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Challenges and Strategies for Using ChatGPT in Written Communication Assignments: A Study of University Students in Malaysia

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Abstract
The development of generative Artificial Intelligence (AI) models, particularly ChatGPT, has gained considerable attention among academics and researchers in recent years. Research shows that ChatGPT can be a vital means of increasing students' writing performance. However, students may face difficulties in developing effective strategies to incorporate ChatGPT-generated content into written tasks. Therefore, this study sought to examine the challenges and strategies employed by students to use ChatGPT-generated responses for written communication assignments. The study utilized a quantitative method, using a descriptive survey technique. A self-developed questionnaire was used to gather data from a sample of 59 communication students at a Malaysian public university. The data were examined through descriptive statistics and Pearson correlation analysis. According to the findings, students face various challenges in using ChatGPT-generated responses, such as the inability to express unique writing skills, dealing with inaccurate citation formats, as well as difficulty revising ChatGPT-generated responses. The students also employ certain relevant strategies for using ChatGPT-generated responses, such as adding ideas to already generated ChatGPT content, using ChatGPT as a means of idea generation, paraphrasing ChatGPT-generated responses, and replacing ChatGPT-generated words with synonyms. Accordingly, the analysis showed a significant association between students' challenges and the strategies they employ to utilize ChatGPT-generated responses. This study provides valuable information that can help educators and relevant authorities review and reinforce institutional policies for quality higher education, particularly in the Malaysian context.

Keywords: Artificial Intelligence, ChatGPT, communication, generative AI, Malaysian context, strategies for using ChatGPTwritten assignments

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Introduction

Artificial Intelligence (AI) models, especially those based on transformer architectures such as Generative Pre-trained Transformers (GPT), have recently become increasingly prominent in education. ChatGPT is a generative AI model established by OpenAI. The term "Generative AI" refers to a subset of models that can generate new textual, audio, or visual data by identifying related patterns and trends in already-gathered information (Barrot, 2023; Taecharungroj, 2023; Ibrahim & Hassan). For instance, ChatGPT can respond to queries on textual, audio, or visual information in just a few seconds (Adeshola & Adepoju, 2023). The development of generative AI models has increased significantly in recent years. Upon its launch in 2022, ChatGPT attracted one million users within five days and reached 100 million monthly active users (Taecharungroj, 2023). ChatGPT, in particular, has become a widely used AI language model (Gill & Kaur, 2023).

ChatGPT has offered several benefits to students. For example, the model can summarize texts, perform linguistic analysis, respond to questions, complete sentences and paragraphs, and translate textual data (Dash & Sharma, 2023; Van Dis, Bollen, Zuidema, Van Rooij, & Bockting, 2023). Also, ChatGPT can enhance independent learning and language support (Avsheniuk, Lutsenko, Svyrydiuk, & Seminikhyna, 2024) as well as vocabulary development (Mugableh, 2024). However, despite its considerable benefits, ChatGPT has raised several concerns within the academic sector (Adeshola & Adepoju, 2023; Gill & Kaur, 2023). In particular, the use of ChatGPT-generated content poses distinct challenges to students. For example, research shows that while ChatGPT can be a powerful tool that facilitates students' writing performance, some academics have shown concerns about its challenges to academic honesty (Barrot, 2023; Thorp, 2023). Additionally, students may face difficulties in developing effective strategies for incorporating ChatGPT-generated content into written tasks (Harunasari, 2022; Ningrum, 2023). This issue also stemmed from the researchers' personal experience while teaching communication subjects, which can serve as a valuable point to conduct research of this nature.

Previous studies have shown that students face challenges in using ChatGPT-generate responses (Ali, 2023; Rasul et al., 2023). To address these challenges, students need to develop certain strategies, which have not been explicitly investigated but hinted at in a few studies (Baskara, 2023; Mondal & Mondal, 2023). Therefore, using the Constructivist Learning Theory (CLT), the current study investigates the challenges and strategies for using ChatGPT among students at Sultan Zainal Abidin University, Malaysia. CLT explains how knowledge is developed based on their unique experiences and cognitive structures. Precisely, this study sought to accomplish the following objectives.

1. To examine the major challenges students face in using ChatGPT-generated content for written communication assignments at the selected university.
2. To determine the key strategies employed by students to incorporate ChatGPT-generated responses into their written communication assignments.
3. To ascertain the correlation between challenges faced by students and the strategies they apply to incorporate ChatGPT responses into their written communication assignments.

Literature Review

Using ChatGPT: Challenges and Strategies for Writing Tasks

The development of generative AI presents both opportunities and challenges in communication and language education (Al-Zubaidi, Jaafari, & Touzani, 2024, Annamalai, Ab Rashid, Hashmi, Mohamed, Alqaryouti, & Sadeq, 2023, Mugableh, 2024). As a generative AI

model, ChatGPT has potential benefits and unique challenges to dealing with many academic tasks at different levels. Students face a unique set of challenges as they need to develop enough strategies for incorporating ChatGPT-generated responses into writing tasks. Some institutions reacted to the use of ChatGPT even by barring its usage due to the fear of misusing the tool by students to cheat in written assessments (Stepanechko & Kozub, 2023). This situation has caused a heated debate among educators and researchers concerning the challenges, benefits, and ethical issues of using ChatGTP (Avsheniuk et al., 2024, Baskara, 2023; Huang & Li, 2023).

One of the major concerns is that ChatGPT-generated content may not help to develop students' understanding and critical thinking skills (Stepanechko & Kozub, 2023). While the possible challenges have been explored in specific contexts (e.g., Ali, 2023; Rasul et al., 2023), the strategies of using ChatGPT in students' writing tasks have only been hinted at in few previous studies (e.g., Baskara, 2023; Mondal & Mondal, 2023). For example, several previous studies have reported consistent findings. In this regard, Ali (2023) employed a survey method to examine the perceived benefits and challenges of ChatGPT English teachers in Saudi Arabia. The study found that while ChatGPT is believed to be beneficial in language education, its challenges include "plagiarism and overreliance on chatbots, with minimal effort from the learners themselves" (p. 629).

Moreover, Rasul et al. (2023) identified challenges of ChatGPT in higher education, such as "academic integrity concerns, reliability issues, inability to evaluate and reinforce graduate skill sets, limitations in assessing learning outcomes, and potential biases and falsified information" (p. 41). Similarly, a review conducted by Ningrum (2023) showed that the use of ChatGPT may limit the creativity and originality of written tasks, which leads to a loss of personal voice and creativity. Likewise, Shidiq (2023) argues that the "ease of ChatGPT in processing information from text input reduces the originality of work" (p. 353). Also, Avsheniuk et al. (2024) revealed that "ethical and pedagogical issues were also significant, including concerns about the authenticity of AI responses, plagiarism risks, and AI dependency" (p. 210).

To address the challenges of using ChatGPT, students need to develop specific skills and strategies, which have not been explicitly investigated but hinted at in a few studies. For example, a review conducted by Mondal and Mondal (2023) emphasizes the significance of human judgment in the writing process to develop strategies for using ChatGPT as "a complementary tool rather than a replacement for human effort" (p. 3600). From a different perspective, Baskara (2023) suggests that providing personalized feedback on AI writing weaknesses can help students correct errors and develop relevant strategies. However, this method can be challenging for teachers, especially in large classes, due to insufficient time or resources to give feedback to individual students. Therefore, the current study focuses on issues and strategies used by students to incorporate ChatGPT-generated responses into written communication assignments at a Malaysian university.

Theoretical Facet

This study uses the Constructivist Learning Theory (CLT) to explain the challenges and strategies used by university students in using ChatGPT for written communication assignments. CLT is credited to Piaget (2005). The theory has various presumptions, including: 1) knowledge is subjective and socially constructed; 2) learning is an active process; and 3) context influences the learning process (Gredler, 2001). Accordingly, CLT presumes that individuals construct knowledge based on their unique experiences and cognitive structures, which lecture alone cannot

offer (Annamalai, Kabilan, Ab Rashid, Valūnaitė-Oleškevičienė, & Vaičiūnienė, 2021; Packer & Goicoechea, 2000). Based on this theoretical facet, the following framework is formulated.

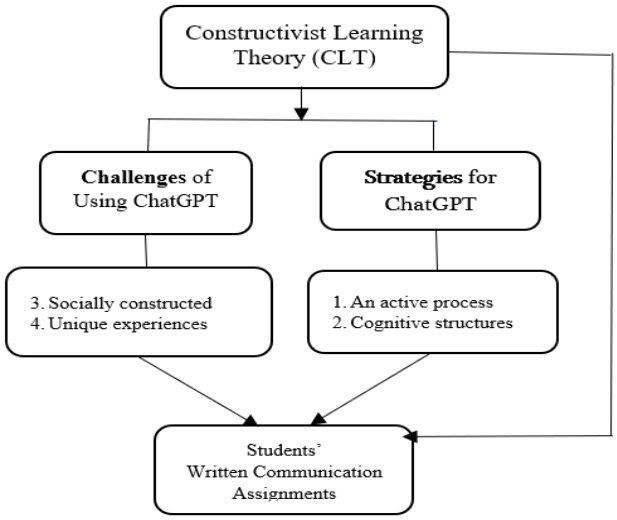


Figure 1. Theoretical framework

As given in Figure 1, the mentioned theoretical facet aligns with the context of this study as students may employ cognitive abilities to develop certain strategies due to the unique challenges they encounter in using ChatGPT for written communication assignments. The level of a learner's cognitive ability determines how they address the unique challenges. This is critical as ChatGPT-generated content requires students to demonstrate their ability rather than incorporating the responses directly into writing tasks. The following section provides a comprehensive description of the methodology used in this study.

Methodology

This study utilized a quantitative technique to study the challenges and strategies employed by communication students in using ChartGPT for written assignments at Sultan Zainal Abidin University, Malaysia. Quantitative research is a method of investigation involving a systematic collection and interpretation of numerical data to explain a particular phenomenon (Creswell & Creswell).

Data Collection

The data for this research were collected using a structured questionnaire containing 20 items designed based on the five-Likert scale. The instrument comprises three parts. The first part entails demographic information, particularly age and gender. The second section entails questions related to the challenges of using ChatGPT for written communication assignments. Whereas, the last section comprises questions regarding the strategies for incorporating ChatGPT responses into written communication assignments. A sample of 59 respondents was chosen from a population of 76 second and third-year students in the communication program at the selected university. This sample was determined using Krejci and Morgan's (1970) technique for calculating sample size. The second and third-year students were chosen while first-year students were excluded as they were newcomers.

Content Validity Reliability

For validity, the questionnaire items were checked by experts to determine their applicability and relevance to the research context and were subsequently refined based on the experts' recommendations. Validity is described as the capability of a study tool to measure the intended variables (Airasian & Gay, 2003). Afterward, the reliability was calculated using Cronbach Alpha formulated in 1951. The analysis revealed coefficients of 0.871 and 0.812 regarding challenges and strategies for using ChatGPT-generated content respectively. These coefficients suggest a high level of the instrument's reliability based on Wiersma's (2000) recommendations. Cronbach Alpha constants are considered according to the average inter-correlation among items.

Data Analysis

The data analysis was executed through descriptive statistics and Pearson correlation analysis. Specifically, the challenges and strategies were studied through descriptive statistics, consisting of the frequency, standard deviation, and mean. In contrast, the relationship between these variables was determined using Pearson correlation as described by Hoon and Fah (2009) and Konting (2000). The purpose was to ascertain the correlation between difficulties faced by communication students and the strategies they employ to incorporate ChatGPT responses into their written assignments. The SPSS package Version 22 was utilized to make all inferences at an alpha level of ≤ 0.05.

Findings

Altogether, 76 questionnaires were administered to the respondents. Out of these forms, 59 were completed and returned, signifying a relatively high level (77.6) of response rate. All returned questionnaires were found valid for analysis. Consequently, 59 questionnaire forms were scrutinized. The demographic data shows that a majority (58) of the students, constituting 98.3%, are between the ages of 18-24. Only 1 student is aged between 25-34, representing 1.7%. Additionally, more than half (40) of the students are females, making up 67.8%. Only 19 students are male, representing 32.2%. The findings are reported as follows.

Challenges of Using ChatGPT

In the analysis of descriptive statistics, the form "A+SA" characterizes 'Agree + Strongly Agree' choices as itemized in the study instrument. On the other hand, D+SD represents 'Disagree + Strongly Disagree', while N stands for the 'Neutral' option. Additionally, the Five-option Likert scaling implies that 'the highest mean value is '5'. Therefore, the findings are reported between 0.00 and 5.00 mean values. The first objective of this study was to examine the major challenges faced by students in using ChatGPT-generated content for written communication assignments at the selected university. The findings are presented in Table 1 as follows.

Table 1**.** *Challenges of using ChatGPT for written assignments*

SN	Items	Mean	Std Deviation	Total (Percentages)		
				SD+D	SA+A	N
1	A lack of personal engagement and understanding of ChatGPT content	3.37	.907	11(18.6)	30(50.9)	18(30.5)
2	Difficulty incorporating ChatGPT-generated content	3.03	1.082	21(35.6)	23(39.0)	19(25.4)

3	Encountering inaccurate or inappropriate suggestions from ChatGPT	3.76	.953	5(8.5)	37(62.7)	17(28.8)
4	Getting suggestions from ChatGPT not universally applicable.	3.81	.776	3(5.1)	41(67.4)	15(25.4)
5	A lack of subject-specific content from ChatGPT	3.76	.897	6(10.2)	39(66.1)	14(23.7)
6	Getting inaccurate or wrong citation formats from ChatGPT	3.88	.984	6(10.2)	42(71.2)	11(18.6)
7	Spending excessive time interacting with ChatGPT	3.18	.990	13(22.0)	24(40.7)	22(37.3)
8	Assignments using ChatGPT look less authentic compared to independent works	3.83	1.116	8(13.6)	42(71.2)	9(15.3)
9	Reliance on ChatGPT affects the ability to express unique writing skills	4.00	1.082	6 (10.2)	43(72.9)	10(16.9)
10	Difficulty revising ChatGPT-generated responses	3.81	.681	9(15.3)	30(50.8)	20(33.9)
	Total	3.643	.947	14.96	59.29	25.58

Level indicator: low=0.1-2.99, moderate=3.0-3.49, high=3.5-5

As shown in Table 1, most students (59.29%) face challenges in using ChatGPT for written communication assignments to a large extent (Mean=3.643). Specifically, the most significant challenge encountered by the students was their ability to express unique writing skills (Mean=4.00) due to reliance on ChatGPT, followed by inaccurate or wrong citation formats (Mean=3.88) generated by ChatGPT. Other considerable challenges include producing unauthentic assignments (Mean=3.83), universally unacceptable suggestions (Mean=3.81), and difficulty revising ChatGPT-generated responses (Mean=3.81) of using ChatGPT. Accordingly, tackling these challenges can contribute to enhancing the authenticity and quality of students' assignments to maximize the benefits of the ChatGPT model.

Strategies for Incorporating ChatGPT-generated Responses

The subsequent objective of this research was to study the key strategies employed by students to incorporate ChatGPT-generated responses into their written communication assignments. This analysis was performed using descriptive statistics as presented in the following table.

Table 2**.** *Strategies for using ChatGPT in written assignments*

SN	Items	Mean	Std Deviation	Total (Percentages)		
				SD+D	SA+A	N
1	Incorporating ChatGPT responses directly into assignments	3.39	.851	10(16.9)	29(49.2)	20(33.9)
2	Complete reliance on ChatGPT-generate content	3.28	.831	10(16.9)	26(44.1)	23(39.0)
3	Revising ChatGPT-generated responses	3.32	.879	11(18.6)	28(47.5)	20(33.9)
4	Paraphrasing ChatGPT-generated responses	3.78	.789	5(8.5)	46(78.0)	8(13.6)
5	Cross-referencing ChatGPT-generated content with reputable sources	3.59	.911	9(15.3)	36(61.1)	14(23.7)

6	Use of ChatGPT as a means of idea generation	3.80	.783	4(6.8)	42(71.2)	13(22.0)
7	Replacing ChatGPT-generated words with synonyms	3.75	.882	6(10.2)	42(71.2)	11(18.6)
8	Using and citing ChatGPT as a reference source	3.01	.973	18(30.5)	22(37.3)	19(32.2)
9	Adding ideas to already generated ChatGPT content	3.86	.797	4(6.8)	44(74.5)	11(18.6)
10	Writing in one language and translating to English using ChatGPT	3.08	1.103	18(30.5)	23(39.0)	18(30.5)
	Total	3.49	0.879	16.10	57.31	26.60

Level indicator: low=0.1-2.99, moderate=3.0-3.49, high=3.5-5

As depicted in Table 2, several strategies are moderately (Mean=3.49) employed by students to use ChatGPT for written communication assignments. In particular, adding ideas to already generated ChatGPT content represents the most frequently used strategy (Mean=3.86) among the students, followed by the utilization of ChatGPT as a tool for idea generation (Mean=3.80). Other strategies with high mean values include paraphrasing ChatGPT-generated responses (Mean=3.78) and replacing ChatGPT-generated words with synonyms (Mean=3.75). Nevertheless, using and citing ChatGPT as a reference source represents the least frequently used strategy (Mean=3.01) for written communication assignments among the students at the selected university.

Relationship between Students' Challenges and Strategies for using ChatGPT

The third objective of this study was to ascertain the correlation between challenges faced by students and the strategies they employ to incorporate ChatGPT responses into their written communication assignments. This analysis was accomplished through Pearson correlation as depicted in the following table.

Table 3. *Correlation between challenges and strategies for using ChatGPT*

Variables	Correlation	Challenges of Using ChatGPT-generated Responses	Strategies for using ChatGPT-generated Responses
Challenges of Using ChatGPT-generated Responses	Pearson Correlation	1	.278
	Significance (2-tailed)		.000
	N	59	59
Strategies for using ChatGPT-generated Responses	Pearson Correlation	.278	1
	Significance (2-tailed)	.000	
	N	59	59

P<0.05=0.000

As presented in Table 3, there exists a significant relationship (p=0.000) between the challenges faced by students, such as their inability to express unique writing skills, dealing with inaccurate citation formats, difficulty revising ChatGPT-generated responses, and the strategies they employ to incorporate ChatGPT-generated responses into their written communication assignments. This outcome implies that the strategies employed by students can help them to use ChatGPT effectively.

Discussion

The findings conveyed in this investigation suggest that students at the selected university face various significant challenges in using ChatGPT for written communication assignments. For example, the students have difficulties expressing their unique writing skills due to reliance on ChatGPT. This outcome concurs with Ali's (2023) findings that students tend to over-rely on chatbots with minimal effort from the learners themselves" (p. 629). This situation, as pointed out by Stepanechko and Kozub (2023), may not help to develop students' understanding and critical thinking abilities. In addition, the findings suggest that students tend to encounter the challenges of inaccurate and wrong citation formats generated by ChatGPT. This issue can affect the reliability of students' work, which is comparable to the findings of Rasul et al. (2023).

Moreover, this study revealed that students are concerned about producing unauthentic assignments. This outcome also concurs with the study conducted by Avsheniuk et al. (2024). Ningrum (2023) also argued that using ChatGPT may limit the originality of written tasks, leading to a loss of personal voice and creativity. According to Shidiq (2023), "ease of ChatGPT in processing information from text input reduces the originality of work" (p. 353). Based on these challenges, considered unique experiences, students may construct knowledge that can help them develop relevant strategies as presumed by CLT (Packer & Goicoechea, 2000). As argued in the theoretical framework of the current study, students may employ cognitive abilities to develop specific strategies due to the unique challenges they encounter in using ChatGPT for written communication assignments.

Additionally, the findings of this study revealed several key strategies employed by students to use ChatGPT for written communication assignments, such as adding ideas into already generated ChatGPT content, using ChatGPT as a means of idea generation, and paraphrasing ChatGPT-generated responses. These strategies might have been developed through cognitive structures due to the unique challenges faced by the students, as presumed by CLT (Packer & Goicoechea, 2000). The strategies could contribute to enhancing the quality of students' written assignments to maximize the benefits of ChatGPT. Similarly, previous research underscores the importance of human judgment in developing strategies for using ChatGPT as a complementary tool (Mondal & Mondal, 2023; Mugableh, 2024). However, some strategies, such as replacing ChatGPT-generated words with synonyms, may not be effective in enhancing students' written assignments or helping to avoid plagiarism. This is one of the issues reported by Ali (2023).

The findings of this study also showed that a significant correlation exists between the challenges faced by students and the strategies they employ to utilize ChatGPT-generated responses. This outcome suggests that students tend to actively adapt their strategies to address specific challenges they encounter. In essence, the findings suggest that how students approach the challenges can directly impact their ability to utilize ChatGPT for written communication assignments.

Conclusion

This study investigated the challenges and strategies employed by students to use ChatGPT-generated responses for written communication assignments at a Malaysian university. According to the findings, students face various challenges and employ specific relevant strategies for using ChatGPT-generated responses. Accordingly, the study revealed a significant correlation between the strategies they employ to utilize ChatGPT-generated responses. Nevertheless, reliance on AI-generated content may not help to develop students' critical thinking or developing their unique writing styles. Additionally, some strategies used by students, such as replacing ChatGPT-

generated words with synonyms, may not help avoid plagiarism and develop individual writing skills. Thus, institutions have to develop clear policies and guidelines for students' assessments. The guidelines should emphasize critical thinking and academic integrity in the context of using AI-generated responses. To maximize the benefits of ChatGPT, teachers need to engage students with ChatGPT using relevant strategies to help students acquire independent writing skills.

The findings of this study highlight the challenges and strategies for using ChatGPT, which could be valuable to educators and relevant authorities, particularly in the Malaysian context, by helping to review and reinforce institutional policies for quality higher education. However, the current study is limited to a descriptive survey with a few respondents. Future investigation may apply a bigger sample to obtain more representative outcomes regarding the challenges and strategies employed by students in using ChatGPT. Additionally, qualitative studies can be conducted to explore how students manage the challenges they face in using ChatGPT-generated content.

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