



# The Influence of Artificial Intelligence on Interpersonal Relationship Among Undergraduate Students

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## ABSTRACT

This study explores the influence of Artificial Intelligence (AI), particularly ChatGPT and Gemini, on education, interpersonal relationships, and communication among university students. As AI tools become essential things for student's daily routines, this research investigates how these technologies affect student behavior, learning engagement, emotional expression, and social interaction. This study guided by Social Comparison Theory by Leon Festinger 1954 and examines how peer comparison motivates AI adoption and how it impacts communication confidence, collaboration, and learning efficiency. A qualitative research design was employed, involving semi-structured interviews with selected informants to gain in-depth insights. The findings reveal that while AI improves access to information and supports independent learning, excessive dependence may hinder authentic interaction, reduce critical thinking, and increase communication anxiety. This study concludes that AI should be used as a tool to enhance, not replace human interaction and learning experience. Keywords: Artificial Intelligence, ChatGPT, Gemini, education, interpersonal communication, social comparison, student behavior.

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## INTRODUCTION

In this globalization era, AI are one of essential things for people especially employee and students. This study investigates the impact of ChatGPT and Gemini, a type of artificial intelligence (AI), on a relationship among undergraduate students. Students might start relying more on AI platforms for jobs like generating, writing and even informal interaction as these technologies become more essential into their everyday academic and social lives. Even though both of this AI can increase the efficiency and provide the immediate support, its effects on interpersonal communication are still a worry. While there are lots of benefits to using AI in education, like improved productivity, time savings, and information access, there are also concerns about students' increasing reliance on these tools. Students might start depending on AI for both academic support and personal interactions including answering messages, asking questions, and expressing feelings. This dependence may eventually change the way they interact with others in real life, which could have an impact on their ability to have personal conversations, connect well with others, and grow emotionally in areas like empathy and active listening. Student's interpersonal and communication skills are greatly influenced by their time at university. Students gain confidence, social intelligence, and teamwork abilities through regular face-to-face encounters with classmates, instructors, and group members. However, these opportunities might be limited if AI is used as a communication "shortcut." Students may find it difficult to maintain real friendships or settle conflicts through direct communication if they rely too much on AI for communication or self-expression. The purpose of this study is to find out whether regular usage of AI enhances or worsen student's interpersonal interactions with peers and how it affects traits like empathy, team works, and in person interaction.

## Problem Statement

The increasing usage of digital communication tools has influenced how people engage with one another and perceive themselves. The way undergraduates communicate, finish tasks, and get information changed because of the development of artificial intelligence (AI) technologies like ChatGPT and Gemini. While AI may



improve student communication and academic efficiency, there are worries that an over reliance on AI could harm relationships, particularly social skills, empathy, and human interaction. Students may become socially isolated and communicate inauthentically because of this reliance. A recent systematic mini review by Klimova and Pikhart (2025) explores how the increasing use of AI in higher education is reshaping student well-being, particularly in terms of interpersonal interaction and emotional health. While AI offers benefits like personalized learning, mental health support, and heightened communication efficiency, the authors warn that over reliance on AI may diminish interpersonal skills and emotional intelligence, potentially leading to social isolation and elevated anxiety among students. Furthermore, continual dependency on AI-mediated communication can erode face-to-face interactions and reduce students' ability to connect sincerely with others. These findings closely align with core concern that AI technologies, such as ChatGPT and Gemini, might improve academic convenience but also risk undermining empathy, social authenticity, and true human connection.

## Research Question

This study consists of the two main research question that align with the main objectives:

- a. How do ChatGPT and Gemini support the learning process and academic communication among undergraduate students?
- b. What differences do students experience when using ChatGPT and Gemini and not using it for daily communication purposes?

## Research Objectives

This study has two main objectives that focus on the influence of Artificial Intelligence (AI) on student's interpersonal relationships.

- a. To investigate the development of ChatGPT and Gemini in education.
- b. To examine the differences of using ChatGPT and Gemini and not using it contributes to student's dependence on technology in their daily interpersonal communication.

## Significant of Study

This study is important because it examines how artificial intelligence (AI) tools like ChatGPT and Gemini are changing university students' academic and social experiences. The educators, organizations, and policymakers can create standards for the responsible and efficient use of AI by having a better understanding of how these technologies affect social communication and learning processes. This research adds to existing knowledge about how depending on AI might affect the psychological and social aspects of university students.

## LITERATURE REVIEW

### Understanding of Artificial Intelligence on interpersonal relationship

This study explains a bit about this study, specifically how AI which is ChatGPT and Gemini, affects education, interpersonal relationships and communication among students who use them. The focus of this section will also explain whether AI actually strengthens interpersonal relationships among them or the other way around. After the Covid era, online learning has been empowered by various countries as a government action to ensure that learning sessions continue even though students and teachers cannot meet face-to-face. After the emergence of online platforms such as Google Meeting, Webex, and many others, new technology in the form of artificial intelligence has also appeared with the aim of facilitating students and educators who must face the situation of online learning. It cannot be denied that AI provides various benefits and conveniences to users. Even this statement is supported by many researchers related to this case study including how ChatGPT improves the quality of interpersonal communication among people. For example, the use of chatbots like ChatGPT allows students to communicate, express questions, or simply discuss a topic in a more convenient and safe manner.



Although it is not a two-way conversation with a real human, this experience somewhat helps students practice their communication skills, especially in the form of writing or delivering messages in a more organized manner. In addition, AI also serves as a safe space for students who may feel shy, anxious, or unsure to discuss directly with friends or lecturers. It gives students the opportunity to express their opinions or ask questions without fear of being judged. This situation indirectly contributes to the improvement of their interpersonal skills, albeit in a form different from regular communication. However, it is important to realize that interpersonal relationships built through AI technology are still different from interactions between real humans. Although AI can help, it cannot fully replace the elements of empathy, emotion, and sincerity that are present in real human communication. Therefore, AI should be seen as a support tool, not as a substitute for genuine interpersonal relationships.

### **Artificial Intelligence (AI) contributions on education**

In this globalization era, it is widely accepted that AI such as ChatGPT can assist users in obtaining the information they need. The first undeniable contribution is that AI can quicker easily deliver the needed information. According to Chun et al (2022), learners who apply AI information technology can reduce learning costs and help them become more diversified. This is because AI allows students to access various learning resources without having to rely entirely on physical materials or paid classes. With AI, students can learn at their own pace, anytime, thereby enhancing their abilities in various fields according to their individual needs. This statement strongly agree that AI contributes a lot in education courses. According to Harry, A., and Sayudin, S. (2023) with the help of AI, education can be made more accessible and inclusive, enabling learners of all backgrounds to access high quality education. This shows that AI can help all students, regardless of their background, to obtain a good education. It not only makes access easier but also provides learning assistance according to individual needs. Besides ChatGPT, Gemini also one of the popular AI nowadays. Imran and Almusharraf (2024) explain that Gemini offers simulations, educational games, quizzes, and multimodal interactive content to support personalized learning experiences. Google Gemini also tend to give similar services to people especially workers and 7 students. Gemini empowered by Google tend to give fast response, 24 hours information if you ask and so on. So, no wonder Gemini also tend to contributes on works and also as a revolution for people to used. Recent research underscores the transformative impact of AI on educational accessibility and affordability. The study by Chun et al. (2022) found that AI-powered educational tools allow learners to independently access personalized content, significantly reducing the need for physical textbooks and costly supplementary courses. This level of customization where study plans adapt to individual pacing and learning styles directly lowers educational expenses while catering to diverse learners. Besides, Ravšelj et al. (2025) conducted a global survey involving over 23,000 students and confirmed that AI platforms widely support independent, self-paced learning, particularly by providing flexible access to study materials across various socioeconomic contexts. Moreover, these AI tools not only reduce operational costs for educational institutions but also help democratize learning, ensuring that quality education is attainable regardless of a student's geographic or economic background. Collectively, these studies suggest that the strategic integration of AI can make education more cost-effective, inclusive, and responsive to individual student needs.

### **The Role of Artificial Intelligence in Modern Student Life**

The lives of today's students are increasingly influenced by technological advancements, particularly Artificial Intelligence (AI). After the period when online learning became the norm, students began to rely on various forms of digital support to help them adapt to new learning methods. AI has become one of the tools that provides convenience, accelerates the information search process, and supports self-learning more flexibly. Students use AI technology to generate 8 writing ideas, understand a topic, restructure sentences, and review their work. AI also helps students save time, especially in completing assignments or making quick revisions. The learning experience becomes more accessible, as information can be accessed at any time without having to rely entirely on teachers or physical materials. In addition, AI allows students to learn according to their own style, whether through text, visual generation, or interactive conversations. This gives students the space to explore various methods and approaches in understanding something, according to their own comfort and level of understanding. This indirectly makes learning more personalized and effective.



AI is also increasingly being used not only in the academic context but also affecting the emotional and social lives of students. Some students use AI as a place to express their feelings, seek tranquility, or receive support when facing stress. This shows that the role of AI in student lives is expanding and involves psychological and social dimensions. Recent research has highlighted both the broad adoption and nuanced perceptions of AI chatbots in higher education. A large-scale survey by Ravšelj et al. (2025), involving over 23,000 students from 109 countries, demonstrated that tools like ChatGPT are extensively used for generating ideas, summarizing complex materials, and finding research sources. The study underscores how such AI chatbots support efficient, self-paced learning and streamline academic workflows. In investigation into students' attitudes and found a dual sided view while many users report enhanced creativity and deeper comprehension of subject matter, they also express serious concerns about overreliance on AI and a decrease in critical thinking skills.

This ambivalence points to a crucial tension which AI support individual productivity but also poses risks to academic autonomy and the development of analytical reasoning. Together, these studies illustrate that AI chatbots have become integral to modern education, yet they simultaneously challenge the balance between technological convenience and cognitive growth. Overall, AI has become an important element in the daily lives of modern students. It not only supports the learning aspect but also influences the way students think, communicate, and manage their daily lives. Although it brings various advantages, the use of AI should be balanced with awareness so that students do not become overly dependent on it and still maintain their natural thinking and communication abilities.

### **ChatGPT and Gemini effects to Interpersonal relationship among Undergraduate Students**

The use of artificial intelligence tools like ChatGPT and Gemini in student's daily lives has begun to influence the way interpersonal relationships are formed and established. Although the main purpose of this technology is to assist learning and provide information quickly, its impact also extends to social aspects and communication between individuals. One of the notable effects is the tendency of students to replace real human interactions with conversations with AI. For example, instead of expressing their feelings to friends, some students are more comfortable chatting with a chatbot to get immediate responses or emotional support. This can be seen by several extensive research indicates that while AI chatbots can serve as emotionally supportive companions, they may simultaneously weaken genuine human connections. Yuan et al. (2024) surveyed 428 Replika users, finding a strong positive correlation between emotional attachment to chatbots and reduced face-to-face social interactions media dependence on AI significantly shaped users' real-life social engagement.

In other hand, Alessa & Al-Khalifa (2023) discovered that although AI chatbots helped alleviate loneliness among the elderly, users often reported increased emotional dependency and drifted away from pursuing new interpersonal connections. To conclude, ChatGPT and Gemini can be in terms to be platforms for 10 people to gain support. Emotional support when others aren't available, which means instant support from them actually works in this generation. ChatGPT and Gemini can serve as temporary companions or outlets for thoughts and feelings, especially during loneliness or emotional distress. This may help individuals regulate emotions before engaging in real-time communication. "Technology also function as a tool for social interaction and its use can have significant emotional impact." (Rizca,2024). Although this can provide temporary relief, excessive reliance on AI can reduce the desire to communicate face to face and weaken the intimacy of interpersonal relationships.

### **Communication Anxiety Caused by AI in Academic Environments**

In today's academic environment, the use of artificial intelligence (AI) technologies such as ChatGPT and Gemini is becoming increasingly widespread. Many students use it to write essays, prepare presentation scripts, compose official emails, and generate more structured sentences. Although it provides convenience and increases productivity, there is a growing side effect, namely communication anxiety, which stems from excessive reliance on AI. First and foremost, students tend to lose confidence to convey themselves. When students become accustomed to relying on AI to construct "perfect" sentences, they begin to lose confidence in their own abilities. They might feel that their writing or speech is not on same level as what AI produces. This causes them to be afraid to speak in front of the class, hesitant to write without assistance, and always doubtful of their own ideas. For example, when asked to send an official email to a lecturer or prepare a presentation text, there are students who only feel confident if it is reviewed or entirely written by AI. This situation makes students less practiced



in using real communication skills, and it can even have a negative, they might impact on their interpersonal skills in the long run.

Besides, risk of authenticity. More concerning, if students become too reliant on AI lose a personal touch or authenticity in communication. AI might be able to produce neat sentences, but it cannot replace the unique language style, emotional tone, and empathy that exist in human communication. As a result, students might be perceived as lacking their "true selves" in their work and this could affect their relationships with lecturers or peers who value honesty and authenticity in communication. Empirical studies demonstrate that escalating dependence on AI for academic tasks can exacerbate communication anxiety among students. Yu (2024), surveying 115 Chinese EFL students, observed a positive correlation between the frequency of AI assisted writing and increased levels of anxiety across cognitive, somatic, and avoidance domains. This suggests that while AI tools ease writing tasks, they may inadvertently foster dependency and undermine students' confidence in independent work. To conclude, communication concerns arising from the use of AI are a new phenomenon in the modern educational world. Although AI brings various benefits, students should be aware that it is only a tool, not a replacement for their own voice, thoughts, and style. The unbalanced use of AI can weaken self-confidence, disrupt authentic interaction, and eventually isolate students from the real and meaningful learning process.

### **The Impact of AI on Peer Learning and Collaboration**

Since the arrival of AI, do we still engage in discussions about assignments with our classmates? Or are we more comfortable completing an assignment with the help of AI, which is more efficient and faster? Questions like this arise after we successfully observe and evaluate the behavior of students. In today's era, the world is becoming busy regardless of whether we are 12 students or workers. Busyness causes some people to prefer completing tasks using AI because they believe AI is more efficient and faster than having to think. This can be seen by the study of Chan and Hu (2023) conducted a robust mixed-method study to explore university students' perceptions of generative AI (GenAI) tools like ChatGPT. Chan and Hu (2023) explored students' broader perceptions of generative AI through a mixed method study of 399 university students. Their findings showed that while many students found AI beneficial for enhancing learning and personal productivity, some expressed concern about the diminishing need for peer interaction, critical thinking, and academic integrity.

The open-ended responses indicated that AI usage may shift preferences from collaborative engagement toward individual efficiency. Combined, these studies highlight that although AI can enrich peer learning environments, its overuse may hinder the interpersonal dialogue and co-construction of knowledge essential to effective collaboration. In other hand, Zhu et al. (2023) conducted a quasi-experimental study to examine how ChatGPT influences peer collaboration in interdisciplinary learning among 130 undergraduate students from both STEM and non-STEM backgrounds. The students were divided into two groups which are with and without ChatGPT assistance over a two-week digital literacy assignment. The study found that ChatGPT use significantly enhanced student engagement, satisfaction with collaboration, and cognitive involvement. It also improved efficiency in generating ideas and identifying knowledge gaps during group work. However, several limitations were identified, such as the emergence of generic responses, reduced self-discipline, and surface-level understanding. Through both quantitative analysis and qualitative coding of weekly reflections, the researchers uncovered eight positive and eight negative themes, concluding that while AI like ChatGPT can enrich peer learning, it should be used as a support tool, not a replacement for meaningful 13 interpersonal collaboration. This study underscores the importance of balancing AI integration with opportunities for genuine student interaction and critical thinking in collaborative settings.

### **The Future of Communication in the Age of AI**

The emergence of artificial intelligence (AI) technologies such as ChatGPT and Gemini has opened a new era in the world of communication. For students in particular, AI is no longer just an aid, but has become part of their daily routine, whether for completing assignments, drafting presentations, or seeking emotional guidance. However, behind this convenience, there is an important question that needs to be addressed which is does AI help improve the way we communicate, or is it slowly replacing it? Firstly, what will happen is unconscious dependence. At first, students used AI for productivity and support purposes. However, over time, some began



to experience unconscious dependence. For example, if previously students were able to construct arguments or write essays on their own, now they only rely on instructions typed into the chatbot. When this happens continuously, they will lose the ability to convey ideas spontaneously and authentically. Recent empirical research reveals that intensive use of AI tools like ChatGPT can lead to homogenization of language and a stifling cultural nuance in communication.

Agarwal, Naaman, and Vashistha (2024) conducted a cross-cultural experimental study involving 118 participants from India and the U.S. who wrote on culturally anchored prompts with and without AI assistance. Their results showed that AI suggestions nudged Indian participants toward Western writing conventions, significantly diminishing culturally specific expressions and narrative styles. The authors warn that such Western-centric AI norms could gradually erode linguistic diversity if AI generated language becomes the unspoken standard. 14 Adding to this, Liu et al. (2024) implemented a quasi-experimental design with 61 college students completing creative tasks over a week with and without ChatGPT. They found that while AI temporarily boosted original idea generation, participant's creativity reverted to baseline once AI was removed, and critically, the content remained homogeneously influenced, lacking personal and cultural distinctiveness. In the context of students, AI can be a great tool if used wisely and balanced. Education also needs to emphasize aspects of authenticity, empathy, and critical thinking, so that future generations do not lose their identity in the digital world.

### **Relationship of The Influence Artificial Intelligence on Interpersonal Relationship and the research problem**

Currently, it is impossible to deny that the use of AI is becoming more and more necessary due to technological advancements that are increasing daily. Furthermore, we cannot deny that the use of AI in daily life has a significant impact on many people from the workplace, education, or household chores for students, employees, or even household members. Everyone would be satisfied if we could all agree that AI makes our daily tasks easier in many aspects. However, there are some concerns and issues if humans constantly interact with AI. Given the current situation heavily related to artificial intelligence, all the positive aspects of AI and its development will be highlighted, but they will quickly turn into drawbacks if its use is not controlled. 15 There are several issues directly related to the objectives of this study.

The first issue is that AI is becoming increasingly useful, or that it is becoming easier for us to use as a result of its development. This will lead to many problems, such as the emergence of negative attitudes in user's self-perception within the learning community. With this, the learning process, or the level of thinking, may be hindered, and if hindered, users will find it difficult to step out of their comfort zones. This is very concerning to various parties if this continues. The second problem statement closely related to the title is also the negative impact of AI if it is used excessively. Excessive use of AI will undermine the ability for genuine communication between humans. This means that with the use of AI, humans might become more isolated, lazy in socializing, or choose social isolation due to addiction to AI in work, learning, or daily communication.

Over time, it is feared that unrestricted AI will dominate humans, leading to the extinction of two-way communication. Besides that, the use of AI will affect the authenticity of human writing, causing the content to be insincere. It should be remembered that the difference between humans and robotic systems is that we possess empathy and feelings that robots do not have, so it is better for us to continue using what we have to distinguish ourselves from the current world system. This is also feared to cause misunderstandings among humans because the context of AI and humans is very different.

For this study, it is based on social comparison theory, a concept proposed by social psychologist Leon Festinger in 1954. This theory explained that individuals evaluate themselves by comparing their abilities, opinions, and experiences with those of others, especially in the absence of objective benchmarks. So, this theory related to the Influence of Artificial Intelligence on interpersonal relationship because of the reason why students start using AI. Individuals naturally compare themselves to others to evaluate their own abilities and worth. In modern digital life, this leads people to adopt AI tools to match or surpass peers in areas like communication, creativity, and productivity, particularly when they observe others succeeding with AI assistance. In today's student life, the use of technology like ChatGPT and Gemini is no longer an extraordinary matter.



However, behind the convenience offered by this technology, there is a psychological factor that drives many students to use it, namely the urge to compare themselves with others. The Social Comparison Theory clearly explains that humans naturally tend to evaluate themselves by comparing their achievements, abilities, or knowledge with those around them, especially when there are no objective benchmarks. In this context, many students start using AI not just because it is easy or time saving, but because they see their peers who appear faster, more creative, or smarter in completing tasks with the help of AI.

This situation triggers feelings of being challenged, less confident, or worried about falling behind, prompting them to also use the same technology to compete with their peer's performance. This is known as upward social comparison, when someone compares themselves to individuals who are considered better, leading to a desire for self-improvement. In addition, there are also students who use AI to boost their self-confidence or feel better compared to those who do not use this technology. They might feel that with the help of AI, they can produce better, faster, and higher quality assignments. This is an example of downward social comparison, which is when someone feels more confident or better by comparing themselves to someone, they consider less successful.

Indirectly, AI has become a tool for students to manage their self-image in an increasingly competitive learning environment. They do not want to be seen as weak, slow, or inefficient means AI is used to maintain social status and academic dignity among peers. However, if left unchecked, this social comparison can cause emotional stress, reduce self-satisfaction, and ultimately create an excessive dependence on technology. In conclusion, social comparison theory provides a deep understanding of the psychological reasons behind student's use of AI. It is not just a matter of convenience, but also closely related to feelings, self-perception, and social standing within their learning community. Therefore, it is important for students to realize that although AI can be an effective tool, healthy and balanced usage is essential to avoid negatively impacting mental health and relationships with those around them.

This reflects upward social comparison, where individuals aspire to reach higher standards. Additionally, some use AI to avoid feeling left behind or to gain a sense of superiority over those who do not utilize such tools, demonstrating downward comparison. Ultimately, AI becomes a tool for navigating social dynamics, boosting self-esteem, and preserving a favourable self-concept in a competitive society. Korchak et al. (2025) investigated how social influence shapes university students' intentions to adopt generative AI tools like ChatGPT, using the Unified Theory of Acceptance and Use of Technology (UTAUT) framework. Drawing on survey data from 271 undergraduate and postgraduate students in the UAE, the study found that undergraduate students were more strongly influenced by peer behavior than their postgraduate counterparts, suggesting that social environments play a significant role in AI adoption, especially among less self-directed learners. This research highlights that AI usage decisions are not solely driven by technical convenience but are also shaped by social comparison processes, where students observe and respond to peer's AI use.

The study contributes to the literature by expanding the construct of social influence within the UTAUT model and aligning with Festinger's (1954) Social Comparison Theory. This theoretical framework is essential in this study as it explains why students are increasingly turning to AI, not only as a tool for learning but also as a means to remain competitive, accepted, and validated within their academic and social circles. The theory also supports the idea that interpersonal communication, collaboration patterns, and self-perception are all influenced by how individuals compare themselves with others in the learning environment.

Festinger (1954) proposed that individuals evaluate their own abilities, opinions, and status by comparing themselves with others, especially when objective standards are unavailable. These comparisons can be upward which is compared with someone perceived as better or downward which with someone perceived as worse, and they serve various psychological motives such as self enhancement, self-evaluation, and reduction of uncertainty. This framework highlights the progression of how actually AI influences students to keep going with using them. The big issues started with the reason why they use it and being addicted from time to time until those advantages quickly turn to big worries and concerns about the addiction may worsen students' interpersonal relationship even it gives many more advantages. With the ongoing addiction, many people are concerned that AI will replace human works. So, this study is purpose of investigating the development of AI



among undergraduate students and examining the differences of using AI contributes to students daily interpersonal communication.

## **METHODOLOGY**

This chapter discusses the methodology for conducting this study. This chapter also discusses the research design, location and subject of the study, selection of informants and the criteria of the informants. The design for the study used by the researcher will be explained in this chapter. Research design refers to the systematic selection and arrangement of methods and procedures used by the researcher to address the research problem effectively by integrating the different research components in a coherent and logical manner. It offers guidance on the process of conducting research using a particular approach. The research design used in this study is a qualitative approach. This design was chosen because it allows the researcher to explore in-depth opinions from chosen informants related to the influence of Artificial Intelligence (AI) tools such as ChatGPT and Gemini on education, interpersonal relationships, and undergraduate students. The study adopts a case study from several article and several opinions from informants to ensure that the data collected is relevant, comprehensive, and aligned with the research objectives. The research design also ensures that the findings can be systematically analyzed and interpreted based on Social Comparison Theory.

### **Location and Subject of the Study**

This study was conducted at University Malaysia Sarawak (UNIMAS). The reason for selecting this location is because students at this institution actively use AI in academic tasks, or it provides access to diverse respondents in terms of background and usage levels especially among 22 undergraduate students. The subjects of the study are undergraduate students are known to have experience or exposure to AI tools such as ChatGPT and Gemini in their academic or daily communication practices.

### **Selection of the informants**

The selection of informants in this study was conducted through purposive sampling. This technique is used to ensure that the individuals involved in the study have relevant experience and knowledge related to the topic being studied. The researcher selects informants based on their suitability with the study's objectives, where they are identified through lecturer recommendations and student peer networks. The informants were given a brief explanation of the study's purpose and asked to voluntarily consent before the data was collected.

### **Criteria of informant**

The criteria of informant play the crucial role to research studies. The informants in this study were selected based on the following criteria:

1. A bachelor's degree student currently studying at a University Malaysia Sarawak (UNIMAS).
2. Having experience using AI tools like ChatGPT, Gemini, or similar platforms for academic purposes or daily communication.
3. Aged between 21 to 25 years, representing a group of active students who are knowledgeable about technology
4. Willing to participate in the study voluntarily and provide honest feedback.
5. Having access to digital devices and possessing a sufficient level of technological literacy. This criterion is chosen to ensure that the information obtained is relevant, meaningful, and makes a significant contribution to the study's findings.

## **Sampling Technique**

This study employed purposive sampling, a commonly used technique in qualitative research where participants are deliberately selected based on their relevance and ability to provide meaningful insights related to the research topic (Sago, 2023). The participants were undergraduate students from University Malaysia Sarawak (UNIMAS) who actively use Artificial Intelligence (AI) tools such as ChatGPT and Gemini in their academic or daily communication. The selection criteria required participants to have prior experience using AI tools, particularly in academic tasks, communication, or personal problem-solving, as this experience is essential to understanding how AI influences interpersonal relationships. Purposive sampling was deemed appropriate as the study does not aim to generalise findings to the entire student population but rather to gain an in-depth understanding of students' lived experiences, perceptions, and communication behaviours related to AI usage. To ensure diverse perspectives, participants were selected from different academic programmes and years of study. Both male and female students were included to capture varied interpersonal and communication experiences. The target sample size ranged between 20 participants, with data collection continuing until data saturation was achieved, where no new themes or significant insights emerged. This approach aligns with qualitative research principles that prioritise depth, richness, and contextual understanding over sample size.

## **Data Collection Procedure**

Data for this qualitative study were collected through semi-structured in-depth interviews with undergraduate students at UNIMAS. Semi-structured interviews were chosen as they allow flexibility for participants to express their thoughts and experiences freely while ensuring that discussions remained aligned with the research objectives. Each interview lasted approximately 30 to 60 minutes and was conducted either face-to-face or via online platforms such as Zoom or Google Meet, depending on participants' availability and preference. Interviews were conducted in English or Bahasa Malaysia to ensure participants' comfort and clarity in expressing their experiences. With participants' consent, all interviews were audio-recorded and later transcribed verbatim for analysis. The interview questions focused on participants' experiences using AI tools, changes in their communication habits, perceptions of self-confidence, emotional expression, and how AI usage influenced their interpersonal relationships. This method enabled the researcher to capture authentic narratives and personal reflections related to AI-mediated communication.

## **Data Analysis Procedure**

The data were analysed using thematic analysis, following the six-phase framework proposed by Braun and Clarke (2006). This approach was selected as it allows for the identification, analysis, and interpretation of recurring patterns and themes within qualitative data.

## **Familiarisation with the Data**

In the first phase, the researcher immersed herself in the data by reading and re-reading the interview transcripts. This process helped the researcher gain a comprehensive understanding of participants' experiences and allowed initial ideas related to AI usage, communication patterns, and interpersonal relationships to emerge. Reflective notes were taken during this stage to capture early impressions and potential coding ideas.

## **Generating Initial Codes**

During this phase, meaningful segments of the data were systematically identified and labelled with initial codes. These codes represented key ideas such as academic dependency on AI, reduced face-to-face communication, social comparison with AI outputs, emotional reliance on AI, and changes in communication confidence. Coding was conducted manually to ensure close engagement with the data while preserving the original context of participants' responses.

## Searching for Themes

The researcher then examined the initial codes and organised them into broader categories and potential themes. Codes with similar meanings were grouped together, leading to the development of themes such as AI as an integrated part of student life, changes in communication habits, and social comparison and self-confidence. In this phase, the preliminary themes were reviewed and refined to ensure they accurately represented the data set as a whole. Some themes were merged, refined, or discarded if 26 insufficient supporting data were found. This step ensured coherence between themes and participants' narratives. Each theme was clearly defined and given a descriptive name that reflected its core meaning. The researcher analysed how each theme addressed the research objectives and contributed to understanding the influence of AI on interpersonal relationships among undergraduate students.

## FINDINGS

This chapter presents the findings of the study based on in depth interviews with undergraduate students from various academic backgrounds. It aims to explore how the use of Artificial Intelligence (AI), particularly tools such as ChatGPT and Gemini, influences student's interpersonal relationships. This research specifically focused on the sub objective as:

- a) To investigate the development of ChatGPT and Gemini in education.
- b) To examine the differences of using ChatGPT and Gemini and not using it to contributes to student's dependence on technology on their daily interpersonal communication.

The findings were analysed using thematic analysis, where participant's responses were coded and grouped into key themes related to AI usage, communication habits, social comparison, self-perception, and interpersonal relationships. Real experiences shared by participants are included to reflect the participant's real experiences and perspectives. The discussion is guided by the research questions and supported by Social Comparison Theory to better understand the social and psychological effects of AI use among undergraduate students.

## Demographic Characteristics of the Respondents

A total of 20 undergraduate students were selected as respondents for this study. The respondents were chosen based on their academic background to ensure diversity in perspectives regarding the use of Artificial Intelligence (AI) and its influence on interpersonal relationships. The participants were drawn from four different academic programmes, namely Strategic Communication, Linguistics, English for Global Communication, and Pendidikan Agama Islam. To protect the identity and privacy of the respondents, pseudonyms were used throughout the study. All respondents were undergraduate students currently enrolled at University Malaysia Sarawak. The participants consisted of students from different years of study, ranging from Year 1 to Year 4, allowing the researcher to capture experiences from students at different stages of their academic

NO	RESPONDENT	AGE	GENDER	PROGRAMME
1	Respondent 1	22	Male	Strategic Communication
2	Respondent 2	23	Female	Strategic Communication
3	Respondent 3	23	Female	Strategic Communication
4	Respondent 4	23	Female	Strategic Communication
5	Respondent 6	23	Female	Strategic Communication



6	Respondent 7	23	Male	English for Global Communication
7	Respondent 8	23	Female	English for Global Communication
8	Respondent 9	23	Female	English for Global Communication
9	Respondent 10	23	Female	English for Global Communication
10	Respondent 11	23	Female	English for Global Communication
11	Respondent 12	22	Female	Linguistic
12	Respondent 13	21	Female	Linguistic
13	Respondent 14	22	Female	Linguistic
14	Respondent 15	22	Female	Linguistic
15	Respondent 16	22	Female	Linguistic
16	Respondent 17	21	Male	Pendidikan Agama Islam
17	Respondent 18	21	Male	Pendidikan Agama Islam
18	Respondent 19	21	Female	Pendidikan Agama Islam
19	Respondent 20	21	Female	Pendidikan Agama Islam
20	Respondent	21	Female	Pendidikan Agama Islam

Table 1: Profile of the respondents

### AI as an Integrated Part of Student Life

The findings indicate that most informants are highly familiar with AI tools such as ChatGPT and Gemini and use them frequently, either on a daily basis or several times a week. AI is mainly utilized for academic purposes, including completing assignments, generating ideas, summarizing lecture notes, and clarifying difficult concepts. Mustofa & Wuryan (2024) investigated the role of AI (ChatGPT) in online learning environments and found that AI can improve the quality and convenience of communication among learners, demonstrating how AI is increasingly integrated into educational experiences. Informants frequently mentioned convenience and academic support as their main motivations, with one participant stating, "I use ChatGPT almost every day to draft my assignments and get ideas quickly, it really saves time." Another highlighted, "Without AI, completing my coursework feels more stressful and slower." Many participants viewed AI as a necessary part of contemporary student life, suggesting that it has become integrated into their daily routines rather than being an optional tool. However, this normalisation also reflects early signs of academic dependency, supporting concerns highlighted in the problem statement regarding excessive reliance on AI among undergraduate students.

### Changes in Communication Habits Due to AI Usage

The findings reveal a noticeable shift in student's communication patterns as a result of AI usage. Many informants admitted that they now prefer consulting AI for problem-solving or advice before approaching peers, mainly due to its efficiency, availability, and non-judgmental nature. One participant shared, "If I have a problem, I'll ask ChatGPT first because it's faster than asking my friends." Another informant stated,



“Sometimes I don’t feel like explaining my problem to people, AI just gives the answer straight away.” Several participants also acknowledged that AI has replaced conversations they would normally have with classmates, particularly regarding academic discussions. Although AI helped structure ideas more clearly, some students felt that communication had become less spontaneous and less personal. This indicates a shift where efficiency is prioritized over interpersonal interaction, supporting concerns that excessive reliance on AI may reduce opportunities for organic peer communication.

### **Social Comparison and Declining Self-Confidence**

The findings show that many informants tend to compare their own abilities with AI-generated responses, which are often perceived as “perfect” or “more polished.” Hou et al. (2025) investigated how generative AI use can redirect help-seeking from peers to AI, undermining peer interaction and contributing to feelings of isolation and demotivation, supporting ideas about social comparison and emotional shifts among students. One participant remarked, “When I see how perfect the AI answer is, I feel like my writing is not good enough.” Another informant explained, “After using AI, I start doubting my own ideas because AI sounds smarter.” This comparison sometimes extended to peers who actively use AI, leading to feelings of inadequacy and reduced self-confidence. Such experiences reflect upward social comparison, as outlined in Festinger’s Social Comparison Theory, where individuals compare themselves to higher standards and 36 experience diminished self-esteem. These findings suggest that AI not only influences academic practices but also shapes students’ self-perception and confidence within the learning environment.

### **Emotional Distance and Reduced Authenticity in Interpersonal Relationships**

Yue et al. (2023) examined user’s perceptions of AI in interpersonal communication and highlighted concerns about inauthenticity and potential overreliance on technology, which aligns with reduced emotional authenticity in human communication. Several informants perceived that increased AI usage has reduced emotional closeness among students. Communication was often described as becoming more task-focused and less emotionally expressive. One participant noted, “Nowadays we just exchange answers, not really talk like before.” Another shared, “When messages are drafted using AI, it feels less personal and less sincere.” Some students also reported experiencing misunderstandings or shallow interactions due to the lack of emotional tone in AI assisted communication. Additionally, a number of informants expressed feeling more socially isolated since AI became part of their learning routine, preferring AI interactions that require less emotional effort than human communication. These findings support the concern that reliance on AI may weaken empathy, authenticity, and meaningful interpersonal relationships among undergraduates.

### **AI as Emotional Support and a Safe Space**

Supermany and Kutty (2025) found that interacting with ChatGPT helped introverted students improve communication confidence in a supportive environment, indicating that AI can serve as a psychologically safe platform for expression. The findings indicate that some informants use AI as a form of emotional support, particularly during stressful or overwhelming situations. Participants described AI as a safe and non-judgmental space where they could express feelings freely. One informant stated, “Sometimes I talk to AI when I feel stressed because it doesn’t judge me.” Another shared, “As an introverted person, it’s easier to vent to AI than to people, especially when I don’t want to burden anyone.” While AI provided temporary emotional relief, several participants acknowledged that this reliance could reduce their motivation to seek support from friends or family. This highlights a complex dynamic in which AI functions as an emotional coping mechanism while

### **Awareness of Responsible AI Usage and Future Outlook**

Despite acknowledging the benefits of AI, most informants demonstrated awareness of the need for responsible and balanced usage. A study on ChatGPT acceptance among university EFL students highlighted that habit and social influence significantly affect student’s behavioural intentions to use AI, underscoring the importance of awareness and informed use rather than unreflective dependence. Many emphasized that AI should serve as a supportive tool rather than a replacement for human interaction. One participant explained, “AI is helpful, but we still need real conversations to grow socially.” Another noted, “If we depend too much on AI, we might



lose our communication skills.” Informants also expressed concern about maintaining empathy, authenticity, and ethical use of AI in the future. This theme reflects students’ growing awareness of the long-term implications of AI on interpersonal relationships and highlights their desire to preserve meaningful human connections alongside technological advancement.

## SUMMARY OF FINDINGS

Overall, the findings reveal that AI has become deeply embedded in undergraduate student’s academic and social lives. While AI enhances efficiency, accessibility, and emotional support, excessive reliance poses risks to interpersonal communication, self-confidence, emotional authenticity, and social interaction. The findings support Social Comparison Theory by demonstrating how AI influences self-perception and peer comparison within the learning environment.

## DISCUSSION

The discussion focuses on how Artificial Intelligence (AI) tools such as ChatGPT and Gemini influence undergraduate student’s interpersonal relationships, communication habits, self-perception, and emotional connection. This chapter also outlines the implications of the findings and suggestions for future research. The findings indicate that AI tools have become an integral part of undergraduate student’s academic routines. Most informants reported frequent usage of AI for academic support, idea generation, and time management. This supports previous studies which suggest that AI enhances academic efficiency and accessibility (Chun et al., 2022; Ravselj et al., 2025). However, the findings also reveal that this integration may lead to over-reliance. When AI is perceived as a necessity rather than a support tool, students may reduce their engagement in independent thinking and interpersonal academic discussions. This directly relates to the research problem, which highlights concerns about excessive AI dependence affecting student’s communication and social engagement.

### AI and Changes in Communication Patterns

The study found that AI usage has altered how students communicate with peers. Students often consult AI before peers due to its efficiency and non-judgmental nature, which may reduce opportunities for natural communication and collaborative learning (Bozorgian & Rahimi, 2025; Hou et al., 2025). Many informants preferred consulting AI over discussing problems with friends due to its efficiency and non-judgmental nature. While this may improve productivity, it reduces opportunities for natural interaction and collaborative learning. This finding supports the concern that AI may diminish real-life communication practice, which is essential for developing social skills, empathy, and emotional intelligence. Over time, this shift could weaken interpersonal bonds among students and contribute to social detachment.

### Social Comparison and Self-Perception Influenced by AI

Consistent with Social Comparison Theory, many students compared their abilities with AI-generated outputs and peers who heavily use AI. AI responses were often perceived as flawless, leading students to feel less capable or confident. AI-generated outputs are often perceived as flawless, causing upward social comparison and reduced self-esteem, which aligns with Social Comparison Theory (Festinger, 1954; Hou et al., 2025). This reflects upward social comparison, where individuals measure themselves against perceived higher standards. As a result, students may experience anxiety, reduced self-esteem, and pressure to rely on AI to maintain academic and social status. These findings align with the problem statement’s concern regarding negative self-perception within the learning community.

### Impact of AI on Interpersonal Relationships

The findings suggest that AI usage may reduce emotional depth and authenticity in interpersonal relationships. AI reliance may weaken empathy and emotional nuance in communication, leading to shallow interactions and social isolation (Yue et al., 2023; Fu et al., 2023). Some informants reported feeling emotionally distant from peers and more socially isolated since incorporating AI into their learning routines. While AI can provide temporary emotional support, excessive reliance may discourage students from seeking meaningful human



interaction. This supports prior research indicating that AI-mediated communication lacks empathy and emotional nuance, which are crucial for genuine interpersonal relationships.

### **Communication Anxiety and Authenticity**

Another important finding is the emergence of communication anxiety among students. Dependence on AI-generated expressions can reduce student's confidence in independent communication and authentic self-expression (Supermany & Kutty, 2025; Fu et al., 2023). Many informants expressed reduced confidence in their own communication abilities due to frequent reliance on AI-generated language. This may result in fear of speaking, writing independently, or expressing personal opinions. This finding supports the argument that AI may undermine authenticity in communication, as students begin to rely on AI-generated expressions rather than developing their own voice. This aligns with the research problem regarding the loss of genuine human communication.

### **Responsible AI Usage and Awareness**

Despite the negative implications, most informants demonstrated awareness of the importance of balancing AI usage with real-life interaction. Students acknowledged that AI should function as a supportive tool rather than a replacement for human communication. Awareness of responsible AI usage helps students balance technological support with human interaction, preserving empathy, authenticity, and communication skills (Strzelecki, 2025; Mustofa & Wuryan, 2024). This finding suggests that with proper guidance and awareness, students can utilize AI responsibly without harming interpersonal relationships. It also highlights the role of educational institutions in promoting ethical and mindful AI usage.

### **Limitation of the Study**

This study focuses on the use of ChatGPT and Gemini among undergraduate students, particularly in their academic learning and daily communication. The participants in this study are students from Universiti Malaysia Sarawak's (UNIMAS) Faculty of Education, Language and Communication (FELC). In order to get detailed information from students, this study will use qualitative techniques like open ended surveys and interviews. To strengthen the results, information will also be collected from academic sources and previous studies. However, there are a number of restrictions on this study. First off, since only students from one faculty which is Faculty of Education, Language and Communication (FELC) were included in the study, the results cannot be applied to all university students. Second, the qualitative technique restricts the quantity of respondents, and the data collected is highly dependent on the students' openness and transparency in expressing their experiences.

### **Practical Implications**

For students, this study highlights the importance of balanced AI usage. For educators and institutions, the findings suggest a need to integrate AI literacy and communication skills training to ensure that AI enhances rather than replaces human interaction.

### **Recommendations for Future Research**

Future research should consider employing quantitative or mixed-method approaches to complement the qualitative insights gained in this study and provide a more comprehensive understanding of how AI influences undergraduate student's interpersonal relationships and communication habits. Expanding the sample size and including participants from diverse academic programmes, cultural backgrounds, and educational stages would enhance the generalizability of the findings. Additionally, examining the long-term psychological and social effects of AI reliance such as changes in self-confidence, communication skills, and emotional well-being could provide valuable insights into the sustained impact of AI on student life. Comparative studies across different universities or cultural contexts may also reveal how environmental and cultural factors shape AI usage and its effects on interpersonal dynamics. These recommendations aim to guide future research toward developing strategies for responsible and balanced AI integration in higher education.



## CONCLUSION

In conclusion, this study demonstrates that Artificial Intelligence significantly influences undergraduate student's interpersonal relationships, communication habits, and self-perception. While AI enhances efficiency and accessibility, excessive reliance may reduce authentic communication, emotional connection, and social interaction. Guided by Social Comparison Theory, the findings reveal that AI not only serves as a technological tool but also shapes social dynamics within the learning community. Therefore, responsible and balanced AI usage is essential to ensure that technological advancement does not come at the expense of human connection.

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