AI-ASSISTED WRITING AMONG CHINESE EFL LEARNERS IN A PRIVATE HIGHER EDUCATION INSTITUTION: A MIXED METHOD STUDY

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APPROVAL SHEET

This research paper attached hereto, entitled AI-Assisted Writing Among Chinese EFL Learners In A Private Higher Education Institution: A Mixed Method Study prepared and submitted by XU, XIAOYAN in partial fulfilment of the requirements for the Bachelor of Arts (Hons) English Education is hereby accepted.

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ABSTRACT

The advent of AI Tools has precipitated a paradigm shift in second language acquisition, offering new possibilities for academic writing support. This study empirically investigates the application of AI-assisted writing tools among Chinese English as a Foreign Language (EFL) learners in a private higher education institution. Despite the growing popularity of tools like ChatGPT, empirical evidence regarding how students in private educational settings engage with these technologies remains underexplored. This research aims to examine students' frequency of use, perceived efficacy, and the ethical dilemmas they encounter. Utilizing a quantitative research design, a survey was administered to 61 participants from the Faculty of Arts and Social Science and Faculty of Education. The results indicate a high adoption rate, with students primarily utilizing AI for lexical resource expansion, translation, and grammatical correction. Significantly, findings suggest that while AI tools enhance writing efficiency and self-efficacy, they also trigger anxiety regarding plagiarism and a potential decline in critical thinking skills. The study concludes that integrating AI into EFL curriculum requires a balanced pedagogical approach, emphasizing critical AI literacy and clear ethical guidelines to foster independent writing competence.

Keywords: AI-Assisted Writing, Chinese EFL learners, Academic Writing, Private Higher E ducation.

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List of Abbreviations

Abbreviation	Full form
AI	Artificial Intelligence
EFL	English as a Foreign Language
TESOL	Teaching English to Speakers of Other Languages
TAM	Technology Acceptance Model
SCT	Sociocultural Theory
GPI	General Perception of AI
UAI	Use of AI in Higher Education
ISE	Impact on Student Experience
CAU	Concerns About AI Use
EAI	Expectations of AI
ZPD	Zone of Proximal Development
PEOU	Perceived Ease of Use
PU	Perceived Usefulness

Chapter 1 Introduction

1.1 Introduction

Over the past years of its integration with education, the concept of artificial intelligence (AI) has completely changed the paradigm of teaching (Selim, 2024). This effect can be seen especially in the language courses where online tools have improved conventional learning (Alzubi, 2024). Among them, academic writing aids with AI support have become an object of interest to researchers. These applications have become known to increase the writing skills, feed students with real-time feedback on corrections, and create the habits of self-directed learning (Apriani et al., 2024; Song and Song, 2023). Such recent studies as Qazi et al. (2025) prove that generative AI such as ChatGPT can help in enhancing student performance and in encouraging independence in the language acquisition process.

Even with these benefits of AI filters, scholarly writing does offer a lot of different challenges to Chinese students of English as a Foreign Language (EFL). The specified difficulties are usually caused by the absence of exposure to real-life English-speaking areas and a considerable disconnect between languages and cultures (Aldabbus & Almansouri, 2022; Wang, 2024). Such challenges are especially high in the context of private institutions of higher learning. In such environments, students usually have varying academic backgrounds and might not be able to cope with the requirements of the English taught academic programs unless someone offers them extra help. In order to fill this research gap, the proposed investigation will examine the motivations of Chinese EFL learners to use any AI-assisted writing tool and how the acceptance or rejection of the tools is affected by the features of the Chinese system of higher education in the field of private higher education.

1.2 Statement of the Study

Over the past few years, artificial intelligence to help us write academic papers has been not only a technology update but a technological revolution in the way we create writings (Selim, 2024). They are now being used to assist through every step of the writing process by including AI-powered systems, which are being applied at both the first step of finding the initial idea when brainstorming and at the last steps of drafting and editing (Guo et al., 2023; Kim et al., 2024).

To EFL learners, machine-assisted support functions are important. According to Wang (2024), such EFL learners tend to experience great language barrier problems because of poor feedback that is not personalized and lacks exposure to the real English conditions. The AI tools have the potential to fill these gaps (Apriani et al., 2024). Nevertheless, even as the use of AI tools in the educational field is on the rise, there are still considerable gaps in the fundamentals of knowledge: little is known about the specific effects that these systems have on EFL students in privatized higher education. The current body of literature (e.g., Kim et al., 2024; Ozfidan et al., 2024) does not consider the specifics of language learning, or even the existence of public institutions. The literature that comments on particular academic writing requirements in the context of private education is rather limited, as student needs in the specified area tend to be rather individual. This research is thus meant to serve this gap in the discipline. This study will show what drives EFL learners to use the tools and even determine the underlying factors that enable the shoe to be used or rejected by them by examining their motivational drivers (Liang et al., 2024).

In this analysis, it is important to have indications of student perspective. It depends on the attitude to practicality, reliability, and ethics of a learner to define his or her behavior (Davis, 1989). That is why, with the specific concentration of the context of the Chinese private

higher education, the present research will serve to offer a practical roadmap to TESOL (Teaching English to Speakers of Other Languages) educators to help them achieve the merging of artificial intelligence compliance with the ethical standards alongside providing pedagogical efficacy to this particular group of students.

According to the problem statement given above, the following specific objectives and research questions are identified in the current study:

1.3 Research Objectives

1. This research aims to identify the key motivations driving EFL learners to use AI-a ssisted writing tools for academic writing.

2. This research aims to identify the factors that influence students' acceptance or resi stance to using AI tools for academic writing.

1.4 Research Problems

1. to identify what motivates EFL learners to use AI-assisted writing tools in academi c writing.

2. to identify the factors influence students' acceptance or resistance to using AI tools for academic writing.

Chapter 2 Literature Review

2.1 Introduction

Although the emerging research on the application of artificial intelligence to language teaching is increasing (Selim, 2024), the studies on the particular motivations and experiences that EFL students are likely to experience in their writing have not been thoroughly studied (Kim et al., 2024). This divide is especially more evident in students in private institutions, whereby, students in these institutions tend to have varying backgrounds of studies as well as differing fluency in the English language. Thereupon, there is a need to investigate the ways in which AI tools could solve their individual requirements (Aldabbus and Almansouri, 2022; Wang, 2024).

Moreover, the attitudes of students to the AI-assisted writing tools, including the choice of accepting the usage of the tools and its continuation, also significantly impact it (Davis, 1989; Liang et al., 2024). The question of the attitude of the students to these AI tools as it is frequently mentioned in Woo et al. (2023) assists in uncovering the pedagogical nature of the use of artificial intelligence in academic writing, as well as offers a strategic framework on how AI-assisted tools can be included in English as a Foreign Language (EFL) pedagogical writing curricula in the future. Thus, this review aims at discussing the available literature in the sphere of AI-assisted writing, outlining the current state of the application of AI writing aids in the Chinese context of small enterprises in the university and what triggers the use of them among English learners, as well as the aspects that determine its acceptance or rejection.

2.2 Definition of Key Terms

- **Academic Writing:** This is a structured method of expressing ideas. It is an important aspect of research and education, and a commonly used method by researchers and educators in their academic work (Khalifa & Albadawy, 2024).
- **EFL:** English as a Foreign Language refers to the process of teaching and learning English in areas where English is not a primary language (Song & Song, 2023).
- **EFL Writing:** According to Guo et al. (2023), EFL writing refers to the writing practices and skills relevant to students learning English as a Foreign Language.
- **AI Tools:** Artificial intelligence tools refer to applications that use artificial intelligence technology to support language learning, particularly in improving the academic writing skills of learners of English as a foreign language (Song & Song, 2023).
- **Perception:** At the level of educational technology, perception refers to how students interpret and understand the value, ease of use, and potential impact of a particular tool based on their experience. This is a cognitive process that influences their attitudes and acceptance of using technology (Davis, 1989).
- **Motivation:** Motivation refers to the drive that initiates, guides, and sustains goal-oriented behavior. In the context of English as a Foreign Language (EFL) learning, it plays a crucial role in influencing students' level of active participation, effort, and persistence in academic tasks and technological applications (Ryan & Deci, 2000).

2.3 Theoretical Framework

In order to fully understand student behavior, the TAM and sociocultural theory will offer a two-fold theoretical background upon which the study has been based. On the individual level, the TAM presented by Davis (1987) is one of the fundamental perspectives in the cognitive process of technology adoption. This paradigm demonstrates that the choice of users to embrace technological innovations is controlled by two fundamental variables which include; the first is the perceived usefulness which is a subjective guess by the potential user on the likelihood that adopting a given application system would lead to efficiency in the learning process (Davis, 1989). Within the framework of the current research, this is reflected by how EFL learners think that AI tools may have a tangible positive effect on the quality of their academic writing. The second, which is the perceived ease of use, is the anticipated eagerness of the potential user in regard to the degree to which the target system will decrease their operation load (Davis, 1989). The motivation of the learners caused by these two cognitions is co-created, and it eventually defines whether learners are willing to adopt AI in their job.

But there is no individual decision to using technology. The sociocultural theory by Vygotsky (1978) is a complement of this one, in that it focuses on the role of wider contextual and interpersonal factors in the acceptability of technology. A combination of these theoretical frameworks creates a multidimensional perspective of understanding technology adoption. This holistic view of the problem is attained by incorporating these frameworks in this study. The Technology Acceptance Model (TAM) offers tangible models of determining the importance of factors related to identifying the degree of approval or rejection of technology by Chinese English learners, specifically, the utility-effort trade-off

calculation (Liang et al., 2024). On the other hand, the sociocultural theory discloses a complicated interactive connection between learners and their academic setting.

The Vygotsky theory (1978) theory of sociocultural approach can be used to add to the TAM theory of the individual perspective. In SCT, the cognitive development is social in nature and necessitates the implementation of cultural artifacts. In this model, learning cannot be discussed as an internal process but a social interactive one. On this background, AI writing helpers are potent cognitive scaffolds that can transcend the existing language skills of EFL students and the possible achievements of the latter (Guo et al., 2023).

Under this theoretical standpoint, AI tools are understood to be culture mediating resources and not utilitarian tools. They are not only helpful in error correction but also in reforming their cognitive frames of writing activity and in their practices of writing standards (Song and Song, 2023). The application of this theory in the current study assists in explaining the mediating information of AI on the interaction of EFL learners with academic writing assignments. As a result, the study can tell the extent to which external forces, which include institutional demands, social influence, and situation factors constitute the motivations of Chinese EFL learners to either accept or oppose AI integration (Liang et al., 2024).

Combination of TAM with SCT can offer a very strong two-layered point of view. The integrated approach that makes this gap between individual cognitive computing and social mediation possible will guarantee careful analysis of both the behavioral and

environmental determinants of artificial intelligence adoption in the academic realm.

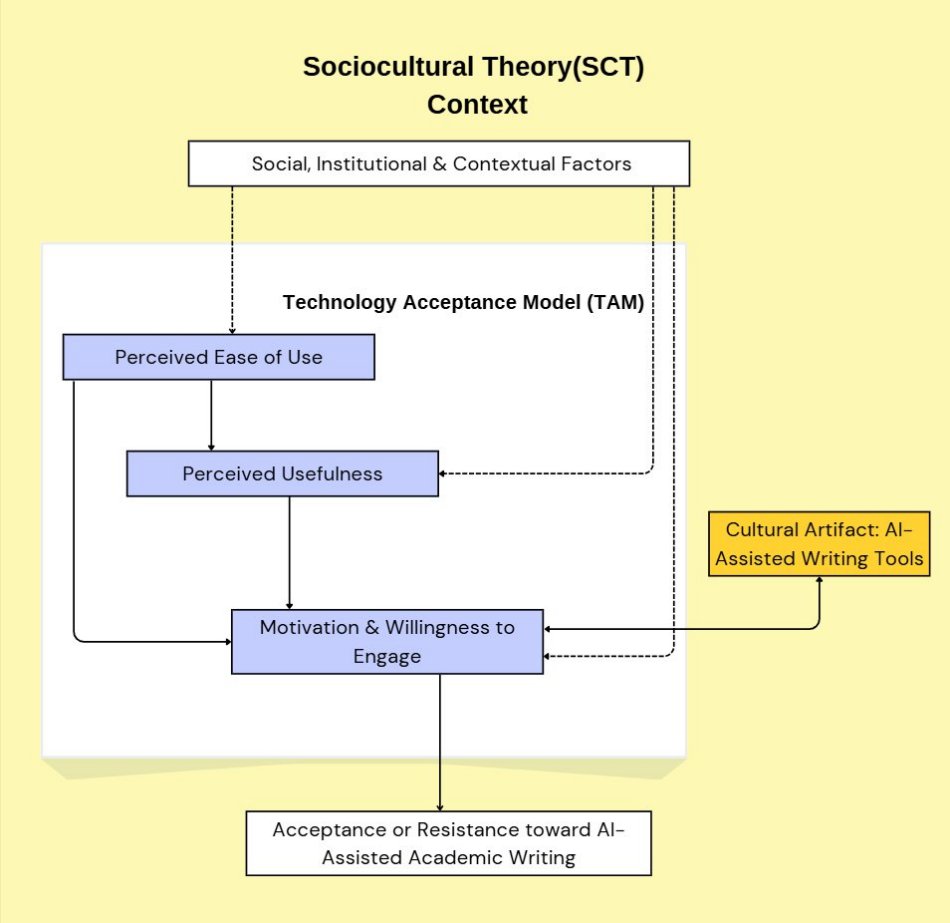


Figure 1. Hypothesis Testing and Results: The proposed sociocultural theory (SCT) and technology acceptance model (TAM) conceptual framework will be conducted using independent and dependent variables and the population of EFL learners regarding the anders and adoption of AI writing tools.

In the conceptual framework (Figure 1), it is possible to implicitly see how two supporting theories are integrated. The exterior delimiter is the Sociocultural Theory (SCT) that appreciates the fact that learning and the use of technology take place in a wide setting influenced by social, institutional, and interpersonal influences. These are not background factors by which the main processes in technology adoption take place but are directly modified factors.

Within this sociocultural setting, the processes of the Technology Acceptance Model (TAM) work. According to Davis (1987) Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) are the main determinants. The diagrammatic representation demonstrates that Perceived Ease of Use determines Perceived Usefulness, and both of the constructs affect English learners motivation and desire to use technology.

The major revelation of this diagram is that the cognition of learners (PU and PEOU) and resultant motivation is the direct effect of the surrounding context of the sociocultural setup (reflected in the dashed parabolic inwards arrows), which confirms the inclusion of SCT theory. Additionally, the diagram concurs with the theory of Vygotsky by placing AI-based writing tools as something that is beyond external objects, i. e. those, which are considered cognitively/culturally as mediators. These are the ones that mediate between academic tasks and learners.

Lastly, via the interaction of the Technology Acceptance Model (TAM) and the Situated Cognition Theory (SCT), the learners will find out their final behavioral response to AI assisted academic writing; adoption or rejection.

2.4 Overview of AI-Assisted Writing in Higher Education

Khalifa and Albadawy (2024) assert that the popularity of the artificial intelligence (A I) technology has fundamentally transformed the image of the higher education. These techno logies in academic writing have come to go beyond a basic spell checker and become highly i ntelligent assistive features that help students through all facilitating steps in writing: first pla nning and drafting, and biting the bullet with full proofreading, (Kim et al., 2024). As Qazi et al. (2025) remark, AI tools do not only improve the writing skills of students, but they also en

able students to be more immersive in the learning process. These systems allow learners to e ffectively correct their work and to detect any errors since they allow this to happen instantly and with an interactive feedback, which is difficult to do with the traditional methods.

But it is much more than this correction of errors that the value of these tools has; thes e tools can even lead to self-directed learning. Guo et al. (2023) believe that applying AI chat bots is a far more effective mechanism that enhances the confidence of English learners in the ir writing skills. The reason is that these students consider AI not only as an extension of their hands but as a partner, collaborative, and scaffolded one, whose help and guidance should be offered during the process of writing. This will enable students to be self-directed learners an d responsible to their academic progress and growth (Apriani et al., 2024).

Nevertheless, some problems are also present. Song and Song (2023) observed that so me students might be unable to independently engage in cognitive work because of excessive use of artificial intelligence. Likewise, Ozfidan et al. (2024) note that an excessive use of thes e tools can lead to the insufficiency of developing good writing skills and, consequently, dimi nishing the critical thinking and creativity in the students. These issues point to the fact that A I instruments are easy to use, but their implementation into the practice of students should be cautious in terms of the impact on academic dishonesty and cognitive growth.

To conclude, although AI can be very useful in increasing the writing proficiency and the autonomy of the learner in the higher education sector, the patterns of their usage deserve critical analysis. This is especially essential to non-native English learners in the individual u niversities since different academic backgrounds could affect the adoption of the tools. This means that the study is subject to research in order to examine this phenomenon in the contex t of Chinese higher education (Liang et al., 2024).

2.4.1 AI Tools as Emerging Cultural Artifacts in ESL/EFL Contexts

Artificial intelligence tools are becoming the key cultural artifact that creates a paradi gm shift in facing academic writing by students within the framework of ESL and EFL educa tion. Academic writing to many learners in higher education facilities is much more than that which is correct grammatically. According to Aldabbus and Almansouri (2022), the most seri ous obstacles these students experience are the choice of the right academic language, the dev elopment of accurate statement of argument, and establishment of coherent ideas into a logica l sequence of paragraphs. In order to get over these challenges, students mediate with AI-base d tools, such as ChatGPT, Grammarly, and Quillbot. These aids encourage academic writing by EFL learners by suggesting vocabularies, correcting their mistakes, and showing them the good writing pattern.

The studies affirm the use of these tools in boosting student engagement. Qazi et al. (2 025) established that AI tools assist EFL learners in building more confidence and independe nce. Through lessening the frustration of the language obstacles, the students are retained to b e more motivated and engaged in the writing assignments. This supports the idea of AI as an assistant in the learning environment.

Moreover, Guo et al. (2023) consider the chatbot-supported writing processes to be an effective cognitive scaffold in teaching the English language to the Chinese population. Stude nts can be corrected on their errors and gain better knowledge on grammar and sentence struc tures with the instant feedback and quick revision features of AI tools. Students also move in the long run to taking correction passively instead of being involved in an interactive cycle. It proves the exceptional opportunities these tools present in the demanding context of the highe r education. Also, since the academia imposes strict requirements on the conformance of styl e, artificial intelligence can help in organizing academic papers and assist students greatly in t

he refining of their linguistic use to fit the requirements of the university (Kim et al., 2024). N evertheless, with the seamless nature of these tools in learning cultures, the necessity to direct students to proper use of AI is becoming more pronounced, such that educators will not overd ependent on the tools, but will nonetheless maintain the ability of the students to achieve inde pendent sets of essential critical writing skills.

2.5 Motivations for Adopting AI-Assisted Writing Tools

In order to find out the reasons why EFL students use AI tools, it is important to analy ze their behavior of adoption. According to the Technology Acceptance Model (TAM) sugge sted by Davis (1987), the desire of a certain person to use a technology is mostly determined by the perceived usefulness of that technology and the perceived ease of use. The application of these tools in academic writing in English as a foreign language, as well as in general writi ng into English, is not only the result of current trends, but also certain cognitive and affectiv e requirements (improving writing abilities and emotional regulation, respectively). Liang et al. (2024) highlight that these cognitive variables are important to Chinese English learners in deciding whether to apply AI to their learning procedures.

2.5.1 Cognitive and Affective Motivations for Adopting AI-Assisted Writing Tools

Cognitive motivation is the type of practical benefits derived by students because of using artificial intelligence (AI). The most common driving force is usually efficiency. On th e one hand, AI as a significant tool of productivity can assist students in managing time-cons uming and time-intensive elements of academic writing (including producing ideas and struct uring thoughts as well as streamlining the writing process) (Khalifa and Albadawy 2024). Gu

o et al. (2023) also established that chatbots prompting instant feedback can be used to motiv ate learning. In contrast to waiting to get teacher corrections, AI tools have the opportunity to correct the grammatical mistakes in real time, which enables students to get appropriate feedb ack and know what errors they make.

Affective motivation is related to students' emotional state, particularly in how AI tools can alleviate writing anxiety, as academic writing often puts pressure on English learners. Song and Song (2023) found that using AI tools like ChatGPT, which provide a low-anxiety practice environment, significantly increased students' motivation to use these tools; for example, when interacting with AI, students were less afraid of being judged and thus less hesitant to make mistakes or ask questions. Similarly, Qazi et al. (2025) pointed out that AI tools can promote self-directed learning and maintain student engagement. The support provided by these tools boosts students' confidence, making them more willing to take on challenging writing tasks and no longer afraid of failure.

2.5.2 The Role of English Proficiency in Shaping Learners' Motivations

Although efficiency benefits and reduction of anxiety are often running motivations, the English proficiency of the learners and the difficulties in writing are other factors that determine the reasons that a learner may use artificial intelligence.
In the case of the learners who have poor English proficiency, they tend to get motivated because they have to get over simple language hurdles. According to Aldabbus and Almansouri (2022) and Mojica (2010), such students tend to have problems with the simplest elements and language usage, grammar, and sentence composition. Thus, they are driven by the compensatory needs when using AI. As Wang (2024) noted in his study, non-native speakers

of English tend to apply generative AI, using it to convert their thoughts in their mother tongue into English or to fix shallow grammatical mistakes. To them, AI is an essential aid that enables the visibility of their writing and academic standards that are not too high.

Conversely, the incentives of advanced learners (or more experienced writers) are aimed at correction and efficiency. Though the number of grammatical mistakes they commit is limited, they rely on AI to make their arguments better. According to Wang (2024), non-native speakers rely on translation and grammar, whereas more proficient writers can rely on AI to modify the tone of the written piece, improve the sequence of ideas, or create intricate pieces. To this group, artificial intelligence is valuable as a working partner in polishing the text and not as a tool of repairing the errors.

2.6 Factors Influencing Students' Acceptance or Resistance towards AI-Assisted Academic Writing.

The technological cognition and situational situations provide a complex interaction of acceptance or resistance of AI-assisted writing tools in EFL learners. According to theoretical framework of this study, these factors can be divided into acceptance drivers (which include perceived utility and social support), and adoption barriers (which include ethical consideration and technological constraints). These aspects can be used to know how such technologies can be incorporated by teachers into foreign language learning methods and establish a balance between innovation and academic honesty.

Perceived utility is the basis of adoption behavior at the acceptance level (Davis, 1989). Kim et al. (2024) have noted that students anticipate the generative AI to be more of a multi-functional writing assistant, with search engine, creative generator, and simple proofreading

capabilities. Nonetheless, to EFL learners the attraction of AI tools is not limited to the enhancement of efficiency. Guo et al. (2023) were able to identify that students tend to think about AI in terms of social interactions, as a tutor or a digital friend offering 24/7 assisted learning. This individual attention helps reduce a major gap in human instruction, thus enhancing student motivation and their desire to use such tools in their tasks (Song and Song, 2023).

The positive experiences presented by AI tools, i.e., higher writing quality, quicker output and emotional support, increase motivation in students to use together with their willingness and readiness. Meanwhile, the resistance by the students can be caused due to a range of negative factors. One of them is the problem of AI trust (or lack thereof) and reliability. Kim et al. (2024) indicate that students usually have a concern that tools will give misleading information due to their inadequate knowledge about a particular context and this can break their confidence in using AI when writing high stakes. Moreover, there is a strong yet very mild kind of barrier known as the literacy gap. Woo et al. (2023) underline that the successful deployment of AI does not occur spontaneously but presupposes the user to have particular prompting engineering skills. The use of AI devices in the production of high-quality content might have challenges to students who are not professionally trained. As noted by Alzubi, AI literacy is also low which deteriorates the ability of users to critically assess AI content (2024). Such technical and personal issues point to the relevance of institutional guidance, since it makes sure that students are able to deploy AI tools in a responsible and effective manner (Liang et al., 2024).

2.6.1 Perceived Output Quality, Trust, and Concerns over Over-Reliance

The desire to make the integration of artificial intelligence as a part of academic workflow basically relies on how the users perceive the quality of their output. It has been demonstrated that the rates of adoption increase exponentially when students can see that AI tools are really having a significant positive impact on their academic performance. According to Song and Song (2023), the English learners who used AI-assisted writing tools improved much in the content, structure, and language use, way beyond the learners who did not use the tools. The consequent positive impacts increased the motivation and engagement of the EFL learners by a great margin. This is not just a case of text polishing, that will improve the self-efficacy of academic writing in learners and it forms a virtuous cycle of motivation and engagement (Apriani et al., 2024).

This acceptance is however weak. Although the results were positive, other students have not been silent about this. Song and Song (2023) indicate that AI recommendations are usually not aligned with the individual style of writing or the particular setting of academics and create confusion in the mind of students on how to use AI instruments. In other instances, learners doubt the validity of AI responses. The biggest challenge is the fear of any false information generated by AI (hallucinations) (Kim et al., 2024). Such insecurity compels students to repeatedly check the output, thus decreasing their perceived efficiency of the tool (Wang, 2024).

The issue of dependency is also another important factor that is affecting student resistance. Ozifidan et al. (2024) caution that excessive use of generative AI may result in the deterioration of the fundamental writing capabilities and, ultimately, the decline in critical thinking and imagination. More so, since the mentioned research did not evaluate the long-term impacts on the writing skill, the sustainability of the AI tools is also questioned by some

of these students. Such considerations make it possible to outline the need of a teaching strategy, AI must be considered a scaffold of building the independence of writing skills, but not a replacement of human intelligence.

Chapter 3 Methodology

3.1 Introduction

This study used a mixed research design to gain a deep insight into student experience and search the advantages of using artificial intelligence tools to integrate them into academic writing. The subject in the study was reduced to the Chinese learners of English in the private ly held higher education institutions. Purposive sampling was used to select the 60 (or more) undergraduate students of Faculty of Arts and Social Science and Faculty of Education. To gr oup up data validity and relevance, it was obligatory that the participants should be internatio nal Chinese students undertaking English-based degree programs and have work experience i n using artificial intelligence tools (Liang et al., 2024). This non-probability approach enable d researchers to get the respondents with a particular set of specifications and well matched to the study.

3.2 Research Design

In order to achieve statistical validity of the respondents, this study used the normal sa mple size determination formula proposed by Krejcie and Morgan (1970). This system of met hods is quite popular among academics and can guarantee a required minimum of the sample size to represent the target population statistically. The target population of Chinese-English l earners with specific educational background of the target department of a private higher lear ning institution is estimated to be around 100. According to the formula with the confidence l evel of 95, it is found that the minimum sample size is 59. Based on this, at least 60 valid que stionnaires will be collected in this study. This minimum requirement is important in order to

ensure that the data is reliable hence the results of the research may be generalized to the parti cular group of students.

In this research study, online questionnaire was adopted as the main method of data c ollection. According to the questionnaire, the design was mixed type incorporating closed end ed, Likert scale and open ended questions and split into four independent sections:

1. Section 1: **Demographic and Behavioral Context:** This part primarily collects participants' gender, age, and English proficiency (based on standardized test scores such as IELTS/CET-4 and self-assessment). A behavioral checklist (e.g., Question 8) is also included in this part to identify the specific stages of the writing process in which students use AI (e.g., brainstorming and proofreading). This question can be used to address the research objective regarding motivation for use.

2. Section 2: **Writing Self-Efficacy Scale:** This part uses a 5-point Likert scale to assess students' confidence in their English writing abilities without AI assistance. This scale serves as a baseline for understanding the relationship between students' self-efficacy and their dependence on AI.

3. Section 3: **AI Perception in Higher Education:** This part measures students' overall attitudes towards AI, focusing on sociocultural and contextual factors. Assessment dimensions include: perceived universal value (Parts 1 & 3), institutional support (Part 2), and concerns/resistance (Part 4). These items are used to identify external and ethical factors that EFL learners accept or resist.

4. Section 4: **Open-ended questions:** This qualitative section invites students to elaborate on the specific benefits of artificial intelligence to writing skills, the challenges (resistance factors), and their initial motivations.

3.3 Data Collection

Data collection was conducted during the researchers' final academic year at the private higher education institution. To ensure a high degree of alignment between the collected data and the research objectives, a purposive sampling strategy was strictly employed, ensuring that all participants met the following criteria: native Chinese-speaking EFL learners with practical experience in academic writing tasks and using AI-assisted tools.

The questionnaire was given out to the target group online (Google Forms). To raise response rate, researchers went proactively and invited students by explaining the research content, and then inviting them with QR code/link during peak hours at FAS academic building. In addition, the researchers utilized Microsoft Teams to contact the qualified individuals, introduced the purpose of the survey and asked them to finish the questionnaire. All the participants take approximately 10-15 minutes to fill out the questionnaire.

Ethical issues were important: the questionnaire started with an introduction part explaining the purpose of the study, that the involvement was voluntary and there would be no anonymity and the confidentiality of the information.

3.4 Data Analysis

The data analysis strategy was designed to bridge the quantitative trends with qualitati ve insights to answer the research questions.

1. **Quantitative Analysis:** Data from the close-ended and Likert scale sections were analyzed using IBM SPSS Statistics Version 27.

Descriptive Statistics: Frequencies and percentages were calculated for Section 1 (Q6, Q7, Q8) to identify the most common AI tools and the specific writing stages where AI i s used. This directly addresses the first research question by revealing behavioral motivat ions. Mean scores and standard deviations were calculated for Section 3 to quantify stude nts' general acceptance levels and the intensity of their concerns (resistance).

Comparative Analysis (Cross-tabulation): To address the role of English proficiency (2.5.2), **Cross-tabulation** was employed to compare AI usage patterns (e.g., usage freque ncy and purpose) across different proficiency groups (Low vs. High proficiency as deter mined by Section 1). This analysis aimed to reveal if students with different language abi lities are motivated by different factors.

2. **Qualitative Analysis:** To fulfill the second research objective and provide depth to the mo tivation analysis, the open-ended responses (Section 4) were analyzed using Thematic Analys is. Instead of a random selection, all valid open-ended responses were reviewed to ensure co mprehensive coverage. This analysis identified the following recurring themes through data coding:

Specific motivations, such as increased efficiency, vocabulary expansion, and anxiety relief.

Resistance factors, such as hallucinations, loss of creativity, and ethical concerns.

By combining quantitative behavioral patterns with qualitative thematic insights, this hybrid research approach provides a holistic understanding of why Chinese English learners accept or resist AI-assisted writing tools.

Chapter 4 Data Analysis

4.1 Introduction

This chapter analyzes data collected using a mixed research method to explore the motivations and acceptance factors of Chinese English learners using AI-assisted writing tools. The data analysis integrates quantitative results from the questionnaire survey with qualitative insights from open-ended responses.

Initially, this survey collected responses from 73 participants. After a rigorous data cleaning process—eliminating participants who did not meet the inclusion criteria (such as non-native Chinese speakers or those without AI using experience) and incomplete or invalid questionnaires—only 61 valid questionnaires were ultimately retained for analysis.

The study findings are structured into three main sections based on the research framework:

1. **Section 4.2** presents the demographic characteristics of the respondents, establishing the research context necessary for this study.

2. **Section 4.3** addresses the first research question by analyzing learners' specific usage habits and motivations (including the influence of English proficiency).

3. **Section 4.4** addresses the second research question by examining the key factors influencing students' acceptance or resistance to AI tools.

4.1.1 Reliability Analysis

Before conducting descriptive and inferential analyses, this study used the Cronbach's alpha coefficient to assess the reliability of the questionnaire. This statistical indicator is used

to measure the association between items within a specific scale to determine whether they jointly measure the same underlying construct. In social science research, a coefficient value of 0.7 or higher is generally considered acceptable (Taber, 2018). Although this questionnaire was completed with reference to other published questionnaires, the researchers still decided to conduct a reliability test to ensure the reliability of the research.

As shown in Table 1 below, this study calculated reliability statistics for two main scales: the Writing Self-Efficacy Scale (Section 2) and the Overall Perception and Attitude to ward AI (Section 3).

Table 1:

Reliability Statistics (Cronbach's Alpha)

Variables/Constructs	Number of Items	Cronbach's Alpha
Writing Self-Efficacy (Section 2)	7	.790
Overall Perception and Attitudes tow ard AI (Section 3)	25	.760

The results showed that the Cronbach's α coefficients for both scales exceeded the threshold of 0.7. This indicates that this questionnaire has satisfactory internal consistency and the collected data is reliable for achieving the research objectives.

4.2 Demographic Profile of Respondents

This section presents descriptive profiles of the participants to establish the research context and representativeness. Following a rigorous screening process based on purposive sampling criteria, 61 valid questionnaires were retained for data analysis. The sample consisted only of Chinese international students from a private higher education institution's

FAS and FED programs, ensuring that all respondents were English as a Foreign Language (EFL) learners within a specific private higher education environment.

The demographic analysis is divided into two parts:

1. **Section 4.2.1** provides an overview of the participants' basic background (gender and age).

2. **Section 4.2.2** details the participants' English proficiency and writing self-efficacy. This subsection is crucial because the data in this section defines the learners' language baseline, which will be a key variable in subsequent analyses exploring whether language proficiency influences motivation for AI use (Research Question 1).

Table 2 below summarizes the complete demographic characteristics of the respondents.

Table 2:

Demographic Profile of Respondents (N=61)

Category	Sub-category	Frequency	Percentage (%)
Gender	Male	37	60.66
	Female	24	39.34
Age	18-20	20	32.79
	21-23	40	65.57
	24 or above	1	1.64
Total		**61**	**100**

4.2.1 Demographic Background

Table 2 presents the demographic information of the 61 participants in this study. Regarding gender distribution, the sample shows a relatively male-biased proportion, comprising 37 male students (60.66%) and 24 female students (39.34%).

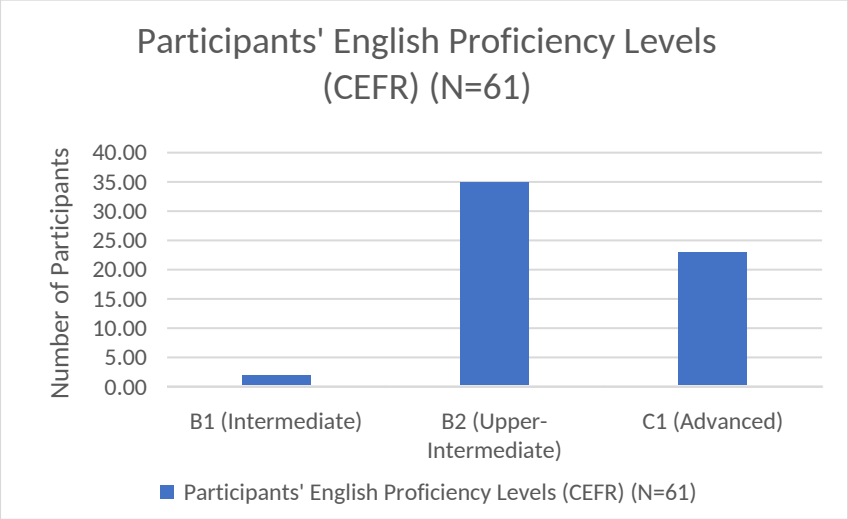
In terms of age distribution, the 21-23 age group had the highest proportion of participants (n=40, 65.57%), followed by the 18-20 age group (32.79%). At the educational level, all respondents were undergraduate students.

According to the inclusion criteria defined in Chapter 3, all 61 participants (100%) were native Chinese speakers and were currently enrolled as English as a Foreign Language (EFL) learners at a Faculty of Arts and Sciences (FAS) or Faculty of Education (FED). This confirms the validity of the sample data and its relevance to the research objectives.

4.2.2 English Proficiency & Writing Self-Efficacy

Figure 2.

Distribution of English Proficiency Levels (CEFR) (N=61)



To provide a uniform measure of the language proficiency of the participants, the section correlates raw scores of distinct standard tests of language proficiency (IELTS, CET-4/6, PTE and Duolingo) with the Common European Framework of Reference of Languages.

By making a standard, it will help connote the various levels of the language used in the sample as well as making the process of data measurement a lot easier.

The number of participants as displayed in Figure 2 indicates that the entire sample population has high English proficiency. It can be seen that most respondents (57.4 percent, n=35) have the B2 (upper-intermediate) level.

The sample size of C1 (advanced) (37.7, n=23) is a significant percentage that reflects learners who are already highly-achieving (e.g., IELTS 7.0, CET-6 >600).

Only a very few respondents (4.9%, n=3) are on the B1 (intermediate) level.

None of the A1/A2 (beginner) participants were identified in this research, and B2/C1 learners constituted a large proportion (95.1%), which means that the respondents represented a relatively mature level of language to be able to judge AI-generated materials critically. The ability distribution forms a firmer background to the research question 1 exploration.

In terms of writing self-efficacy (Section 2), the average of the entire sample constituted 3.67 (SD = 0.61). This means that the participants were relatively confident in their stand-alone writing performance: they were mainly moderate or very high in relation to the test scores.

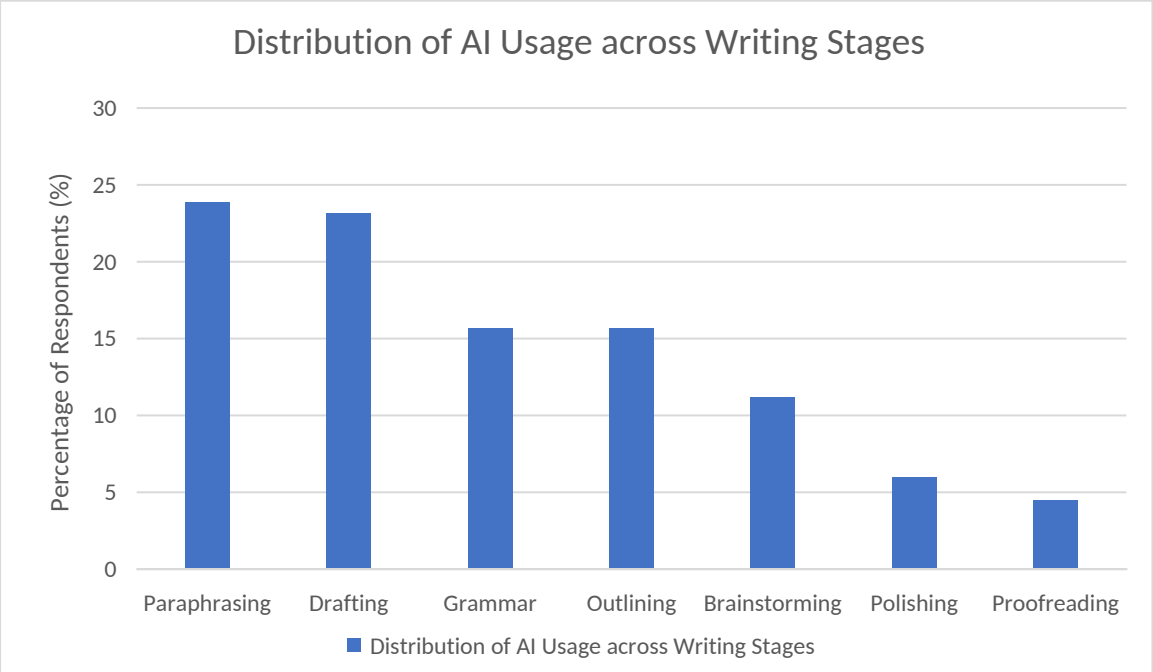
4.3 Findings for RQ1: Motivations and Usage Patterns

To address the first research objective — exploring the motivations of EFL learners in using AI tools for academic writing — this study first analyzed the specific stages in the writing process where AI tools were used particularly frequently by EFL learners (Section 1, Question 8).

4.3.1 Usage Habits (Frequency & Stages)

Figure 3.

Distribution of AI Usage across Writing Stages



The utilization of AI by the participants is not uniformly spread over the period of wri ting, but is concentrated greatly at the stage of content generation and linguistic modification, as shown in Figure 3.

The statistics indicate that the most common reason to use this feature was to paraphra se and reword sentences, which occupied the 23.88 of the reported use. It was followed by dr afting and initial content creation very closely with a considerable 23.13 percentage. The com bination of these two applications contributed to close to fifty percent of the AI interactions. That means the key internal driving force of Chinese EFL learners is the so-called Cognitive offloading, the inability to shut down due to the empty pages, by simply rephrasing written te xt or creating the first drafts with the help of AI.

Interestingly, not only grammar and spelling mistakes are to be corrected but also the Structure is outlined in 15.67% of cases. This shows that grammar checking is usually regard ed as a central AI feature, in the case of EFL students in the research, their auxiliary function was not as prominent as drafting and rewriting.

Functions that were least used were, in descending orders; Brainstorming (11.19%), L anguage Polishing (5.97%), and Proofreading (4.48%). This fact is low proofreading rate, wh ich implies that students can subconsciously use the quality check feature (rewriting) or can u se AI to write a draft (rewrite) instead of polishing a final.

To conclude, the quantitative research reveals that the central motivation of these lear ners is the compensatory one: they mostly make use of AI to close the gap between the ideas t hey have and the target language output by writing and rewriting.

4.3.2 Types of Motivations (Thematic Analysis)

Following the six-step thematic analysis framework proposed by Dawadi (2020) and Ahmed et al. (2025), qualitative data on the specific benefits of AI tools in the first open-ended question were analyzed. By coding and categorizing the responses, the researchers identified two dominant themes regarding motivations for using AI: (1) language enhancement and error correction, and (2) cognitive scaffolding and creative generation.

Theme 1: Language Enhancement and Error Correction – The vast majority of participants cited the greatest benefit of using AI tools as ensuring grammatical accuracy and improving fluency. For non-native English learners who frequently struggle with English grammar, AI acts as a reliable grammar teacher. Participants explicitly stated that they used AI *"to improve my written content in order to avoid grammar mistakes."*

Besides correcting grammatical errors, students also viewed AI as a tool to improve writing style to meet academic standards. AI's role in this area is particularly crucial for learners who believe their language skills limit their expressive abilities. As one participant stated:

"For lower level of EFL learners , AI can help a lot in both vocabulary and sentence structure. For me , sometimes is hard to construct a sentence in academic style , but ai can help me adjust my sentence structure."

This indicates that for many students, the motivation to use artificial intelligence stems from their desire to bridge the gap between their current language skills and the expectations of university writing standards, particularly in terms of "the fluency in organization" and "grammatical polishing."

Theme 2: Cognitive Scaffolding and Creative Generation—Until AI covers langua ge lapses, the majority of respondents still noted that AI has cognitive benefits. With AI-assis ted writing, the AI does not only perform the role of an editor but a partner who provides stru ctural support. Others, in their responses, mentioned that AI assists them in writing, in a man ner that it achieved framework and ideas to them, which means less cognitive load at the phas e of the task initiation.

One respondent explained its general advantages as follows:

"It will be able to expand my knowledge, to think and provide more ideas of writing."

This proves that the feasibility of AI is applicable to pre-writing preparation phase. Of fering structural schemes and widening the scope of knowledge base, AI tools contribute to b reaking the obstacle of writing among English learners, give them writing motivation, and inc

rease the logicality in argumentation. Moreover, many respondents also cited such aspects as convenience, e.g. how AI tools can help them to solve their assignments easily. This once aga in validates the purpose of artificial intelligence as an effective scaffolding- not only it will ai d EFL learners in the mechanical aspects involved in the academic writing, but it will also mo tivate them to write.

Provided that Question 1 presents the reason why students are still using AI, the respo nses to Question 3, in turn, will tell us what exactly happened that led the users to use AI. Usi ng thematic analysis of these stories, researchers have determined that psychological needs (r educing people's anxiety) and practical needs (improving efficiency) determined the early ado ption of AI by these participants.

Theme 3: Overcoming Anxiety and Building Confidence—For many Chinese EFL the lack of language self-efficacy was the first motivation of learners to utilise AI. Others part icipants called academic writing stressful activity that usually made them feel either uncertain or lacking confidence. In this regard, the starting point of artificial intelligence was perceived as an affective security net.

One of the respondents explained this mental barrier and the freedom introduced by ar tificial intelligence in the following way:

> *"The reason is I cannot be confident about my writing skills. When I used it for the first time, I felt that it could inspire my trust to use these to polish my writing content."*

Similar ideas were shared by another student who stressed on the fact that artificial int elligence is not just a weapon but a helping hand. He told how his first experience was anxiet y and how he felt like he relaxed once he joined university:

"I first started using AI writing tools when I entered UTAR. At that time, I needed to write many English assignments, but I often felt unsure about my vocabulary and grammar. Using AI for the first time made me feel relieved because it gave me instant corrections and clearer sentence suggestions. It felt like having a helpful tutor guiding me step by step."

Through these feedbacks, it can be argued that negative emotions usually motivate EF L learners to use AI in the first place. The students find AI tools helpful in lowering the chall enge and stress of writing in a second language. The emotion of excitement and relief upon u sing the aid of AI shows that the confidence of language they offer is a very good source of fe eling secure. Having this kind of positive emotional response, the students are likely to undert ake writing activities otherwise difficult to them.

Theme 4: Pragmatic Drivers – Beyond psychological drivers, the high efficiency brought by AI is a significant theme. Students initially turned to artificial intelligence to cope with the heavy workload and time pressure in higher education. Instead of searching for information and inspiration on their own, AI provides them with a fast and efficient solution.

In the Q3 responses, the convenience brought by AI was frequently mentioned by participants:

"I never have enough ideas. Use AI. It reduces the time for consulting materials, and AI can generate ideas according to its own needs."

Another participant reinforced this pragmatic motivation by noting the advantages of AI over traditional search engines:

"No need spend a lot of time to search online learning website, it's save time and high efficiency."

Furthermore, the initial adoption was often tied to specific urgent tasks, such as prese ntations or deadlines, where AI acted as an "accelerator" for drafting. As one respondent cand idly stated:

> *"I first used AI writing tools when I needed to finish an English essay quickly; it streamlined my drafting, and I felt relieved yet cautious about over-reliance."*

In summary, the qualitative data reveals that the motivation for adopting AI is dual in nature: it serves both as a support framework alleviating the psychological pressure of anxious learners and as an efficiency tool addressing the demands of rigorous academic life.

4.3.3 The Influence of English Proficiency on Motivation

Table 3:

Cross-tabulation of Proficiency Groups and AI Usage Stages

Writing Stage/Motivation	Group 1: Intermediate (n=38)	Group 2: Advanced (n=23)	Difference Analysis
Drafting Content	*55.3%*	43.5%	Group 1 relies more on generation.
Paraphrasing	52.6%	52.2%	Equal usage.
Grammar Checking	26.3%	47.8%	Group 2 focuses more on accuracy
Outlining Structure	42.1%	21.7%	Group 1 needs more structural support
Brainstorming	26.3%	21.7%	Similar usage.
Polishing Language	10.5%	17.4%	Group 2 focuses more on refinement.

To examine the hypothesis that the levels of language proficiency determine the way of how students utilise AI, the researcher used the cross-tabulation analysis of two language proficiency groups (Group 1: Intermediate /B1-B2 vs Group 2: Advanced/C1) and their particular usage patterns (Question 8). The outcome proposed in Table 3 finally indicates distinct motivational trends that address various needs of the learners.

Structure Support vs. Language Refinement—According to the table, intermediary group (Group 1) depended more on AI in both generative and structural activities, 42.1% used AI in generating the structure and 21.7 percent used AI in language refinement compared to the advanced group (Group 2), which used AI 21.7% in both generative and structural assignments. In like manner Group 1 employed AI more in the stage of Drafting and Generating Initial Content with Group 1 and Group 2 proportionate to 55.3 and 43.5 respectively. It implies that in terms of the intermediate learners, AI will act as a scaffolding assistance in the sense that it will enable them to generate articles in a blank form and deal with challenges in structuring their thoughts and writing.

The strategies of advanced learners, namely, the Perfectionist approach as opposed to the other two groups (Intermediate group and Group 3), advanced group (Group 2) were more likely to apply AI to optimization and quality control. Unlike the dependence on grammar checking in the case of lower level learners, the data revealed that 47.8% of the learners in the advanced group depended on AI in terms of Polishing language as compared to 26.3% in the intermediate group. Moreover, the high level group was much more likely to make use of AI to do language polishing, as the rates were 17.4% and 10.5% as opposed to Group 1..

These findings indicate that EFL learners' motivations for using AI shift as their language proficiency improves. The data analysis above suggests that intermediate learners seem to use AI to compensate for weaknesses in their writing skills (e.g., "I don't know how to

structure my writing, so I let AI write it for me"). Conversely, advanced learners with independent drafting and outlining abilities use AI as a post-writing verification tool to ensure linguistic accuracy and stylistic elegance. These findings corroborate the idea that in the process of EFL learners using AI-assisted writing, the AI's role varies depending on the user's language level, acting as a "co-writer" for lower-level students or an "editor" for higher-level learners.

4.4 Findings for RQ2: Factors Influencing Acceptance and Resistance

To address the second research objective, this section analyzes the drivers that motivate English learners to adopt AI tools and the concerns that lead to resistance.

4.4.1 Drivers of Acceptance

To identify key factors influencing AI tool acceptance, this section conducts descriptive statistical analysis on relevant constructs from Section 3, including: General Perce ption (GPI), Current Usage and Support (Part 2), Impact on Experience (Part 3), and Future Expectations (Part 5). Results are summarized in Table 4.

Table 4:

Descriptive Statistics for Acceptance Factors (N=61)

	Mean (M)	Std. Deviation (SD)	Interpretation
General Perception (Part 1)	3.79	.523	High Acceptance
Current Use & Support (Part 2)	3.72	.516	High Acceptance
Impact on Experience (Part 3)	3.73	.518	High Acceptance
Future Expectations (Part 5)	3.66	.395	Moderate-to-High

The qualitative examination has shown that the rates of agreement concerning the acceptance of AI tools were very high among the respondents. As indicated in Table 4, General perception had the highest mean score (M=3.79) which means that the participants are strongly convinced that AI can enhance the quality of higher education. It is closely related to the Impact on Student Experience (M=3.73), as it implies that students in question get some tangible benefits out of using AI-powered tools to help them in their learning.

Luckily, Current Use (Part 2) gave the same score (M=3.72), which is only 0.01 points lower than the average score of Impact on Student Experience (Part 3). This is contrary to the widely held view of a lag in the development of institutions but this represents that the respondents are really positive about the fact that their academic climate is promoting or slowly becoming acculturated with AI technology. The adoption rate of AI can be enhanced by such a conducive environment. The lowest mean score (M=3.66) was on Future Expectations (Part 5) although it was still on the high-mid to high range. The standard deviation of this category

is extremely low (SD=.395), and this fact proves that students have a very coherent opinion c oncerning this part: even the majority of the population is optimistic about the AI, however, it s expectations any progress of AI development are more realistic rather than the blind promot ion of this technology which is sharpened by hypothetical speculations.

4.4.2 Barriers and Resistance Factors

While acceptance levels are high, the study also identified specific areas of resistance.

Table 5 presents the descriptive statistics for individual items within the "Concerns" s cale (Section 3, Part 4).

Table 5:

Descriptive Statistics for Resistance Factors (Concerns) (N=61)

Item	Statement	Mean (M)	Std. Deviation (SD)
Q14	Concern about data privacy	3.66	.964
Q18	Awareness of AI policies*	3.62	.840
Q15	Concern about equity in educational access	3.59	.844
Q16	Concern that AI may replace teachers	3.57	1.087
Q17	Ethical concerns about algorithms	3.49	.906

Note: Q18 measures policy awareness, where a higher score indicates better knowledge, servi ng as a contextual factor rather than a direct concern.

Table 5 reveals that privacy and security are the two issues that make EFL learners resistant to AI. Of all the questions in this section, Q14 recorded the highest mean score (M=3.66) meaning that the students were more worried about the way their personal data would be used in the AI systems. This goes in tandem with the perceived risk barrier with technological adoption.

Surprisingly, under Q16 about the replacement of teachers by AI, although the mean score (M=3.57) was the highest as compared to the rest of the questions, the standard deviation (SD=1.087) was the largest. This implies that there is a large difference in the views of the respondents: some of the students think that AI is a serious threat to the teaching profession whereas others might think that AI is not capable of entirely destroying teachers in the teaching profession.

In addition, question 18 demonstrates that students demonstrate quite a sufficient knowledge of AI policies (mean=3.62). It means that even the sufficiently high rate of policy awareness students are still worried about privacy (question 14) and fairness (question 15), which is to say the rule of the institution might not be enough to get rid of the deeply rooted fears.

In order to complement these statistics, this paper used a six-end topic analysis approach to examine the qualitative responses to Q2 (biggest challenge or confusion) of open ended questions. This paper used coding of the narratives of the participants to discover three different types of conflicting topics namely: (1) Cognitive distrust and accuracy verification, (2) Erosion of personal agency and creativity, and (3) Interaction barriers and prompt engineering.

Theme 1: Cognitive Distrust and Accuracy Verification – In line with quantitative research outcomes on the ethical concerns, students saw the problem of hallucinations and the inability to check the information produced by AI as the most acute practical problems. Other participants demonstrated that they did not trust the output of the AI and thus it introduced a mental load to the writing process.

Many students have openly identified the danger of being misinformed, and that Artifi cial Intelligence can create artificial data. Nevertheless, the problem is even more challenging as it is not only the mistakes, but the failure of some students to spot them. As one participant stated:

"I'm not sure if the AI's answer is correct."

This ambiguity constitutes a verification barrier a stage of the drafting can be squande red on verifying the fact, which is much more devastating to the utility of the tool itself.

Theme 2: The Demise of Personality Agency and Creativity - in addition to the pre ssure that technological accuracy causes, deep psychological obstacles to the loss of the voice of a writer arise within the students. In response, particularly high-skill students are also conc erned that excessive use of AI will result in the homogenization of their writing, or that it will inhibit intellectual and creative development.

One of the respondents explained the conflict between utilization, on the one hand, an d not losing oneself, on the other:

"AI-generated writing responses are overly formal and formulaic, requiring personal refinement of writing style… Definitely, I feel that my own creative space is being reduced."

This anxiety of formulaic production is one that is closely connected with dependency anxiety. The people fear that the comfort of AI will turn out to be a trap causing a loss in auto nomy. There was another student, who was also quite honestly acknowledged in the survey:

"The biggest challenge I face is these AI tool will let me highly rely on using them."

Theme 3: Interaction Barriers and Prompt Engineering The principal and exclusi ve theme that was identified through qualitative data analysis is as follows: or so, the activity of artificial intelligence is determined by whether the user is able to give instructions (i. e. AI literacy). Contrary to the use of the simple search engines, AI demands a process of logical n egotiation among the users, otherwise put, the users have to learn to pose questions first befor e they can receive the answers they seek.

This interaction appeared to be rather challenging to some of the participants: AI outp uts were not always very complex and practicable.

"Answers given by AI tools are sometimes hard for me to read because they may use many professional terms that I'm not very familiar with."

Nonetheless, other students came to the realization that the problem was sometimes p osed by the user and no longer by the tool. An important insight provided by one of the partic ipants was with regards to providing clear instructions:

"It depends on the commands we give to AI. If we provide logical and clear instructions, then AI will produce results that fulfill our needs. By the way, it is better to have our original ideas first."

This opens one important result of this research: the reluctance or inability of the stud ents to use AI tools is frequently a result of their deficiency of the skill of Prompt engineerin g. It occurred to students that they needed to learn the art of fine instructions, otherwise they r isked getting formulaic or wrong answers, to which also there was a learning curve.

Chapter 5 Conclusion

5.1 Introduction

Based on the results introduced in Chapter 4 on the quantitative and qualitative data, t his chapter will attempt to place the results provided in context of existing literature and theor etical studies.

To conclude, the data analysis in Chapter 4 demonstrates one competency-related trait of student AI adoption many students of different language proficiency possess different moti vations of using AI to write a book, AI can be used as a leveling device or an optimization de vice. What is more, the participants are also characterised with the traits of a Critical adopters type as they are highly recognitive to the perceived usefulness of AI and also share a concern on privacy and accuracy. These are the dynamic relationships that are going to be referred fur ther below.

5.2 Discussion of Findings

The sub-section is an attempt to generalize the quantitative above results and qualitati ve above insights to draw answers to the research questions. The main object of the research was to explore the incentives that contribute to the use of AI writing instruments among Chin ese EFL learners and to check which factors predispose them to accept or reject them.

According to the research, the use of artificial intelligence by EFL learners is not a si mple issue of convenience but also a strategic step to improve the problem of academic writin g in the second language. Considering the data in the light of the theoretical approaches of the Technology Acceptance Model (TAM) and Sociocultural Theory (SCT), two crucial dynamic s will be unveiled in this study: the dependence on proficiency of AI usage patterns (Research

Question 1), and the conflict between perceived utility and critical skepticism (Research Question 2).

5.2.1 Motivations and Role of Proficiency: From Scaffolding to Optimization

The initial research question will be focused mainly on the motivation of students to use artificial intelligence (AI). According to the data provided in Chapter 4, cognitive offloading is the most prominent reason behind the use of these tools. Since the frequency of AI application is greatest in the Paraphrasing and Drafting steps which is almost half of total use (see Figure 3 in Chapter 4) it follows that students are indeed utilizing AI to help in closing the cognitive conception and language expression gap. This will be compatible with the results of Song and Song (2023) who discovered that AI technology among EFL learners has a significant impact on facilitating less cognitive load so that the students can concentrate on content instead of structure.

Nevertheless, the most important discovering of the study is that such motivation is not permanent but changes depending on the development of language skills of the learners. Cross-analysis (see Figure 3 in Chapter 4) gives us an important insight into the usage habits of intermediate and advanced learners (Group 1 and Group 2) and depicts distinct differences.

The students with intermediate levels of academic writing demonstrated a strong dependency on the functions of Drafting (55.3) and the use of Outlining (42.1), which means that AI becomes a scaffolding tool at this level. Using the provisions of the sociocultural theory by Vygotsky (1978), AI is a kind of a more knowledgeable person that can work within the Zone of Proximal Development (ZPD) of the student. Such students tend to have ideas, which they are not in a position to package in structured ways due to their inability to communicate in

English. Artificial Intelligence technologies accord the requisite "positive reinforcement whic h allowed it to generate English texts that they were not able to do by themselves.

Advanced learners on the other hand tend to become more perfectionists when it com es to academic writing. The analysis of the data presented in Chapter 4 indicates that they are more dependent on AI to check grammar (47.8%), and polish (17.4%). To this audience, AI i s no longer a construction but an optimization that will help them finish their writing. This rol e change means that the role of AI will be to correct weaknesses (producing text) as the langu age proficiency of learners enhances, but rather to upgrade the quality (refinishing text). This supports the opinion of Wang (2024) about generative AI; advanced users can more easily ass ess and refine the results of the tool and, accordingly, opt to use the latter to improve the styl e, not necessarily to generate anything required.

To sum up, the motivation of EFL learners to use AI is not a permanent design, but an active developmental process: at lower level, AI becomes a learning scaffold, at the high leve l, it becomes a quality assurance mechanism.

5.2.2 Balancing Acceptance and Resistance

The second research question sought the challenge of factors that influence the accept ance or resistance of the adoption of AI tools by students. The findings indicated that Chinese EFL students are the features of the critical adopters, showing the high level of awareness of artificial intelligence efficiency and being conscious of its risks and potential limitations.

As one would expect, in line with the Technology Acceptance Model (TAM), the mea n values of both General Perception (Part 1) and Impact on Experience (Part 3) were high, an d it is the perceived utility, which is the driver of AI acceptance. Students usually perceived

AI as a revolutionary device that will help to enhance the quality of education. Moreover, the score of Current Institutional Use is rather high (M = 3.72), which gives us an idea that the ac ademic environment is an important factor affecting the choice of students in relation to the a doption of AI. Contrary to the previous researches where resistance was usually based on inst itutional prohibition, this research proposes that an enabling environment will reduce the resis tance to adoption and AI can be an accepted and valid academic support.

Despite this acceptance, significant resistance persists, primarily centered on Perceive d Risk.

Data Privacy: Students showed the highest level of concern regarding data privacy (Section 3, Q14, M = 3.66). This indicates that while students are willing to sacrifice some private data for the convenience of using AI, the "black box" nature of AI data processing remains a major psychological barrier.

Polarization of Professional Identity: Notably, there was a significant difference in students' concerns about whether AI could replace teachers (SD = 1.087, Section 3, Q16). This polarization reveals a division within the student groups: some view AI as a threat to the humanization of teaching, while others believe that AI cannot fully replicate the brilliance of human teachers.

Cognitive Distrust and Agency: The qualitative analysis of Section 4 demonstrates t hat another cause of EFL learners being resistant to AI is real failure (hallucinating phenomen a) and the possibility of becoming deprived of their agency. Moreover, students lack absolute trust in the work of AI and have to constantly check the credibility of the output of AI. Theref ore, even though AI will help them save a significant amount of time during the drafting phas e, this perk will be compensated during the stage of checking the facts.

This research is important since it shows that there is a third significant source of opp osition that this data sheds light on which is Interaction barriers. In the open-ended question, t here were reports of students who claimed that the generated content by AI was not easy to fo llow or that the content included some errors making them feel frustrated. One, however, can consider it due to the fact that, as recent literature on AI literacy points out, this issue can be more attributed to the inability of the users to accurately follow the instructions of AI rather t han the inability of the tool itself.

Much needed and pointed out by Woo et al. (2023) and Alzubi (2024) is that the use o f generative AI needs a novel form of literacy, the capability to create accurate logical instruc tions to use. Indeed, those who pass through AI successfully (they do as revealed in the qualit ative feedback in Section 4, Q3) are the ones who simply understand how to effectively instru ct AI. Resistance, on the other hand, occurs when the students cannot deliver results as expect ed because of lack of clarity in instructions. This implies that the so-called technical constrain ts (resistance) are, in fact, the phenomenon of the literacy gap, and it is high time that prompti ng engineering training should be included in the EFL curriculum.

5.3 Pedagogical Implications

The findings of this study provide practical insights for educators and policymakers in private higher education institutions. The data suggests that students at different levels are "critical adopters" with varying needs (depending on their ability levels), therefore a "one-size-fits-all" AI integration strategy may be ineffective. Below are some recommended instructional strategies.

5.3.1 Differentiated AI Pedagogy Based on Learner Proficiency

In this paper, it has been found that artificial intelligence (AI) serves purposes with dif ferent types of learners: it can act as a learning guide to Weak and Intermediate learners and a s an optimization system to Advanced learners. Thus, teachers ought to implement differentia ted approaches in order to embrace AI technology.

With beginner/intermediate learners: The teachers are to promote the use of AI in the i nitial phase of writing (brainstorming and outlining) in order to diminish the mental load and overcome the second language writing obstacle. Teachers can make students hand in an AI-g enerated outline and then a self-written one so that AI could assume a structural guiding role i n ZPD (Zone of Proximal Development) of students.

In order to avoid highly depending on an AI tool, a teacher must employ a so-called st rategy of scaffolding withdrawal (according to SCT): A teacher must clearly declare that AI u tilization is confined to the stage of brainstorming and asks students to provide an argumentat ion log, explaining why and how AI proposals are going to be modified at the final stage of w riting. This will make AI support but will not exclude being able to ensure that students are in volved in the real process of writing but in a cognitive manner.

Advanced learners: The teaching process should be devoted to the critical analysis an d style perfecting. Teachers may provide the tasks when the students are going to compare dr afts produced by AI with human writing, and see small nuances of the tone and expression. T o provoke the formation of the own style of writing among the students, a teacher must encou rage a student to apply AI as a peer reviewer to write and correct grammar and consistency b ut not to create a piece of writing.

5.3.2 Cardinal Teaching in AI Literacy and Rapid Engineering

Qualitative studies have demonstrated a general state of interaction barriers caused by students improve with poor instructions as a result of receiving incorrect or formulaic answer s. It is thus essential to apply AI literacy to the academic writing programs.

It implies that this should primarily be aimed at the development of students in their s kills of prompt engineering, as opposed to simply letting the students use or not use tools. Th e students should be trained to format accurate and context specific prompts (e.g., provide def inite idea of who the audience is, tone and level of the academic text) to obtain high output qu ality.

Considering prompt design as a kind of rational negotiation process, like the recent lit erature postulates (Woo et al., 2023 & Alzubi, 2024), will make students less afraid of AI tool dependency because they actively manage tools instead of relying on them and, accordingly, depend less on this technology than in this study.

5.3.3 Addressing Ethical Concerns Through Transparent Policy and Guided Use

Given students' high concerns about data privacy and the "illusion" (accuracy), institutions must eliminate ambiguity surrounding the use of AI in academic writing.

1. **Policy Transparency:** Institutions should develop clear guidelines clarifying how AI tools process data to alleviate students' privacy concerns.
2. **Process-Oriented Assessment:** To address the "cognitive distrust" regarding accuracy, assessment methods should shift from an "outcome-oriented" (focusing solely on the final paper) approach to a "process-oriented" one. Educators can require students to submit "AI audit traits" — reflective logs documenting which parts of their papers used AI assistance,

how they verified the information, and how they revised the AI-generated content. This not only curbs plagiarism but also cultivates students' critical evaluation skills regarding AI output, turning the risk of misinformation into a learning opportunity.

5.4 Limitations and Recommendations for Future Research

While this study provides valuable insights into the AI-assisted writing habits of Chinese English learners, some limitations must be acknowledged when interpreting the findings. These limitations also point to fruitful directions for future research.

5.4.1 Limitations of the Study

To begin with, there is a significant weakness caused by the sample size and composit ion. The data used in this study is based on the population of 61 Chinese students (N=61) in t he Faculty of Arts and Social Science and Faculty of Education in one of the Malaysian priva te higher education institutions so only a small number of students are used. Thus, the results can only mirror the particular academic culture and curriculum in these departments and not t o all Chinese EFL learners in Malaysia or to student groups in other countries with different s ystem of assessments.

Second, there may be language barriers that will impact data accuracy. The questionn aire was designed in English, which means that those who have lower levels of English profic iency (e.g., B1) might experience difficulty in comprehension of such complicated terms as A I ethics or technological constraints. Such a possible misconception might result in unintentio nal biases, i.e. students selecting neutral or incorrect answers because they got confused, and not because they shared their real opinions.

Third, the study uses self-reported information and it is prone to buyer-societal expect ation bias. Students can be under-identified with their dependence on AI or may overdo their ethical issues to prove their academic responsibility. Thus, patterns of AI-use as are detailed i n the report might not represent the real-life usages of AI-use in the household all the way.

5.4.2 Recommendations for Future Research

To reduce the possible shortcomings of this research and elaborate on the current findi ngs, further studies can take into account the following directions:

Scaling up of the sample size: The research in the future must include a more large-s caled and diversified sample of students in addition to the other students in the other private a nd public Malaysian universities, or they can carry out comparative analysis on other internati onal students of Chinese origin in other countries like the United Kingdom and Australia to d etermine whether the usage habits of the students in this study are applicable in the other cou ntries.

Minimizing language obstacles: Future research instruments may also utilize the use of bilingual questionnaires (in both Chinese and English) to ensure the accuracy of the data o btained as well as reducing understanding bias among the lower language learners.

Methodological diversification: The research might be furthered by applying mixed methods of research as longitudinal tracking and focus group interviews to provide insightful information. Researchers can access more objective data by following the real-time writing pr ocess of students across a semester, which is especially beneficial to discover possible dynam ically changing circumstances concerning the dependence of EFL learners on the AI.

5.5 Conclusion

In conclusion, this study provides a comprehensive analysis of the role of AI-assisted writing tools in English as a Foreign Language (EFL) learners in Chinese private higher education institutions. The research indicates that in EFL writing, AI is no longer merely a su pplementary tool, but has become a core participant in the student's writing process. Its functions vary depending on learner proficiency, providing both structural support and style optimization.

Despite the widespread acceptance of these tools, EFL learners still have legitimate concerns regarding privacy protection, accuracy assurance, and the risk of career substitution. The research suggests that the future of artificial intelligence in education lies not in its prohibition, but in cultivating "AI literacy" — teaching students to navigate this technology with critical thinking and ethical awareness. Educators can ensure that AI becomes a catalyst, not a substitute, for EFL learners' language learning by implementing differentiated instruction strategies and systematic prompting engineering training.

Reference

[1] Ahmed, S. K., Mohammed, R. A., Nashwan, A. J., Ibrahim, R. H., Abdalla, A. Q., Ameen, B. M. M., & Khidhir, R. M. (2025). Using thematic analysis in qualitative research. *Journal of Medicine Surgery and Public Health*, *6*, 100198. https://doi.org/10.1016/j.glmedi.2025.100198

[2] Aldabbus, S., & Almansouri, E. (2022). Academic writing difficulties encountered by university EFL learners. *British journal of English linguistics*, *10*(3), 1-11.

[3] Alzubi, A. a. F. (2024). Generative Artificial Intelligence in the EFL Writing Context: Students' Literacy in Perspective. *Qubahan Academic Journal*, *4*(2), 59–69. https://doi.org/10.48161/qaj.v4n2a506

[4] Apriani, E., Cardoso, L., Obaid, A. J., Muthmainnah, N., Wijayanti, E., Esmianti, F., & Supardan, D. (2024). Impact of AI-Powered ChatBots on EFL Students' writing Skills, Self-Efficacy, and Self-Regulation: A Mixed-Methods Study. *Global Educational Research Review*, *1*(2), 57–72. https://doi.org/10.71380/gerr-08-2024-8

[5] Davis, F. D. (1987). User acceptance of information systems: the technology acceptance model (TAM).

[6] Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319–340. https://doi.org/10.2307/249008

[7] Dawadi, S. (2020). Thematic Analysis Approach: A step by step guide for ELT research practitioners. *Journal of NELTA*, *25*(1–2), 62–71. https://doi.org/10.3126/nelta.v25i1-2.49731

[8] Guo, K., Li, Y., Li, Y., & Chu, S. K. W. (2023). Understanding EFL students' chatbot-assisted argumentative writing: An activity theory perspective. *Education and Information Technologies*, *29*(1), 1–20. https://doi.org/10.1007/s10639-023-12230-5

[9] Khalifa, M., & Albadawy, M. (2024). Using artificial intelligence in academic writing and research: An essential productivity tool. *Computer Methods and Programs in Biomedicine Update*, *5*, 100145. https://doi.org/10.1016/j.cmpbup.2024.100145

[10] Kim, J., Yu, S., Detrick, R., & Li, N. (2024). Exploring students' perspectives on Generative AI-assisted academic writing. *Education and Information Technologies*. https://doi.org/10.1007/s10639-024-12878-7

[11] Krejcie, R.V., & Morgan, D.W., (1970). Determining Sample Size for Research Activities. Educational and Psychological Measurement.

[12] Liang, J., Huang, F., & Teo, T. (2024). Understanding Chinese University EFL Learners' Perceptions of AI in English Writing. International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT), 14(1), 1-16. https://doi.org/10.4018/IJCALLT.358918

[13] Mojica, L. A. (2010). An investigation on self-reported writing problems and actual writing deficiencies of EFL learners in the beginners' level. *TESOL journal*, *2*(1), 24-38.

[14] Ozfidan, B., El-Dakhs, D. a. S., & Alsalim, L. A. (2024). The use of AI tools in English academic writing by Saudi undergraduates. *Contemporary Educational Technology*, *16*(4), ep527. https://doi.org/10.30935/cedtech/15013

[15] Qazi, M. H., Munir, T., Zaigham, M. S., & Mughal, U. A. (2025). THE IMPACT OF AI-ASSISTED SELF-REGULATED LEARNING, SPECIFICALLY CHATGPT, ON

STUDENTS'ENGAGEMENT AND WRITING SKILL ENHANCEMENT. *Journal of Applied Linguistics and TESOL (JALT)*, *8*(1), 393-415.

[16] Ryan, R. M., & Deci, E. L. (2000). Intrinsic and Extrinsic Motivations: classic definitions and new directions. *Contemporary Educational Psychology*, *25*(1), 54–67. https://doi.org/10.1006/ceps.1999.1020

[17] Selim, A. S. M. (2024). The transformative impact of AI-powered tools on academic writing: Perspectives of EFL university students. *International Journal of English Linguistics*, *14*(1), 14.

[18] Song, C., & Song, Y. (2023). Enhancing academic writing skills and motivation: assessing the efficacy of ChatGPT in AI-assisted language learning for EFL students. *Frontiers in Psychology*, *14*, 1260843.

[19] Taber, K. S. (2018). The use of Cronbach's Alpha when developing and reporting research instruments in science education. *Research in Science Education*, *48*(6), 1273–1296. https://doi.org/10.1007/s11165-016-9602-2

[20] Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Cambridge, MA: Harvard University Press.

[21] Wang, C. (2024). Exploring Students' Generative AI-Assisted Writing Processes: Perceptions and Experiences from Native and Nonnative English Speakers. *Technology Knowledge and Learning*. https://doi.org/10.1007/s10758-024-09744-3

[22] Woo, D. J., Guo, K., & Susanto, H. (2023). Cases of EFL secondary students' prompt engineering pathways to complete a writing task with ChatGPT. *arXiv preprint arXiv:2307.05493*.

Appendices

Appendix 1

Questions for questionnaire [Noted: Section 2 and section 3 are adapted from Apriani et al. (2024) and Vera (2023).]

Thank you for your participation in answering this questionnaire. Your responses will be treat ed with strict confidence and individuals will not be identified in any report or publication. Pl ease answer all questions as accurately as you can.

Section 1: Demographic and background information

➢ For each question, please tick the appropriate box or fill in the blanks.

Background Information

Q1. Gender:

Male

Female

Q2. Age:

Q3. Your native language:

English

Chinese

Malaysian

Other (please specify):

Q4. What is your current academic level?

Foundation

Undergraduate

Postgraduate

Other (please specify):

Survey on the Use of AI-Assisted Writing Tools

Q5. Have you had any experience with artificial intelligence (AI)

None

Limited

Moderate

Extensive

Q6. Which of the following AI tools have you used to assist with English writing? (You may select multiple)

ChatGPT (e.g., GPT-3.5, GPT-4)

Grammarly

Quillbot

Jasper

Copy.ai

Deepseek

Other (please specify)

Q7. How often do you use AI tools for learning purposes? Please tick (Ö) one that best applie s.

Never (I will skip the rest of this survey)

Rarely (Less than once a month)

Occasionally (1-3 times per month)

Frequently (1-2 times per week)

Very Frequently (3 or more times per week)

Q8. At which stages of the English writing process do you typically use AI tools? (You may s elect multiple)

Brainstorming and generating ideas

Outlining the structure

Drafting and generating initial content

Paraphrasing and rewording sentences

Correcting grammar and spelling errors

Polishing language and improving word choice

Proofreading and final checking

English Proficiency Assessment

Please provide one of the following that best represents your current English proficiency. Yo ur information will be kept strictly confidential.)

Q9. Please select the ONE option that best represents your English proficiency:

CET-4, Score

CET-6. Score

IELTS, Overall Band Score

TOEFL, Total Score

Other Standardized Test (e.g., TEM, PTE, Duolingo, etc.): Test Name: _____ Score: __ _____

I have not taken any of the above tests

English Proficiency Self-Assessment Scale

Please assess your English skills based on your ability WITHOUT the assistance of AI tools.

Q10. Writing Skill: Please select ONE

Beginner (A1): Can write simple sentences.

Elementary (A2): Can write short memos or descriptions.

Intermediate (B1): Can write coherent text on familiar topics.

Upper-Intermediate (B2): Can write detailed essays, expressing viewpoints.

Advanced (C1): Can write complex, well-structured texts with appropriate style.

Proficient (C2): Can write on any topic with precision and nuance.

Section 2: Writing Self-Efficacy Scale

Please indicate your level of agreement with the following statements using the Likert scale b elow.

• 1 = Strongly Disagree

• 2 = Disagree

• 3 = Neutral

• 4 = Agree

• 5 = Strongly Agree

Q1. I possess a strong sense of assurance when it comes to my ability to write in the English l anguage.

Q2. I have the skill to effectively create written content in English.

Q3. I compose written content in the English language while employing a fundamental frame work of logical organization.

Q4. With sufficient dedication and diligence, I am confident in my ability to develop proficie nt writing skills in the English language.

Q5. I possess the ability to compose essays that are pertinent and suitable in accordance with the given task.

Q6. I adeptly articulate my perspective or assertions with precision and efficacy in the contex t of English composition.

Q7. I am confident in my ability to excel in writing classes, despite their challenging nature.

Section 3: Statements

Please indicate your level of agreement with the following statements regarding Artificial Intelligence (AI) in higher education using the Likert scale below.

• 1 = Strongly Disagree

• 2 = Disagree

• 3 = Neutral

• 4 = Agree

• 5 = Strongly Agree

Part 1: General Perception of AI in Higher Education (GPI)

Q1. Artificial intelligence has great potential to improve the quality of higher education.

Q2. I believe AI can positively transform higher education.

Q3. AI can personalize students' learning experiences.

Q4. I am aware of the implementation of AI in my educational institution.

Q5. I have experienced concrete benefits in higher education due to the use of AI.

Part 2: Current Use of AI in Higher Education (UAI)

Q6. My institution actively uses AI systems to suggest courses or learning resources.

Q7. I have had access to online learning platforms that use AI to assess my progress and adap

t

content.

Q8. Chatbots have been implemented in my educational institution to support students.

Q9. AI is used in research or data analysis in my area of study.

Q10. In my experience, the impact of AI on higher education has been positive.

Part3: Impact of AI on the Student Experience (ISE)

Q11. AI personalizes learning content according to my needs and preferences.

Q12. AI has improved my ability to keep pace with online classes.

Q13. AI has influenced academic management in the educational institution.

Part 4: Concerns About the Use of AI in Higher Education (CAU)

Q14. I am very concerned about the privacy of my personal data when AI systems are used.

Q15. I have many concerns about equity in education access due to the use of AI.

Q16. I am greatly concerned that AI may replace teachers in the future.

Q17. I have many ethical concerns about how AI algorithms are used in education.

Q18. I feel very well-informed about policies and practices related to AI in my educational institution.

Part 5: Future Expectations of AI in Higher Education (EAI)

Q19. I fully believe that AI will play an even more significant role in higher education in the future.

Q20. I greatly hope that AI will enhance the quality of learning in the coming years.

Q21. I have high expectations of how AI could make higher education more accessible.

Q22. I fully believe that AI will be essential in online education in the future.

Q23. I largely think specific areas of higher education will benefit from AI development.

Section 4: Open-Ended Questions

Q1. What do you think are the specific benefits of using AI writing tools for your English wri ting capability? (e.g., in vocabulary, grammar, sentence structure, or text organization). Pleas e illustrate with a concrete example.

Q2. What are the biggest challenges or confusions you face when using AI-assisted writing? (For instance, do you find it hard to judge if AI's suggestions are correct, or feel that your own creative space is being reduced?).

Q3. What initially motivated you to try using AI tools for English writing? Please describe th e situation and how you felt when you used it for the first time.

Appendix 2

SPSS Output

Appendix A: SPSS Reliability analysis output

Writing Self-efficacy scale

Reliability Statistics

Cronbach's Alpha	N of Items
.790	7

Overall Perception and Attitudes toward AI (Section 3)

Reliability Statistics

Cronbach's Alpha	N of Items
.760	23

Appendix B: SPSS Frequency table

Q1. Gender

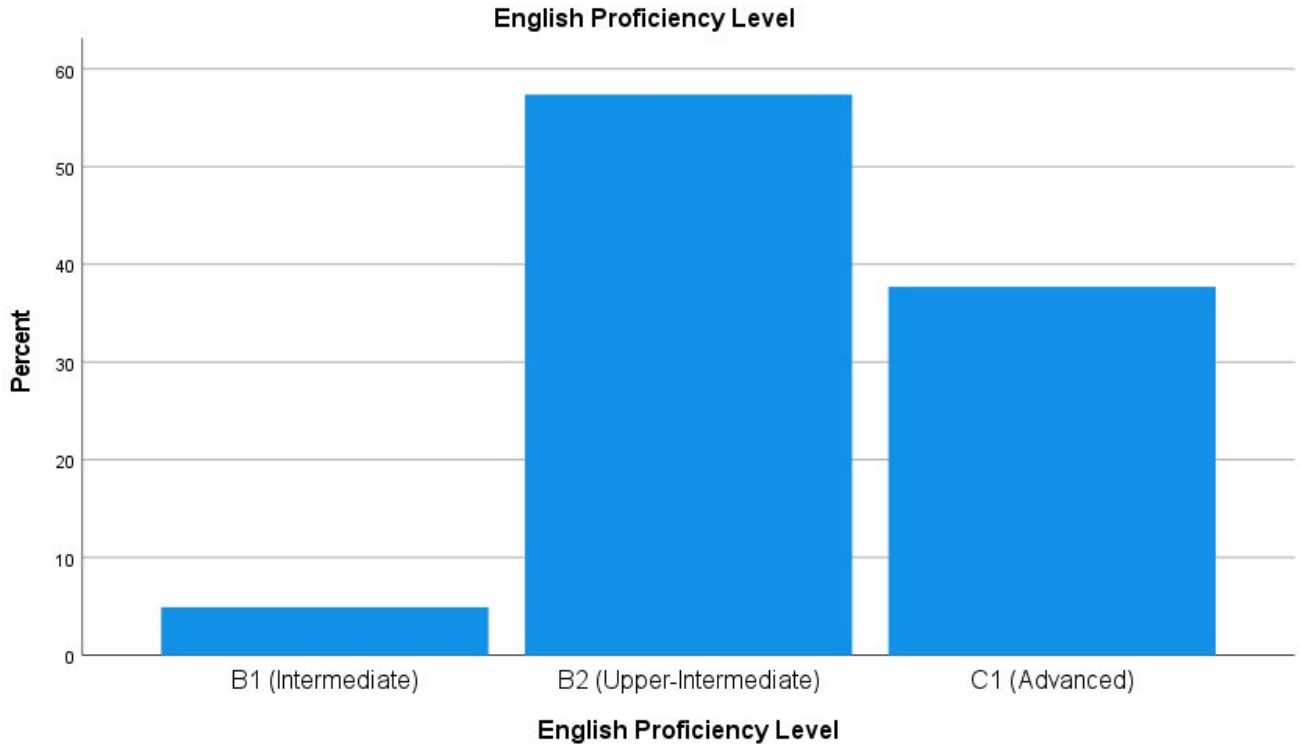
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	9.0	9.0	9.0
	Female	37	55.2	55.2	64.2
	Male	24	35.8	35.8	100.0
	Total	67	100.0	100.0	

Q2. Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18	2	3.0	3.3	3.3
	19	3	4.5	4.9	8.2
	20	15	22.4	24.6	32.8
	21	19	28.4	31.1	63.9
	22	16	23.9	26.2	90.2
	23	5	7.5	8.2	98.4
	25	1	1.5	1.6	100.0
	Total	61	91.0	100.0	
Missing	System	6	9.0		
Total		67	100.0		

English Proficiency Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	B1 (Intermediate)	3	4.5	4.9	4.9
	B2 (Upper-Intermediate)	35	52.2	57.4	62.3
	C1 (Advanced)	23	34.3	37.7	100.0
	Total	61	91.0	100.0	
Missing	System	6	9.0		
Total		67	100.0		



Appendix C: Cross-tabulation statistics

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Proficiency_Group * Q8_Brainstorming	61	91.0%	6	9.0%	67	100.0%
Proficiency_Group * Q8_Outlining	61	91.0%	6	9.0%	67	100.0%
Proficiency_Group * Q8_Drafting	61	91.0%	6	9.0%	67	100.0%
Proficiency_Group * Q8_Paraphrasing	61	91.0%	6	9.0%	67	100.0%
Proficiency_Group * Q8_Grammar_checking	61	91.0%	6	9.0%	67	100.0%
Proficiency_Group * Q8_Polishing	61	91.0%	6	9.0%	67	100.0%
Proficiency_Group * Q8_Proofreading	61	91.0%	6	9.0%	67	100.0%

Proficiency_Group * Q8_Outlining Crosstabulation

			Q8_Outlining		
			.00	1.00	Total
Proficiency_Group	1.00	Count	22	16	38
		% within Proficiency_Group	57.9%	42.1%	100.0%
	2.00	Count	18	5	23
		% within Proficiency_Group	78.3%	21.7%	100.0%
Total		Count	40	21	61
		% within Proficiency_Group	65.6%	34.4%	100.0%

Proficiency_Group * Q8_Drafting Crosstabulation

			Q8_Drafting		
			.00	1.00	Total
Proficiency_Group	1.00	Count	17	21	38
		% within Proficiency_Group	44.7%	55.3%	100.0%
	2.00	Count	13	10	23
		% within Proficiency_Group	56.5%	43.5%	100.0%
Total		Count	30	31	61
		% within Proficiency_Group	49.2%	50.8%	100.0%

Proficiency_Group * Q8_Paraphrasing Crosstabulation

			Q8_Paraphrasing		
			.00	1.00	Total
Proficiency_Group	1.00	Count	18	20	38
		% within Proficiency_Group	47.4%	52.6%	100.0%
	2.00	Count	11	12	23
		% within Proficiency_Group	47.8%	52.2%	100.0%
Total		Count	29	32	61
		% within Proficiency_Group	47.5%	52.5%	100.0%

Proficiency_Group * Q8_Grammar_checking Crosstabulation

			Q8_Grammar_checking		
			.00	1.00	Total
Proficiency_Group	1.00	Count	28	10	38
		% within Proficiency_Group	73.7%	26.3%	100.0%
	2.00	Count	12	11	23
		% within Proficiency_Group	52.2%	47.8%	100.0%
Total		Count	40	21	61
		% within Proficiency_Group	65.6%	34.4%	100.0%

Proficiency_Group * Q8_Polishing Crosstabulation

			Q8_Polishing		
			.00	1.00	Total
Proficiency_Group	1.00	Count	34	4	38
		% within Proficiency_Group	89.5%	10.5%	100.0%
	2.00	Count	19	4	23
		% within Proficiency_Group	82.6%	17.4%	100.0%
Total		Count	53	8	61
		% within Proficiency_Group	86.9%	13.1%	100.0%

Proficiency_Group * Q8_Proofreading Crosstabulation

			Q8_Proofreading		
			No	Yes	Total
Proficiency_Group	1.00	Count	34	4	38
		% within Proficiency_Group	89.5%	10.5%	100.0%
	2.00	Count	21	2	23
		% within Proficiency_Group	91.3%	8.7%	100.0%
Total		Count	55	6	61
		% within Proficiency_Group	90.2%	9.8%	100.0%

Appendix D: Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Pary1_GPI_Mean	61	2.40	4.80	3.7934	.52277	-.061	.306	-.162	.604
Pary2_Use_Mean	61	2.20	4.80	3.7180	.51559	-.620	.306	.183	.604
Part3_Impact_Mean	61	2.67	5.00	3.7268	.51822	.184	.306	.002	.604
Part5_Future_Mean	61	2.60	4.60	3.6557	.39519	-.469	.306	.633	.604
Valid N (listwise)	61								

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Q14. I am very concerned about the privacy of my personal data when AI systems are used.	61	1	5	3.66	.964	-.633	.306	.450	.604
Valid N (listwise)	61								

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Q15. I have many concerns about equity in education access due to the use of AI.	61	2	5	3.59	.844	.222	.306	-.656	.604
Valid N (listwise)	61								

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Q16. I am greatly concerned that AI may replace teachers in the future.	61	1	5	3.57	1.087	-.518	.306	-.191	.604
Valid N (listwise)	61								

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Q17. I have many ethical concerns about how AI algorithms are used in education.	61	1	5	3.49	.906	-.461	.306	.566	.604
Valid N (listwise)	61								

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Q18. I feel very well-informed about policies and practices related to AI in my educational institution.	61	2	5	3.62	.840	-.054	.306	-.533	.604
Valid N (listwise)	61								

Appendix 3

Excel-Survey on the Use of AI in English Academic Writing Responses

Survey on the Use of AI in English Academic Writing Responses.pdf

Survey on the Use of AI in English Academic Writing (Responses) Sheet 1.pdf