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Cetusan
MINDA TVET MADANI

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PRAKATA

Alhamdulillah syukur ke hadrat Allah S.W.T kerana dengan keizinan-Nya, EDIGEST TVET THINK BIG V8: CETUSAN MINDA TVET MADANI berjaya diterbitkan.

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‘Cetusan Minda TVET Madani’ melambangkan pendekatan holistik dalam pendidikan teknikal dan vokasional (TVET) yang menggabungkan amalan sedia ada dengan inovasi baru untuk melahirkan tenaga kerja yang fleksibel, berdaya saing, dan bersedia menghadapi ketidakpastian dunia moden. Berteraskan nilai Malaysia Madani, inisiatif ini bukan sahaja memberi penekanan kepada kemahiran teknikal tetapi juga membentuk individu yang berfikir kritis, kreatif, dan berintegriti. Dalam era revolusi industri 4.0, TVET Madani berperanan penting dalam menyediakan generasi yang cekap dalam teknologi dan memiliki daya adaptasi tinggi demi kesejahteraan sosial dan pembangunan ekonomi yang mampan.

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Diharapkan hasil kajian ini dapat dimanfaatkan oleh penulis, pembaca dan pihak berkepentingan dalam meningkatkan pemahaman dan penerapan ilmu dalam konteks yang relevan. Semoga kajian ini dapat menjadi sumber rujukan yang berguna dalam usaha untuk memajukan bidang ini ke arah yang lebih progresif dan berdaya saing

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EXPLORING STUDENTS' EXPERIENCES WITH CHATGPT IN A WRITTEN ASSIGNMENT

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ABSTRACT

ChatGPT is a text-based artificial intelligence (AI) generative tool with unprecedented affordances to transform teaching and learning. This study aims to explore students' learning experiences using ChatGPT in a written assignment. It examines how students used ChatGPT to accomplish the assignment and their perceptions of the tool. This exploratory, qualitative study involved six architectural technology college students taking the Entrepreneurship course. It employed the focus group technique to collect data that were then analyzed using thematic analysis. Findings show that students, in accomplishing the assignment, used ChatGPT to generate ideas, provide explanations, perform translations and prompt critical thinking. Students also perceived ChatGPT as spurring their excitement and providing handy assistance in accomplishing the assignment. These findings provide evidence of how ChatGPT could enrich students' learning experiences and point to the need to further educate students in harnessing the full potential of this tool for learning purposes. There is also a need to impart AI literacy and academic integrity understanding to students for effective and ethical integration of this tool into their learning.

Keywords—Artificial Intelligence, ChatGPT, Chatbot, Learning experiences, Written Assignment

1. INTRODUCTION

Artificial intelligence (AI) technologies are advancing rapidly and becoming more pervasive in many facets of our lives. One recent example is ChatGPT, a chatbot created by OpenAI with a conversational artificial intelligence interface. As one of the most sophisticated artificial intelligence applications, ChatGPT has garnered significant public attention worldwide (Tlili, 2023). ChatGPT generates textual responses highly reminiscent of human language in response to given prompts (Eke, 2023; Lo, 2023). It is a large language model capable of processing and generating human-like conversations. It uses advanced machine learning techniques, particularly a type of neural network called a transformer, to understand natural language and generate appropriate responses to user queries. As a language model, it has been trained on a massive amount of text data from the internet, enabling it to understand and respond to diverse topics and conversations (OpenAI, 2023).

ChatGPT was introduced in November 2022. The application has garnered an astounding 100 million active users two months after its release as of January 2023

(Reuters, 2023). Since then, the tool has been pervasively used in many fields. According to Haleem et al. (2022), the alterations in the information retrieval paradigm afforded by ChatGPT have the potential to provide valuable outcomes for various fields, which include education, research, journalism, mass communication, information technology (IT), finance, and many others. The meteoric rise of ChatGPT has spread into the realm of education and captured the imagination of students and educators (Whalen, 2023).

ChatGPT provides the affordance to give students customized instructional support and evaluative insights corresponding to their unique scholarly requisites and academic advancement (Baidoo & Owusu, 2023). Using ChatGPT presents an opportunity to impart tailored instruction and appraisal to learners based on their personal learning requisites and advancement (Kasneci et al., 2023). ChatGPT exhibits significant interactivity and can engage in human-like conversations on a broad spectrum of subjects (Opara et al., 2023). It can facilitate the progression and cultivation of novel ideas and practices in education (Zhai, 2022). Additionally, it can generate persuasive, creative content (Baidoo & Owusu, 2023). Within educational environments, this tool can facilitate the creation of assessments and essays and the translation of various languages (Kohnke, 2023). Students can also use ChatGPT for various tasks, such as research and writing assignments, summarizing and paraphrasing text, and even generating creative writing prompts (Atlas, 2023).

The rise of ChatGPT and its potential applications in education and research has garnered attention. Several conceptual articles that discuss the implications of the tool were published during the first half of 2023. Qadir (2023) focuses on the implications of utilizing ChatGPT in engineering education, encompassing its benefits, limitations, and ethical concerns. In addition, Kohnke et al. (2023) provide a technological review that assesses ChatGPT's abilities in language education, exploring the advantages, benefits, and drawbacks of utilizing ChatGPT for language teaching and learning. Apart from this, Kasneci et al. (2023) discuss the potential benefits and challenges of using large language models in education. It highlights how these models can be used to create educational content, improve student engagement and interaction, and personalize learning experiences while also addressing challenges such as potential bias in the output and the need for continuous human oversight. Mhlana (2023) analyzes

the responsible and ethical use of ChatGPT in education, considering factors such as privacy, fairness, transparency, and accountability. Additionally, Baidoo-Anu and Owusu Ansah (2023) and Halaweh (2023) provide strategies for responsible and successful implementation of ChatGPT in educational settings. Rospigliosi (2023) delves into the potential risks and ethical considerations of student misuse of ChatGPT in writing essays in interactive learning environments. Similarly, Hong (2023) discusses the impact of ChatGPT on foreign language teaching, exploring concerns, misconceptions, issues, risks, and opportunities for teachers and learners.

There is also a growing number of empirical-based articles on using ChatGPT in education. Firat (2023) explores the integration of ChatGPT as a virtual teaching assistant in medical education. Moreover, Mizumoto and Eguchi (2023) evaluate the reliability and accuracy of AI language models like GPT-3 for automated essay scoring, with potential implications for writing evaluation and feedback. Apart from this, Malinka et al. (2023) assess the effectiveness and usability of ChatGPT in computer security-oriented university education, considering its role in exams, programming assignments, and term papers. Choi et al. (2023) examine ChatGPT's ability to write law school exams without human assistance and discuss its implications for legal education and lawyering. Similarly, AlAfnan et al. (2023) tested ChatGPT with theory and application-based questions and discovered that the tool could provide accurate information and ideas for communication, business writing, and composition courses. Bitzenbauer (2023) demonstrates the positive impact of ChatGPT in promoting critical thinking skills among secondary school students in physics classrooms. Additionally, Tlili (2023) explores user experiences and ethical considerations in education, revealing issues such as cheating, honesty, privacy, and manipulation. Correspondingly, Rahman and Watanobe (2023) discuss potential opportunities and threats that ChatGPT poses to overall education from the perspective of students and educators.

Overall, the above conceptual and empirical-based articles provide valuable insights into the potential benefits, limitations, and ethical considerations surrounding the use of ChatGPT in education across various disciplines. While ChatGPT has gained widespread use in education, there is a lack of research exploring students' experiences when utilizing ChatGPT in the context of written assignments. This qualitative study aims to fill this gap by exploring how students use ChatGPT to accomplish a written

assignment and examining their perceptions of the tool. The corresponding two research questions are as follows:

RQ1: How did ChatGPT assist students in accomplishing the written assignment?

RQ2: What are students' perceptions of using ChatGPT in accomplishing the written assignment?

2. METHODOLOGY

This study employed a qualitative, exploratory approach to explore students' experiences using ChatGPT in a written assignment. It involved all six college students enrolled in the Entrepreneurship course of the Architectural Technology certificate program at a community college in Sarawak, Malaysia. They were provided with a consent form explaining the purpose and procedures of the study. These participants provided their consent and were involved in a focus group interview. The primary instrument used in this study is the assignment paper, which serves as the context for students' interactions with ChatGPT. The assignment paper was designed to align with the course requirements and objectives. It provides a standardized framework for students to engage with ChatGPT and produce their written reports.

Participants are indicated according to the coding P1, P2, P3, P4, P5 and P6. P1 and P2 are female, and P3, P4, P5, and P6 are male students. Data were collected through participants' feedback obtained during the focus group interview. The focus group interview was conducted in a computer laboratory at the community college, ensuring privacy and a comfortable environment for participants. It was moderated by the researcher using a semi-structured interview guide. The moderator guided the discussion, encouraging participants to share their experiences of using ChatGPT in accomplishing the written assignment. Prompting questions related to the research objectives were used to facilitate the conversation. The interview involved all six participants to allow interactive discussions about their experiences using ChatGPT in accomplishing the assignment. The focus group discussions were audio-recorded to ensure accurate data capture. Participants were informed about the recording and allowed to express any concerns or preferences regarding their privacy. The researcher also took field notes during the focus group interview.

The study then employed thematic analysis to analyze the collected data. The audio recordings from the focus group discussions were transcribed verbatim. The transcribed data were then imported to Atlas.ti v23, a qualitative analysis software, to facilitate the coding and thematic analysis process. The analysis involved identifying patterns, themes, and recurring ideas in the participants' feedback to gain insights into their experiences and perceptions of using ChatGPT in completing the written assignment.

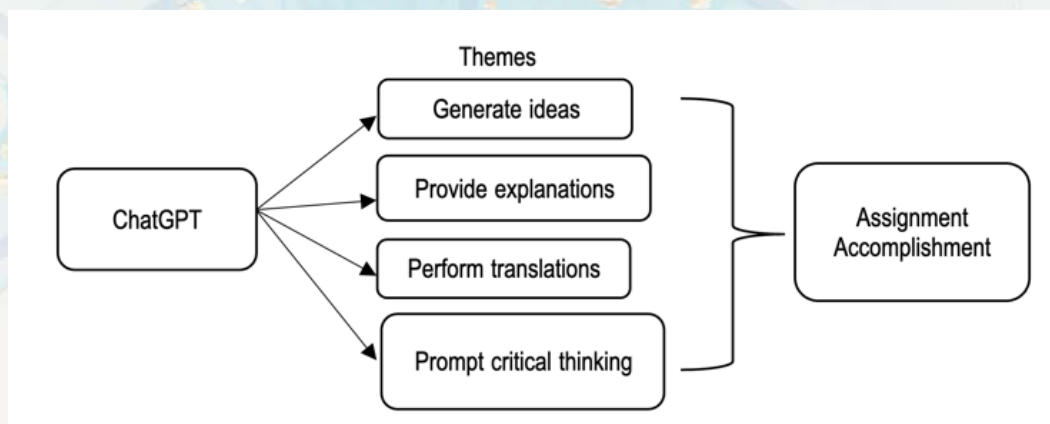
3. FINDINGS AND DISCUSSION

This section presents the findings of theme analysis based on the two research questions. The six participants were labeled P1, P2, P3, P4, P5 and P6, respectively.

RQ1: How did ChatGPT assist students in accomplishing the written assignment?

The analysis revealed four themes for RQ1, which focuses on ways ChatGPT assisted students in accomplishing the written assignment. Figure 1 shows the derived themes.

Figure 1: Ways ChatGPT assisted students in accomplishing the written assignment.



A. Themes

Theme 1: Generate Ideas

Students found ChatGPT to be a valuable tool for topic exploration, providing a range of suggestions and prompts that they had not considered before. Students would

ask questions about their assignments, and ChatGPT would respond with various ideas and explanations, aiding their understanding. For example, P5 mentioned, *“I would ask it [ChatGPT] questions related to my assignment, and it would respond with various ideas and prompts. It also provided some brief explanations and examples to give me a better understanding of each suggested topic. This not only helped me generate ideas but also gave me a starting point for doing my assignment”*. P2 commented, *“It provided me with a range of ideas and potential focus areas that I hadn’t considered before.”*

Students found that ChatGPT was crucial in providing diverse suggestions and ideas, helping them explore new directions and think outside the box. For example, P1 commented, *“In one of my assignments, I was tasked with developing a business plan for a new startup. I had some ideas in mind, but I felt stuck and unsure how to make my concept stand out. When I turned to ChatGPT for assistance, it offered me alternative perspectives and unique approaches that I hadn’t thought of before. It suggested different target markets, innovative business models and even provided examples of successful startups in similar industries. These suggestions sparked my creativity and helped me develop a truly unique and compelling business plan”*.

The conversational and assistive nature of the tool further enhanced their experience, making it akin to having a supportive virtual assistant throughout their assignment process. This back-and-forth dialogue helped students explore different angles and generate innovative ideas for their marketing strategies. In this regard, P5 mentioned, *“ChatGPT presented the topic suggestions in a conversational manner, and P2 mentioned, “When I started using ChatGPT, I was pleasantly surprised by its ability to assist me in topic exploration for my assignments. It was like having a virtual assistant who could suggest different directions for my assignment.”*

Students reported that ChatGPT was instrumental in generating ideas for their assignments. In academia, scholars, researchers, and students have increasingly utilized Large Language Models (LLMs) like ChatGPT to fulfill a wide range of academic and non-academic tasks. These include essay composition, formal and informal speech writing, literature summarization, and idea generation (Rahman et al., 2023). The experiment with ChatGPT by Rahman et al. (2023) revealed that the chatbot is quite successful in generating new research ideas and developing research outlines

Theme 2: Provide Explanations

ChatGPT assisted students by providing clear and refined explanations for complex concepts in their assignments. ChatGPT has acted as a valuable tool for breaking down complex topics and presenting them in a manner that is easily understandable to the reader. P6 mentioned, *“ChatGPT has been very helpful in enhancing my ability to convey complex concepts effectively. It acts as a valuable tool for clarifying and refining my explanations. For example, in the assignment, I had to explain the initiative characteristic of an entrepreneur. ChatGPT helped me break down the complex topic and present it in a way that was clear and easily understandable to the reader”*. In this case, ChatGPT has provided additional insights and perspectives on entrepreneurship, expanding the student's understanding of underlying principles. This enhanced conceptual understanding has contributed to the clarity and coherence of their explanations. For example, when explaining the concept of the business model canvas, ChatGPT offered alternative viewpoints and examples that enriched the student's understanding and allowed for more comprehensive explanations.

P3 also highlighted that ChatGPT's assistance in expressing explanations concisely has significantly improved the quality of his assignments. P3 commented, *“ChatGPT's support in expressing explanations concisely has significantly improved the quality of my assignments. It has helped me present my ideas in a clear and focused manner, making my assignments more impactful and easier to understand”*. By helping the student present their ideas in a clear and focused manner, ChatGPT has made their assignments more impactful and easier to understand. ChatGPT's support in providing explanations has been instrumental in enhancing students' ability to effectively convey complex concepts in their assignments. It has helped them break down topics, gain additional insights, and present their ideas clearly and concisely, ultimately improving the quality of their work. A recent study by Surameery and Shakor (2023) shows that ChatGPT can be used to explain bugs, including why a particular piece of code is causing a bug and how it can be fixed. This can be useful for improving the understanding of bugs and providing insights into how to prevent similar bugs in the future. The same concept of how ChatGPT helps students explain terms or concepts in the Entrepreneurship Course and better understand the requirements of the questions in the assignment.

Theme 3: Perform Translations

ChatGPT played a significant role in expediting the translation process for the student. Instead of manually translating each sentence or phrase, ChatGPT provided quick and near-instantaneous translations. This saved the student considerable time, as they no longer had to engage in extensive research or consult multiple sources for translation assistance. P6 mentioned, *“I found that ChatGPT significantly expedited the translation process and saved me a great deal of time. Instead of manually translating each sentence or phrase, I could simply input the text into ChatGPT and receive the translation almost instantaneously. It eliminated the need for extensive research or consulting multiple sources, which can be time-consuming.”*

P4 commented, *“I had to provide a written report in English. Instead of spending hours translating the entire document manually, I used ChatGPT to translate the information from Malay to English quickly. It allowed me to focus more on the assignment answer based on the rubric rather than getting caught up in the translation process”*. The student mentioned using ChatGPT to translate a written report from Malay to English. By utilizing the tool, they could focus more on addressing the assignment requirements and adhering to the rubric rather than being consumed by the time-consuming task of manual translation. ChatGPT's translation capabilities proved to be an efficient and helpful resource for the student, allowing them to allocate their time and effort more effectively. Students' experience with ChatGPT showcased how the tool expedited the translation process, saving them valuable time and enabling them to concentrate on the content and requirements of their assignment. The study by Jiao et al. (2023) finds that ChatGPT performs competitively with commercial translation products (e.g., Google Translate).

Theme 4: Prompt Critical Thinking

The students' experiences highlight how ChatGPT is a powerful tool for encouraging critical thinking among students. ChatGPT prompts students to reflect on their initial ideas and perspectives by challenging assumptions and biases. According to Saleh (2019), the concept of critical thinking applies to all sorts of knowledge and implies the true engagement of learners in knowledge construction through reflecting and thinking deeply. The ability of the tool to provide alternative viewpoints and pose thought-provoking questions encourages students to explore different angles and possibilities,

fostering deeper critical thinking. In this regard, P2 commented, *“ChatGPT has been instrumental in challenging my assumptions and biases throughout the assignment process. For example, when I input my initial ideas or perspectives into ChatGPT, it often responds with alternative viewpoints or questions that I hadn't considered before. This prompts me to reflect on my assumptions and encourages me to explore different angles and possibilities”*.

P6 commented, *“Compared to traditional methods or resources, ChatGPT stands out because it engages in interactive conversations with me. It doesn't just provide information but challenges my thinking through probing questions. It's like having a virtual critical-thinking partner. Other resources may offer insights or examples, but ChatGPT's ability to prompt me to question my assumptions is unique and invaluable”*. ChatGPT stands out due to its interactive nature compared to traditional methods or resources. It goes beyond providing information and engages the student in conversational exchanges. ChatGPT actively challenges the student's thinking process through probing questions, pushing them to analyze their arguments, evidence, and reasoning. This interaction creates an environment akin to having a virtual critical thinking partner, stimulating intellectual engagement and inquiry.

Chun (2010) mentions multiple definitions associated with critical thinking; however, the most suitable definition characterizes it as a type of thinking that operates at an advanced level, encompassing analytical reasoning and problem-solving skills. While other resources may offer insights or examples, ChatGPT's unique ability to prompt students to question their assumptions is vital in encouraging critical thinking. By challenging preconceived notions, biases, and beliefs, ChatGPT pushes students to evaluate their perspectives critically. This process of reflection and self-assessment cultivates intellectual humility and openness to alternative viewpoints, leading to more well-rounded and robust arguments. Overall, ChatGPT assists students in developing critical thinking skills by challenging their assumptions, biases, and preconceived notions. Interactive conversations and thought-provoking questions prompt students to analyze, reflect, and question their thinking. By engaging with ChatGPT, students can enhance their capacity for critical thinking, enabling them to approach assignments and tasks with a more thoughtful and analytical mindset.

On the hand, the integration of ChatGPT as a virtual assistant in students' assignment completion raises concerns regarding the integrity of their work. Since ChatGPT can generate ideas, provide explanations, translate languages, and encourage critical thinking, there is a potential risk for students to rely on the tool and compromise their original and critical thought processes. As Eke (2023) mentioned, the general fear is that students can start outsourcing their writing to ChatGPT. When using ChatGPT to generate ideas, students may become overly dependent on the suggestions and prompts provided by the model. This can lead to a lack of personal creativity and originality in their assignments, as they may adopt the ideas presented by ChatGPT without engaging in independent thinking or research. Additionally, Kasneci et al. (2023) stated that the effortlessly generated information could negatively impact their critical thinking and problem-solving skills. This is because the model simplifies the acquisition of answers or information, which can amplify laziness and counteract the learners' interest in conducting their investigations and coming to conclusions or solutions. While ChatGPT can provide explanations and help clarify complex concepts, there is a risk that students may rely too heavily on the tool for their understanding. They might use ChatGPT's explanations as a substitute for their comprehension and fail to develop their critical thinking skills and deep understanding of the subject matter. ChatGPT is causing concern among educators as some students are using it to cheat by holding work and ideas they did not generate as their own (Atlas,2023). ChatGPT's quick and convenient translation capabilities may tempt students to rely solely on the tool without actively engaging in language learning or improving their translation skills. This can lead to issues of accuracy and integrity in their assignments if they mindlessly accept the translations provided by ChatGPT without verifying or critically evaluating them. Although ChatGPT can encourage critical thinking by challenging assumptions and biases, there is a risk that students may treat it as a "black box" and passively accept the alternative viewpoints or questions it presents without fully engaging in critical reflection. Students must be mindful of actively questioning, evaluating, and integrating the information provided by ChatGPT into their analytical frameworks (Kasneci et al., 2023).

RQ2: What are students' perceptions of using ChatGPT in accomplishing the written assignment?

The analysis revealed two themes and five subthemes for RQ2, focusing on students' perceptions of using ChatGPT to accomplish the written assignment. Table 1 shows the derived themes, subthemes, and related quotations.

Table 1: Themes and subthemes of students' perceptions of using Chatgpt in accomplishing their assignment

Theme	Subthemes	Participant	Quotation
Excitement	A Sense of Purpose	P2	<i>"Overall, I feel so motivated"</i>
		P3	<i>"I feel motivated in doing my assignment and producing a high-quality assignment"</i>
	Serendipity	P5	<i>"I am so lucky to have known this ChatGPT today"</i>
	Inspirational	P4	<i>"I feel unbelievable as there are so many ideas"</i>
Handy Assistance	Satisfaction and Clarity	P4	<i>"I feel so detailed and clear"</i>
		P6	<i>"ChatGPT speeds up the information"</i>
		P1	<i>"ChatGPT can give me very detailed information"</i>
	Efficiency	P1	<i>"It is much easier compared to the old method"</i>
		P3	<i>"ChatGPT speeds up the information search process"</i>
		P5	<i>"ChatGPT really helps shorten my assignment completion duration"</i>
	Future Use	P2	<i>"I will use ChatGPT in my future assignments"</i>

A. Excitement

The finding reveals students' excitement when using ChatGPT. It was their first time knowing and using ChatGPT. Three subthemes: the sense of purpose, serendipity, and inspirational, show students' excitement when using ChatGPT to accomplish the assignment. The study by Ali et al. (2023) reveals that ChatGPT is an effective tool for promoting the development of reading and writing abilities among learners. This implies the motivating impact of using ChatGPT for learning.

A Sense of Purpose

The participants' high motivation to accomplish the assignment (P2 and P3) highlights the participant's positive perception of using ChatGPT in accomplishing the written assignment. P2 mentioned, *"Overall, I feel so motivated."* and P3 stated, *"I feel motivated in doing my assignment and producing a high-quality assignment."* P3's intention to produce high-quality work suggests that the participant recognized the potential of ChatGPT to assist him in accomplishing the written assignment more effectively. Participants experienced a strong drive, inspiration, and excitement when utilizing the tool, recognizing its potential to enhance their assignment process and outcomes.

The perception of ChatGPT as a tool that can support students in accomplishing their written assignments aligns with the idea that it can act as a virtual assistant or a co-creator. As Firat (2023) pointed out, utilizing Chat GPT can aid self-directed learners in their quest to locate and exploit open educational materials, thereby facilitating their access to an extensive range of online learning resources and materials. Additionally, Neumann et al. (2023) mentioned that in the forthcoming times, individuals who avail themselves of AI resources will operate significantly more flexibly than those who abstain from utilizing such resources. This is due to the assistive technology provided by ChatGPT. The participants likely viewed ChatGPT as a reliable and competent partner in accomplishing the assignment, capable of providing valuable insights, guiding their thinking, and contributing to the overall success of their work. By perceiving ChatGPT to improve their assignment outcomes, the participants demonstrated a belief in the ability of the tool ability to enhance their academic performance. This perception may have stemmed from their positive experiences and the tangible benefits they derived from

using ChatGPT regarding idea generation, topic exploration, information retrieval, and overall efficiency.

Serendipity

The feeling of gratitude and serendipity (P5 and P4) suggests that participants felt fortunate to have discovered and utilized ChatGPT in the written assignments. P5 and P4 likely perceived ChatGPT as a valuable tool providing unique academic work opportunities and advantages. The statement, "*I am so lucky to have known this ChatGPT today.*" and "*It is unbelievable...*" reflect a sense of appreciation and acknowledgement of the positive impact that ChatGPT had on the assignment process. The participant recognized that ChatGPT offered them a distinct advantage by providing access to a wealth of information, insights, and assistance they may not have otherwise had. The perception of serendipity indicates that they were introduced to ChatGPT unexpectedly and discovered its potential benefits. This unplanned encounter with ChatGPT could have led to a pleasant surprise and a feeling of good circumstances in finding a tool that significantly aided the written assignments. Bozkurt (2023) regards ChatGPT as a valuable tool that assists students in enhancing their linguistic abilities, particularly in writing, by delivering prompt feedback and recommendations or by embodying the persona of a textual dialogue participant.

Inspirational

Delivering the expression of inspiration by P4 indicates that the participant was pleasantly surprised and excited by the abundance of ideas that ChatGPT generated for him in accomplishing the written assignments. This suggests that he perceived ChatGPT as a valuable tool for idea generation, sparking creativity and expanding thinking beyond initial expectations. The statement "*I feel unbelievable as there are so many ideas.*" reflects the participants' astonishment and delight at the variety and quantity of ideas suggested by ChatGPT. P4 was likely impressed by the innovative and unique perspectives offered by ChatGPT, which helped him explore different angles and possibilities for the assignments. As highlighted by Dwivedi (2023), the advent of ChatGPT has seemingly disrupted the fundamental structures of numerous domains, including education.

B. Handy assistance

In the context of student perceptions, "handy assistance" refers to the convenience and usefulness of ChatGPT as a tool for accomplishing assignments. Students perceive ChatGPT as a practical and accessible resource providing valuable support throughout the assignment accomplishment process. Three subthemes: satisfaction and clarity, efficiency, and future use, suggest that students perceive ChatGPT as a helpful aid in clarifying aspects of the assignment. They appreciate the time-saving aspect of using ChatGPT, as it expedites the information search process and helps them complete their assignments more quickly. Students can streamline their research and quickly find relevant insights and resources to support their work by having access to a vast amount of information and ideas at their fingertips. Bozkurt (2023) stated that ChatGPT has the potential to enhance efficiency regarding time and effort for educators too. This is achievable through providing support for various tasks, including composing emails, summarizing educational concepts, and formulating test/quiz questions. Utilizing this technology can ultimately result in saved time that may be allocated towards facilitating interpersonal interactions between educators and students.

Satisfaction and Clarity

The expressions *"I feel so detailed and clear."* by P4, *"It is clearer in explaining technical words."* by P6, *"ChatGPT can give me very detailed information."* and *"It is much easier compared to the old method."* by P1, suggest a perception of satisfaction and clarity in using ChatGPT to accomplish their assignments. It indicates that the participants found ChatGPT a valuable, user-friendly tool that gave them a deeper understanding and improved clarity in their work. The statement implies that the level of detail and ease of use provided by ChatGPT satisfied the participants.

Participants expressed that ChatGPT effectively explained technical words and concepts clearly and offered them detailed information. This perception indicates that participants found ChatGPT a valuable resource for enhancing their understanding of complex topics and technical terminology. They appreciated the ability of the tool to provide concise and coherent explanations, which helped them grasp challenging concepts more easily. It can be inferred that they appreciated the comprehensiveness of the responses provided by the tool and found the information it offered to be extensive. It is plausible that ChatGPT provided them with in-depth explanations, pertinent

examples, and insightful insights, all of which contributed to their overall satisfaction with the tool. ChatGPT was initially conceived of as a research aid, whereby students utilized it to facilitate comprehension of novel subject matter (Dwivedi, 2023). ChatGPT can enhance students' learning experiences by fostering interactivity and engagement. It enables students to engage in meaningful conversations, poses inquiries, and receive instant responses, mimicking a one-on-one interaction with a knowledgeable instructor or peer (Kasneci, 2023). This personalized and interactive nature of ChatGPT facilitates student-centered learning, catering to individual needs and adapting to various learning styles (Zhai, 2023). This possibly explains P1's comment on the easiness of using the tool.

Efficiency

P3 and P5 have conveyed their perception of efficacy and time-saving when employing ChatGPT to execute their assignments through their statements: "*ChatGPT speeds up the information search process.*" and "*ChatGPT really helps shorten my assignment completion duration.*". They have articulated that the utilization of ChatGPT was significantly less cumbersome compared to conventional techniques, and it has facilitated an accelerated process of exploring information. In addition, they have acknowledged that ChatGPT has assisted them in curtailing the period required to accomplish their assignments. The perception conveyed by the participants points towards their recognition of the benefits of employing ChatGPT, primarily in terms of efficiency. The tool was perceived as a valuable resource facilitating their workflow, reducing the time and effort invested. The participants were able to leverage the capabilities of ChatGPT to swiftly access relevant information and insights, thereby eliminating the need for extensive manual research. This enabled them to focus on analyzing and synthesizing information. Dwivedi (2023) conveyed that ChatGPT can optimize the efficiency of knowledge-based tasks through diverse mechanisms, including streamlining the information retrieval process.

Future Use

P2's statement, "*I will use ChatGPT in my future assignments.*" indicates a positive perception of using ChatGPT in completing assignments. It suggests that the student found value in their experience with ChatGPT and intends to continue utilizing it as a tool for assistance in future assignments. This perception implies that the student perceives ChatGPT as a helpful resource contributing to their overall success in

completing assignments. Findings of RQ1 indicate ChatGPT to be beneficial in various aspects, such as generating ideas, providing explanations, and performing translation. The student's intention to use ChatGPT in future assignments suggests that they trust the capabilities of the tool to support them in accomplishing their tasks effectively and efficiently. Firat (2023) asserted that Chat GPT provides real-time feedback and guidance to autodidactic learners, helping them stay focused and overcome challenges during their learning journey. Its accessibility through various platforms makes it a preferred option for students who lack access to conventional educational resources.

4. CONCLUSION

In the education field, ChatGPT offers a unique opportunity to augment traditional teaching methods by providing personalized support to students (Firat, 2023). It serves as an intelligent virtual assistant (Shafeeg, 2023), capable of answering questions (Biswas, 2023), offering feedback (Dwivedi, 2023), and aiding in completing assignments (Zhai, 2023). By leveraging the vast knowledge and language proficiency embedded within its programming, ChatGPT holds promise for transforming how students engage with learning materials and accomplish their academic tasks—one of the key areas where ChatGPT demonstrates its capability is assisting students with their written assignments. Writing assignments often require students to articulate their thoughts, synthesize information, and convey ideas effectively (Marbun, 2023). However, students may encounter writer's block, difficulty organizing their thoughts, or uncertainties regarding content (Atlas, 2023). Here is where ChatGPT can serve as a valuable tool, offering suggestions, guiding students through the writing process, and providing feedback to improve the quality of their assignments. Through its assistance, ChatGPT can promote deeper understanding, critical thinking, and analytical skills development (Mhlana, 2023).

Limitations

It is essential to acknowledge that this study has limitations, including small sample size and a specific focus on students in the Entrepreneurship Course of the Certificate in Architectural Technology program. The findings may not be generalizable to other contexts or student populations. However, the study will provide valuable insights into

the experiences and perceptions of students using ChatGPT in their written assignments, contributing to the existing body of knowledge in this area. Another limitation is that the indicator of learning outcomes is based on the student assignment in the Entrepreneurship courses. ChatGPT might not be relevant to other courses involving technical output, such as Architectural courses, which need students to design a house plan. It might be relevant regarding information searching but not in an assignment involving graphics, at least when this article is written. Future ChatGPT versions or other AI generative tools, such as Midjourney and DALL-E, will be relevant for assignments involving graphics.

Implications

Findings show that students, in accomplishing the assignment, used ChatGPT to generate ideas, provide explanations, perform translations, and prompt critical thinking. Students also perceived ChatGPT as spurring their excitement and providing handy assistance in accomplishing the assignment. These findings provide evidence of how ChatGPT could enrich students' learning experiences and point to the need to further educate students in harnessing the full potential of this tool for learning purposes. There is also a need to impart AI literacy and academic integrity understanding to students for effective and ethical integration of this tool into their learning. Educators need to emphasize the appropriate and responsible use of ChatGPT as a tool for support and guidance rather than a substitute for independent thinking and research. Students should be encouraged to critically evaluate the suggestions and explanations provided by ChatGPT, supplement them with their insights and research, and maintain their academic integrity by properly citing any information derived from ChatGPT or similar tools. Ultimately, the responsible integration of ChatGPT into the assignment process requires a balance between utilizing its capabilities to enhance learning and ensuring that students retain their independence, creativity, and critical thinking skills.

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