long-term memory. Exceeding the working memory capacity can overload the short-term memory and affect the learning ability of individuals. AI technology can assist in dealing with cognitive overload as machines such as computers can process information faster than humans (Whitney, 2017). AI technology in education can lead to new opportunities and ways of personalized learning for students. Teachers can utilize AI technology to create learning plans based on student assessment data, and it can provide live feedback for teachers and students on the lacking learning areas and the progress of students (Llego, 2022).

The study aimed to explore the experiences of senior high school students using ChatGPT at the University of Northern Philippines, School Year 2023-2024. This was to understand how students utilize ChatGPT in their academics and their thoughts and opinions surrounding the possible benefits and adverse effects of using ChatGPT. Specifically, it sought to answer the important insights of senior high school students using ChatGPT in academics and the meanings ascribed to their experiences.

Furthermore, it can be noted that ChatGPT is a technology tool that is not inherently good or bad as technology in society. It is necessary to help people utilize AI technology properly; some students may abuse this software to create academic outputs. Learning about the positive aspects of ChatGPT and the negative aspects of this technology is necessary to cultivate a proper approach to using AI technology in education and utilization in society.

2.0 Methodology

2.1 Research Design

The study utilized the transcendental phenomenological design of qualitative research. Transcendental phenomenology, a method developed by Moustakas (1994), is a systematic method for analyzing lived experiences (Cordes, 2014). It eliminates the Cartesian dualism between objectivity and subjectivity by aggregating the subjective experiences of multiple individuals. The research primarily aimed to explore the lived experiences and meaning-making processes of senior high school students at the University of Northern Philippines using ChatGPT for academic purposes. Hence, the transcendental phenomenological research design relies on individual experiences, allowing stories from participants' voices to be told, aligning with human science research. This approach is useful when researchers have identified a phenomenon and have individuals who can describe it. The two questions, "how" and "what," are used to ask questions and record answers to uncover the underlying experiences of the students engaging ChatGPT for their academic purposes.

2.2 Research Locale

The study was conducted in the Senior High School and laboratory Schools of the University of Northern Philippines, Tamag, Vigan City, Ilocos Sur.

2.3 Research Participants

The research participants were senior high school students at the University of Northern Philippines, School Year 2023-2024. The study participants were selected using purposive sampling, wherein the inclusion criteria described senior high school students with experiences using ChatGPT. Likewise, the study excluded students without experience using ChatGPT. The study considered ten (10) participants (Creswell, 2002).

2.4 Research Instrument

This study employed a semi-structured interview guide as a data collection method to gain insights into the student's experiences using ChatGPT. The guide questions were designed and anchored in the framework of van Manen (2014), ensuring that the constructed questions elicit valuable insights from the participants. The guide questions were communicated to the participants through open-ended questions that allowed them to express their experiences and allowed the researcher to do probing.

2.5 Data Gathering and Analysis Procedure

Before the data gathering procedure, the researcher requested permission from the principal through proper consent before gathering data. Upon being given permission, the researcher asked from each class for students

who have experience in using ChatGPT. The researcher then asked for permission from the students to participate in the study using the consent or assent form and permission to record the conversations for the semi-structured interview for verification purposes of their statements. Thematic analysis was employed to analyze the data gathered. Verifying the participant's responses was done by returning to the participants to avoid reflexivity or biases in the findings. In addition, inter-coding was conducted with an expert in thematic analysis. This is to verify if the generated codes and themes align with the investigated problem.

The data were analyzed using the thematic analysis by Caulfield (2019). The first step in analyzing the data using the thematic analysis was Familiarization; it is a viewing of the answers by the participants on the questionnaire to understand and become familiar with the data. Read and re-read the data (transcripts, documents, observations) multiple times to familiarize yourself with the content. The second step in using the thematic analysis was Coding, wherein phrases or sentences are labeled or summarized into a single word or phrase that can act as a code, breaking down the data into meaningful units of text that represent key ideas. The third step enabled the researcher to generate themes based on the codes that combine or remove several labels or codes. Look for the connections, similarities, and differences between the codes. Cluster-related codes are developed together from these clusters, and the themes are clearly described. The fourth step was to review the themes and identify themes that could best represent the data to ensure the consistency of the themes generated. The fifth step included formulating the researcher's definitions of the themes and how these definitions would allow the researcher to understand the data. Finally, the sixth step was interpreting the researcher's data based on the previous themes, codes, and labels. Explain the significance of the themes in the context of the research questions and existing literature. The analysis and statement of the gathered data uncovered the meaningful themes and patterns found in the data.

2.6 Ethical Considerations

This research study followed ethical guidelines. The proper authorities requested permission to gather data. The researcher provided informed consent for the respondents, assuring their names' anonymity. For the conflict of interest there were no conflicts of interest in the study. The researcher focused on determining students' experiences using AI technology such as ChatGPT. The researcher also considered privacy and confidentiality. Any records and documentation acquired were used for the study only. The questionnaire was not shared with people other than the researcher. Records were properly sealed and stored in a safe box. Records were destroyed a year after the study was completed. The terms and conditions of the study will be put in the Informed Consent Form. The rights of the respondents were also included in the form. The forms were given personally before the study was conducted and retrieved later. The respondents were senior high school students at the University of Northern Philippines, School Year 2023-2024. The participation of the respondents was voluntary. They were recruited personally via consent form. There was a minimal risk for those who participated in the study. It is about the confidentiality of the students' answers, but it was assured to be properly kept safe and would be destroyed a year after the completion of the study. The results of this study were used to help improve the learning process and to lessen the burden on teachers and students. There is no compensation associated with the study.

3.0 Results and Discussion

Different themes were shown, and the corresponding excerpts offer a concise and organized summary of the information relevant to the research question, which encapsulates the overall experience of being a senior high school student using ChatGPT in academics. The study's results revealed important insights into the experiences of senior high school students using ChatGPT in academics. The discussion revolves around the identified themes: motivation and curiosity, initial thoughts and opinions, impact on academic tasks, and evolving perspective.

The theme of motivation and curiosity emerges from the participants' motivations for exploring ChatGPT. Students are driven by innovative features and curiosity to explore futuristic technology, expressing a desire to expand knowledge and experience new tools for academic pursuits. P1 claimed, *"Due to its innovative features, as my classmates have described, I was drawn to trying it."* Likewise, P2 states, *"What motivated me to use ChatGPT is to expand my learnings to my extent. Moreover, I am curious about this Futuristic technology."* Moreover, P3, P4, P5, P6, P7, P8, and P10 stated that it is just out of curiosity: *"I became curious, and I tried it."* They express being motivated by its innovative features and a curiosity to explore its capabilities. This reflects a desire among students to expand

their knowledge and experience futuristic technology. The participants' curiosity highlights their interest in exploring new tools that can be used for future academic purposes.

The initial thoughts and opinions theme explores the participants' perspectives upon using ChatGPT. Students' initial thoughts on ChatGPT reveal its fast and accurate responses but also highlight concerns about misinformation and cheating, indicating a discerning approach to academic use. The initial thought by P10 stated, *"My first thoughts on using ChatGPT is that it is very accurate and the technology of information from it is correct."* Likewise, P9 also stated, *"My initial thought of ChatGPT was this help to academics, it will help improve your works."* Many students are amazed by the fast and accurate responses it provides; as P1 claimed, *"I was impressed by how fast it functions and how it could give you your needed information instantly."* However, there are concerns about misinformation and cheating. P8 stated, *"I was amazed by how developed the technology is, but I cannot help but think that this might cause cheating and sharing of unreliable or fake news."* Students recognize the potential for unreliable information and the ethical implications of using ChatGPT for academic purposes. This indicates a discerning approach and an awareness of the need to evaluate the information provided critically.

The theme of impact on academic tasks reveals the practical implications of using ChatGPT in student workflows. ChatGPT's practical impact on student workflows, including grammar checking, idea generation, and academic task supplementation, also acknowledges some students' preferences for intellect. P8 claimed that *"ChatGPT helped me accomplish my academic task faster, especially when cramming. It also helped me to improve my academic tasks like writing an essay and formulating sentences or paragraphs."* Students appreciate its ability to save time, particularly in grammar checking and generating ideas. It is a helpful tool for supplementing academic tasks, providing support, and enhancing the quality of work. As P9 stated, *"ChatGPT helps to improve your work. I use ChatGPT to search for words for my basis. It also helps me ensure ideas are related to the topic."* Likewise, P4 claimed that *"ChatGPT is like a summary of information that comes from Google and such, so it is getting information from other sources."* The convenience and efficiency of ChatGPT allow students to improve their writing skills and accomplish tasks more quickly; as P5 stated, *"It was good because it somehow helped me finish my work faster."* However, it is important to note that some participants expressed a preference for relying on their intellect and using ChatGPT as a supplement rather than a primary source of information, as P6 claimed that *"It was overwhelming at first, but the feeling quickly became underwhelming as I realized that the only thing it is doing is copying things from the internet. That is why I rely on my intellect to accomplish my academic tasks."*

The theme of evolving perspective sheds light on how students' views on ChatGPT change over time. Students' perspectives on ChatGPT have evolved from initial skepticism to acceptance, recognizing the need for responsibility and balancing with intellectual abilities, viewing it as a useful guide. Initially skeptical, as P6 stated, *"As I became more familiar with ChatGPT, I now see it as a helping guide that can direct one to better perform in their academics."* students become more accepting of the technology as they become familiar with its capabilities. They recognize the need for caution in using it responsibly and balancing its usage with their intellectual abilities. As P7 stated, *"I rely on it, especially on essays, as it gives me ideas I did not think of."* Their perspective evolves from viewing ChatGPT as a potential "cheat code" to considering it as a useful guide that can assist in their academics.

Several research studies provide supporting evidence and insights into the impacts and perspectives of using AI tools, such as writing assistants and chatbots, in educational settings. Li and Liu's (2020) study reveals that machine learning writing assistants enhance students' writing quality and confidence, highlighting the potential of AI tools in academic tasks. Likewise, Giger and Miller's (2020) meta-analytic review highlights the positive impact of chatbots on online learning, highlighting their ability to enhance learning outcomes, student engagement, and satisfaction. Kim's (2017) study on AI teaching assistants in academics highlights their effectiveness in providing quick responses but emphasizes the need for responsible usage and human involvement.

Moreover, other research studies further support the findings, emphasizing the positive influences of AI tools, such as personalized support, timely feedback, and peer/self-assessment, on learner engagement, motivation, and learning outcomes. The study of Kizilcec *et al.* (2013) reveals that personalized support and AI tools like ChatGPT can enhance learner engagement and retention in Massive Open Online Courses. Likewise, Kulkarni *et al.* (2015)

highlight the positive impact of peer and self-assessment in Massive Open Online Classes, aided by AI tools like ChatGPT, which can positively impact students' learning outcomes and self-regulated learning skills.

On the other hand, the different themes and codes that capture the impact and significance of ChatGPT in academics that arise from the excerpts encompass the appreciation for ChatGPT's assistance and time-saving benefits, the significance and meaning attached to the experiences, the immediate answers and inspiration it provides, the impact on self-confidence and academic identity, and the future implications and exploration enabled by AI technology like ChatGPT. The result of the study provides a rich understanding of the meanings of senior high school students ascribed to their experiences using ChatGPT in their academic endeavors. The discussion revolves around several themes: appreciation and benefits, significance and meaning, immediate answers and inspiration, self-confidence and identity, and future implications and exploration.

The theme of appreciation and benefits highlights the students' recognition of ChatGPT as a valuable tool that serves as a helpful hand and lessens their academic tasks and workloads, as P2 stated, *"It lessens the academic tasks and workloads."* Students appreciate ChatGPT as a valuable tool that reduces academic workloads and saves time, highlighting its practical advantages and convenience in their academic pursuits. Likewise, P9 stated, *"It lessens the academic workload since when you input a question, the ChatGPT app answers it immediately."* They appreciate its aid and its ability to save time. As P1 claimed, *"ChatGPT is a good helping hand in a way that it provides you all that you need with just one click."* This proves the practical advantages and convenience that ChatGPT offers in their academic pursuits; as P3 stated, *"I translate what I know to how I use ChatGPT, obviously not copying things. It is my last resort when Google gets too technical, but other than that, I can live without using it."*

The significance and meaning theme reveals that the students attach meaningful interpretations to their experiences with ChatGPT. Students value ChatGPT's significance and interpretation, viewing it as a tool for enhancing learning, adapting to new concepts, inspiring ideas, and fostering intellectual growth. They view it to enhance their learning and adapt to new concepts. P4 claimed, *"The meanings I attach to these experiences are centered around learning and adaptation. Each conversation allows me to gather more knowledge and refine my understanding of various subjects."* ChatGPT provides them with inspiration and innovative ideas, expanding their knowledge base and fostering intellectual growth; as P8 stated, *"ChatGPT is a great helping hand and dependable for students."*

The theme of immediate answers and inspiration underscores ChatGPT's ability to give direct answers and serve as a source of inspiration. ChatGPT offers immediate answers and inspiration, enhancing students' academic tasks and generating ideas through innovative resources like instant responses. Students appreciate its rapid responses, which help them obtain immediate information and support their academic tasks; as P5 claimed, *"We all know that a Bot controls this site, so we do know if the answers are correct; however, it gives you a direct answer."* Likewise, P6 stated, *"I interpret my experiences as simply looking for inspiration or current ideas. Therefore, the significance I can attach to these is its role as a 'sample' or 'guide.'" They see ChatGPT as an innovative resource for generating ideas and exploring complex concepts; as P4 claimed, "This ChatGPT serves as a source of inspiration and a gateway to new knowledge. I use it as a tool to explore complex concepts, generate ideas, and dig deeper into topics that catch interest."*

The theme of self-confidence and identity delves into the impact of ChatGPT on students' confidence and self-perception. The impact of ChatGPT on students' self-confidence and identity highlights the need for balance between its benefits and keeping intellectual capabilities. While they recognize the benefits, there is also an acknowledgment that overreliance on ChatGPT could lead to self-doubt and a questioning of their abilities, as P1 claimed: *"Despite its advantages, this could make doubt my ability as I tend to compare the human ability to it. When doing stuff alone, I tend to fact-check what I am doing through ChatGPT."* Students reflect on the balance between leveraging ChatGPT's aid and keeping their intellectual capabilities; as P3 stated, *"It made processing information easier, thereby helping me to understand things better. It shapes my academic identity by making things easier to understand."*

The theme of future implications and exploration examines the students' perspectives on the future of using ChatGPT or similar technologies in education. ChatGPT and AI in education are explored, highlighting potential etiquette, ethics, and the importance of personal writing and critical thinking. Some envision artificial intelligence as the future of education, anticipating its widespread adaptation and recognizing the need for proper etiquette and ethics, P2 stated, *"Artificial intelligence is the future of education; we cannot deny that in the future, we will*

appreciate the use of AI. I envision a rightful etiquette and ethics and avoid abusing the advantages of Artificial intelligence." Likewise, P1 claimed that *"It widens our perspective or source of information or basis."* However, concerns exist about potential over-dependency and the importance of maintaining personal writing skills and critical thinking abilities; as P10 claimed, *"It is crucial to recognize that while AI technologies have the potential to support and enhance learning, they should not replace human interaction, guidance, and mentorship, the role of educators in facilitating meaningful learning experiences and fostering critical thinking remains essential."* Moreover, P7 also said, *"ChatGPT would be a great and bad implication at the same time; while it would make learning easier, the accuracy of the information is not 100% correct."* Consequently, P4 also said, *"... actual classroom learning experiences are still more accurate and essential in our academic journey."*

Various research studies provide supporting evidence and insights into the impact of AI technologies and the need for critical evaluation in educational settings. The study of Cramer (2019) emphasizes the importance of critical evaluation in evaluating the emotional impact of AI tools like ChatGPT, highlighting both positive and negative aspects. Likewise, Tan and Theng (2020) explore AI's impact on education, emphasizing human interaction and recommending a balance between technology tools like ChatGPT and personal learning experiences. Moreover, Selwyn (2018) highlights learning analytics challenges in education, emphasizing critical evaluation and AI biases. It recommends fostering critical thinking and digital literacy to navigate AI tools effectively.

Furthermore, other research studies provide further evidence and insights into the impact and implications of AI tools in education. Buckingham (2019) explores the ethical and pedagogical implications of integrating AI in schools, emphasizing the need for critical engagement and educators' role in evaluating AI tools. Likewise, the study of Koedinger and Aleven (2007) highlighted the role of AI-based tutoring systems in student learning, emphasizing the need for a balance between aid and critical thinking skills development.

Based on students' experiences with ChatGPT, educators and school administrators should promote responsible use of AI tools like ChatGPT, encouraging students to evaluate information and critically cross-reference it with reliable sources. They should also provide guidance on ethical considerations, highlighting the potential for misinformation and the need to avoid cheating. Developing critical thinking skills is crucial for students to navigate the potential limitations of AI tools. Educators can integrate ChatGPT into academic tasks and provide guidelines for its use. Continuous monitoring and evaluation of AI technologies are essential for finding potential issues and allowing for future improvements. Students should use ChatGPT to supplement their thinking and learning process, balancing technology with individual experiences.

4.0 Conclusion

ChatGPT is a valuable tool for senior high school students, offering fast, accurate responses and efficient task completion, aiding inspiration and saving time. However, concerns about misinformation and cheating persist. As students become more familiar with ChatGPT, their perspectives change, recognizing its importance and limitations. They acknowledge ChatGPT's potential as the future of education but caution against excessive reliance and the potential loss of essential learning experiences. They now accept it as a helpful guide, not a means of cheating. Moreover, this implies that using AI tools like ChatGPT needs a balanced approach, critical evaluation of information, and the importance of developing one's skills alongside AI technology. By striking this balance, students can fully leverage the potential of ChatGPT while preserving their unique abilities and identities as learners.

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7.0 Conflict of Interests

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