Navigating Academic Writing Challenges in Final Year Projects in the Age of Generative AI

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ABSTRACT

Final year projects (FYPs) are an essential element of undergraduate education, requiring students to demonstrate advanced academic writing skills, research competence, and critical thinking. Students need to have proficient academic writing skills to enable them to communicate ideas clearly and construct arguments coherently which are vital to academic success (Hyland, 2019). However, many students face particular challenges in producing high quality academic output. To investigate these issues, this study employs semi-structured interviews designed to explore students'perceptions and experiences with specific writing challenges such as vague problem statements, weak organisation, surface-level literature reviews, limited argumentation and citation errors. The interview questions examine challenges faced by students and coping strategies. By focusing on both problems and solutions, the study captures how students address the demands of academic writing. The findings are categorised into four key themes: the role of Generative AI (GenAI) as a learning and writing aid; difficulties in academic writing and critical thinking; the interplay between efficiency, dependency, and ethical AI utilisation; and the vital role of supervisor guidance. This study contributes to the literature by integrating academic writing challenges with emerging technological practices, highlighting how students combine conventional supports with generative AI (GenAI)- assisted tools. Findings highlight pedagogical approaches and institutional policies aimed at scaffolding students' writing development in the era of GenAI.

Keywords: Final year projects, writing, writing strategies, generative AI

INTRODUCTION

The final year project (FYP) is an undergraduate thesis which involves the application of students' knowledge and skills while being closely monitored by research supervisors (Mohd Noor et al., 2023). It usually involves a structured format which consists of introduction, literature review, methodology, results, discussion and conclusion sections (Hyland, 2019). It requires the synthesis of research competence, critical thinking, and advanced academic writing (Hyland, 2019). The FYP highlights the transition from applying to producing knowledge.

The type of writing used in FYP is formally known as research-based academic writing, which is characterised by evidence-based argumentation and a highly structured format. This allows students to move from basic writing towards a higher level of writing which include critical thinking skills (Husin & Munir, 2021). It demands a transition from descriptive reporting to a more critical stance, where every claim is supported by empirical data or acknowledged theoretical frameworks (Hyland, 2019). Students are required to use different approaches to writing when writing different chapters of FYP as each chapter serves different purposes.

The structure of a Final Year Project (FYP) represents a logical progression from identifying a problem to proposing a validated solution. Following Chapter 1(Introduction), which introduces the research problem and objectives (Regent University, 2020), Chapter 2 (Literature Review) establishes the study's foundation by critically synthesizing existing scholarship to justify the research gap (Paul & Criado, 2020). This leads to

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Chapter 3 (Methodology), which outlines the study's design, target population, and sampling techniques. It also details the methods used for data collection, instrument validation, and data analysis (Juma, 2021). The focus then shifts to Chapter 4 (Results and Discussion), where empirical findings are presented and interpreted to evaluate their significance within the broader academic context (Lara-Haro et al., 2026). The project concludes with Chapter 5 (Conclusion and Recommendations), which summarises the study's contributions which relate the findings to previous scholarly work(Zeus Press, 2026).

One of the theories of writing is Cognitive Process of Writing by Flower and Hayes (1981). This theory emphasises cognitive skills applied when writing. It includes the stages of planning, translating and reviewing. During these stages, students may face various challenges in terms of cognitive (Negretti, 2021) and technicalities. Some of the cognitive challenges include developing a logical argumentative flow and interpreting complex data sets, to basic technical issues like grammatical accuracy, vocabulary range and format (Al-Gharabally, 2020). Furthermore, students often report significant difficulty in organising ideas to ensure information is well-delivered.

Problem Statement

The transition from knowledge application to knowledge production in a Final Year Project (FYP) presents significant cognitive and technical hurdles for undergraduate students. Despite the structured nature of academic writing, many students struggle with the higher-order thinking skills required to move beyond descriptive reporting toward critical synthesis and evidence-based argumentation (Hyland, 2019; Husin & Munir, 2021). These challenges are most prominent in the literature review and discussion sections, where students often find it difficult to adapt global research to specific local contexts and maintain a consistent academic register (Kakisaka et al., 2023).

Furthermore, the rapid integration of GenAI has fundamentally altered the writing process, creating a new pedagogical dilemma. While GenAI tools offer solutions for technical issues such as referencing and writer's block, they may inadvertently foster a sense of "intellectual passivity," potentially compromising the student's ability to develop a personal critical voice (Flower & Hayes, 1981). Without consistent and proactive supervisor intervention, there is a risk that students may over-rely on automated tools, leading to diminished cognitive engagement required for a successful undergraduate thesis (Abu Bakar et al., 2025). Consequently, there is a pressing need to investigate how students balance these technological aids with traditional cognitive labor to achieve the standards of research-based academic writing.

Research Question and Objective

The research question of the study is:

What academic writing challenges do final year students face, and how do they utilise both conventional strategies and GenAI tools to cope with them?

Thus, the objective of the study is to examine the challenges faced by students and coping strategies in terms of conventional strategies and GenAI in academic writing challenges while completing final year projects.

LITERATURE REVIEW

Academic Writing in Higher Education

Academic writing is an essential component of higher education, as it enables students to communicate ideas, construct arguments, and demonstrate critical thinking in academic contexts. In universities, students are expected to produce written work that reflects clarity, coherence, analytical thinking, and adherence to academic conventions. Hyland (2019) describes academic writing not merely as a linguistic activity, but also as a social and cognitive practice that requires students to engage with disciplinary knowledge and academic expectations. As a result, effective academic writing plays a significant role in determining students' academic success, particularly in major assessments such as final year projects (FYPs).

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FYPs require students to independently conduct research, synthesise information from various sources, and present findings in a structured academic format. However, many undergraduate students experience difficulties in meeting these academic writing demands due to limited writing proficiency, insufficient critical thinking skills, and unfamiliarity with academic conventions (Fareed et al., 2016). The writing process itself is often complex and recursive, involving planning, drafting, revising, and reviewing ideas throughout the development of a text. This perspective is supported by the Flower and Hayes Writing Model (1981), which conceptualises writing as a cognitive process requiring writers to continuously organise and evaluate their ideas while composing. Consequently, academic writing in higher education involves not only language proficiency but also the ability to manage multiple cognitive and organisational demands simultaneously.

Challenges in Academic Writing

Despite the importance of academic writing in higher education, many undergraduate students continue to face difficulties when completing final year projects. One common challenge involves generating and developing ideas, particularly when students are required to formulate research problems, construct arguments, and critically engage with academic sources. Students may also struggle with organising information coherently, resulting in weak paragraph structure, limited cohesion, and unclear flow of ideas. In addition, difficulties related to grammar, vocabulary, and academic language use may further affect the clarity and quality of students' written work (Singh, 2019).

These writing difficulties may occur at different stages of the writing process. Students often struggle to generate and develop ideas during the early stages of writing, while difficulties related to organisation and coherence may emerge when transforming ideas into structured academic texts. In addition, problems involving revision, paraphrasing, and citation practices may affect the overall quality and accuracy of written work. Flower and Hayes (1981) emphasise that writing is a recursive process that requires continuous planning, drafting, and reviewing, suggesting that students must manage multiple cognitive demands simultaneously throughout academic writing tasks.

The Use of Generative AI in Academic Writing

The increasing use of generative artificial intelligence (GenAI) tools has influenced the way students approach academic writing in higher education. Tools such as ChatGPT and Grammarly are increasingly used to assist students in generating ideas, improving sentence structure, checking grammar, and organising written content. The accessibility and convenience of these tools have made them popular among university students, particularly when completing academically demanding tasks such as final year projects. Recent studies suggest that AI-assisted technologies may support students in overcoming certain writing difficulties by providing immediate feedback, language support, and drafting assistance (Tlili et al., 2023).

Despite these potential benefits, the use of GenAI in academic writing has also raised concerns regarding overdependence, originality, and academic integrity (Kasneci et al., 2023). Excessive reliance on AI-generated content may reduce students' critical engagement with the writing process and limit the development of independent writing skills. In addition, questions surrounding ethical AI use and plagiarism continue to be debated in higher education settings. Nevertheless, GenAI tools are increasingly becoming part of students' coping strategies in managing academic writing challenges, particularly in areas related to idea generation, language use, and revision practices (Cotton et al., 2023). This highlights the growing role of AI-assisted technologies in shaping contemporary academic writing practices among university students.

METHODOLOGY

This study employed a qualitative research design to explore the academic writing challenges experienced by undergraduate students and the coping strategies they used in completing their FYPs. A qualitative approach was considered appropriate as it enabled the researchers to gain in-depth insights into students' experiences, perceptions, and writing strategies.

The participants were selected through purposive sampling and consisted of three final-year undergraduate

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students from the Bachelor of Applied Language Studies: English for Professional Communication programme at the Academy of Language Studies, Universiti Teknologi MARA (UiTM) Shah Alam. The participants were selected based on their experience in completing academic writing tasks related to their FYPs.

Data were collected through semi-structured interviews lasting approximately 25 to 40 minutes. The interviews focused on students' academic writing challenges, including ambiguous problem statements, poor organisation, minimal literature reviews, limited argumentation, and citation difficulties. In addition, the interviews explored the coping strategies employed by students, including the use of conventional academic support and AI-assisted tools in academic writing.

The interview data were analysed using thematic analysis as proposed by Virginia Braun and Victoria Clarke (2006). The steps involved are 1) Familiarisation with the data, 2) Generating initial codes, 3) Searching for themes, 4) Reviewing themes, 5) Defining and naming themes and 6) Producing the report. In the first stage of familiarisation with the data, rereading took place until they were fully understood. While reading, some initial notes on important and prominent points were made. Then, some initial codes highlighted and generated based on the data. After that, themes emerged based on the initial codes, and were identified. Next, in refining the themes, an iterative process of looking back at the data and checking for consistency between the data and themes identified took place. Next, each theme was clearly described and written including the core concept and scope. The themes were finalised considering the research objective. Once the themes were finalised, a report was written based on the themes and supporting evidence from the data. This was to ensure that the data correspond to the research objective of the study. The findings were further organised into cognitive, metacognitive, and technological strategies to identify how students managed academic writing difficulties throughout the writing process.

It should be noted that all three participants are students from the same Bachelor Programme; Bachelor of Applied Language Studies, which is a language and linguistic focus programme. Thus the participants might have a comparatively higher grasp of the language conventions, academic vocabulary and grammar than those in non-language disciplines. This represents a limitation to the study, as findings cannot be generalised across undergraduates in higher education institutions. Future studies could be done to adopt a comparative approach across different academic disciplines to produce a broader understanding of academic writing challenges in the Malaysian IPTA context.

FINDINGS AND DISCUSSION

This section presents the findings of the study based on thematic analysis of semi-structured interviews conducted with three final-year undergraduate students at UiTM Shah Alam. Four themes emerged from the data: (1) GenAI as a support tool for learning and writing, (2) ongoing challenges in academic writing and critical thinking, (3) the relationship between efficiency, dependency and ethical use of GenAI, and (4) the importance of supervisors' guidance.

AI as a Support Tool for Learning and Writing

The findings show that participants always utilise GenAI to help with the writings of various elements of their FYP. The incorporation of GenAI is mainly in assisting them with generating ideas, developing theoretical content, and providing grammar support. Participant 2 described how GenAI helped in understanding complex academic concepts during the literature review process:

"When I encountered some theories that I do not understand, I will ask AI to just simplify it for me so I can get the real meaning of that certain theories." (Participant 2)

Participant 3 highlighted GenAI's role in broadening students' thinking beyond their initial limitations:

"AI gives you much more ideas. Because some people are very limited in thinking. So AI pushes them to another level of thinking ... there are some more levels to explore. There is more title, more researches." (Participant 3)

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These responses reflect the scaffolding function of AI tools that support students' cognitive and linguistic skills especially when writing challenging academic tasks. This finding aligns with Tlili et al. (2023), who identified AI-assisted tools as effective in providing immediate language support, drafting assistance, and idea generation. Together with these support, GenAI also helps in reinforcing students' confidence particularly in complying with academic writing conventions in the English language. This is further supported by Zou et al. (2023), who noted that generative AI holds significant potential in supporting learning by reducing barriers to academic task completion.

Navigating Academic Writing and Critical Thinking

Despite the availability of AI tools, participants continued to face significant difficulties in their academic writing. The literature review was identified as the most challenging component. Participant 2 elaborated on the nature of these difficulties:

"The literature review is the most challenging part of my FYP. I mostly did research and then I just summarised the theories and everything that has to be in the literature review section." (Participant 2)

The finding shows that there is a tendency to summarise rather than synthesise sources critically, reflecting limited engagement with academic and critical thinking skills. Nikbakht and Miller (2023) found that synthesising information from multiple sources was among the most difficult academic writing tasks for ESL students, as it requires not only language proficiency but also higher-order critical engagement with source material. Difficulties with grammar and academic vocabulary were also prominently reported. Participant 2 acknowledged these challenges:

"My grammar is still not that good. The most challenging part when it comes to my FYP is the grammar and also the certain words .. the academic language. Because sometimes I do not understand the terms when they are used in academic language in the FYP." (Participant 3)

Similarly, Participant 1 described challenges in identifying a research focus, where in the beginning, she had no clear direction for the FYP. Only when resorting to AI-powered research tools such as Perplexity is she able to explore potential topics. This reflects the difficulty many students face in the early problem identification stage of academic writing. These findings are consistent with Fareed et al. (2016), who identified similar linguistic and organisational challenges among ESL undergraduate learners, and with Flower and Hayes (1981), who emphasised that academic writing demands continuous and recursive cognitive engagement that extends well beyond surface-level text production.

Balancing Efficiency, Dependence, and Ethical Use

While AI was widely used in completing their FYP, participants also demonstrated awareness of its limitations and the issue of over-reliance. These students reported that they have workload pressures and limited time to work on their FYP thus contributed to a heavier reliance on AI tools:

"I really cannot balance between my studies and then I have to work." (Participant 1)

This response above, also reflects the pressures that lead students to seek shortcuts, in particular AI assistance, while managing other demands, potentially disregarding their own critical thinking in favour of AI-generated output. These patterns are consistent with Kasneci et al. (2023), who cautioned that convenience-driven AI use may reduce students' critical engagement with academic tasks. A common issue that emerged was the balance between convenience and ethical responsibility. Participant 1 reflected on how AI use had cultivated passivity in her writing:

"They will give me suggested ideas which is kind of dangerous because I sometimes end up copying it. So I really want to decrease my usage because it makes me feel lazy when I do that." (Participant 1)

She further admitted that despite recognising the ethical implications, heavy reliance on AI had become

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habitual:

"I was abusing it every day. It helped me a lot but I also feel wrong to admit it." (Participant 2)

Participant 2 meanwhile, demonstrated a more conscious effort to maintain academic ownership, stating that she would:

"rely more on my own ideas instead of other resources out there, just to make sure that the FYP actually comes from me" (Participant 2).

These participants recognised the importance of balancing reliance on AI alongside their own cognitive and writing skills. These responses reveal a gap between ethical awareness and actual practice, consistent with Cotton et al. (2023), who cautioned that AI convenience may normalise passive reliance even among students who recognise its risks.

Continued Importance of Supervisors' Guidance

Despite the widespread use of AI tools, participants consistently identified supervisors as their most important source of academic support throughout the FYP process. Participant 1 spoke at length about the critical role of supervisor consistency in driving FYP progress:

"The reason I'm able to finish my FYP is because my supervisor was consistent. So I would say that students really need a good supervisor. I'm not saying the supervisors are not good, but sometimes they're absent most of the time." (Participant 1)

She further noted disparities in supervisor engagement among peers, observing that some students received little to no feedback, which she attributed as a primary cause of poor FYP outcomes rather than student motivation alone. This finding is supported by Ahmad Syafi'i et al. (2024), who established that timely, personalised supervisory feedback significantly improves student engagement, motivation, and thesis outcomes among undergraduate students. Participant 1 further noted that the quality of supervision varied considerably among peers, with some students receiving little to no feedback from their supervisors:

"I have a few friends who said, 'Wow, your supervisor is great because she's there for you.' And then they were saying, 'Oh, my supervisor didn't respond to me.' So I think the larger part of the problem was that it's not because the students are unmotivated … it's because they don't have a supervisor that is good enough to guide them to write better for the FYP." (Participant 1)

This finding underscores the irreplaceable role of human mentorship in academic writing development, particularly for higher-order skills such as argumentation, critical analysis, and research direction (Hyland, 2019). Overall, the findings suggest that effective FYP completion is best supported through a hybrid system in which AI tools and supervisor guidance complement rather than substitute each other.

CONCLUSION

This study explored the academic writing challenges experienced by undergraduate students in completing final year projects, as well as the coping strategies they employed in managing these difficulties. The findings indicate that students continue to face challenges related to literature review writing, academic coherence, and critical thinking despite the increasing accessibility of digital and AI-assisted tools. Difficulties in synthesising sources, constructing coherent arguments, and maintaining academic vocabulary remain significant concerns among students in higher education.

At the same time, the findings demonstrate that generative artificial intelligence (GenAI) tools have become important forms of academic support in students' writing processes. Participants reported using GenAI tools to assist with grammar correction, idea generation, paraphrasing, and revision practices, highlighting the role of AI in reducing cognitive and time-related demands. In addition, the use of GenAI appeared to enhance

students' confidence and support their learning processes during academic writing tasks.

However, the findings also suggest that excessive reliance on AI-assisted technologies may contribute to reduced critical engagement and overdependence on generated content. Concerns regarding academic integrity and ethical AI use remain relevant, particularly when students accept AI-generated information without sufficient evaluation. These findings emphasise the importance of balancing technological assistance with the development of independent critical thinking and academic writing skills.

Overall, the study highlights the continuing importance of supervisors' guidance and institutional support in helping students navigate academic writing challenges in the era of generative AI. Higher education institutions should therefore promote responsible AI use while simultaneously strengthening students' academic literacy, critical thinking, and writing development through appropriate pedagogical support and academic guidance.

Ethical Considerations

Participation in this study was voluntary, and informed consent was obtained from all participants prior to data collection. Participants' identities and responses were kept confidential and used solely for research purposes.

Conflict Of Interest

The authors declare no conflict of interest regarding the publication of this paper.

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