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Perceived Impact of ChatGPT on Academic Engagement and Creative Self-Efficacy in Higher Education

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Abstract: *This study explores student perceptions of ChatGPT's influence on academic engagement and creative self-efficacy in higher education. With generative artificial intelligence becoming increasingly embedded in academic settings, it is essential to understand its implications for motivation, participation, and creative confidence. Drawing on a cross-sectional survey of 57 undergraduate students from Universiti Teknologi MARA (UiTM), Malaysia, the study investigates three dimensions: (1) the extent of ChatGPT usage for academic purposes, (2) its perceived impact on academic engagement, and (3) its contribution to creative self-efficacy. Descriptive statistics indicated high levels of usage, with most students relying on ChatGPT for assignments, projects, and overall academic support. Students reported that the tool helped sustain focus, clarify complex concepts, and maintain motivation, demonstrating its role in behavioral, emotional, and cognitive engagement. Correlation analysis revealed a strong positive relationship between ChatGPT use and academic engagement ($r = 0.770$, $p < .001$), suggesting that frequent users were more invested in their academic activities. Findings also highlighted ChatGPT's role in fostering creative self-efficacy. Students expressed confidence in generating original ideas and developing unique outputs when supported by ChatGPT, though moderate levels of cognitive rigidity were observed, where students tended to adhere to their initial thinking despite alternative suggestions. A strong positive correlation was found between ChatGPT use and creative self-efficacy ($r = 0.731$, $p < .001$), reinforcing the tool's potential as a catalyst for innovative learning. The results underscore that ChatGPT can enhance student engagement and creative confidence when used thoughtfully. However, they also point to the importance of embedding AI literacy and reflective practices into higher education to prevent overreliance and ensure ethical use. Overall, this study contributes empirical evidence on ChatGPT's pedagogical value and offers insights for integrating generative AI into university learning environments.*

Keywords: ChatGPT, Artificial Intelligence in Education, Academic Engagement, Creative Self-Efficacy

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1. Introduction

Higher education plays a vital role in preparing graduates to thrive in a rapidly changing and competitive global environment. Beyond producing academically competent individuals,

universities are expected to nurture critical thinking, creativity, adaptability, and collaboration. These skills are widely recognized as central to the 21st-century learning agenda. This vision aligns with the United Nations Sustainable Development Goal 4 (SDG4), which emphasizes inclusive and equitable quality education and lifelong learning opportunities for all (Fung et al., 2024). At the national level, the Malaysia Education Blueprint 2015–2025 (Higher Education) reinforces these priorities by stressing the need for graduates who are innovative, entrepreneurial, and globally competitive (Sani, 2017).

At the institutional level, Universiti Teknologi MARA (UiTM) adopts the Quadruple Helix model as part of its academic transformation strategy. This approach promotes collaboration between academia, industry, government, and community to strengthen graduate competencies and ensure holistic development (Universiti Teknologi MARA, 2019; Hazmilah et al., 2016). Such initiatives highlight UiTM's role in aligning education with national aspirations for innovation and global competitiveness. Reinforcing this vision, former Education Minister Dr. Maszlee Malik asserted that "higher education institutions must know what employers are looking for, and groom students in order to build the competencies that will help them stand out or stand on par with their competitors." (Salman, 2019).

In this context of growing expectations, artificial intelligence (AI) has emerged as a transformative force in higher education. Among AI applications, ChatGPT, developed by OpenAI and released in 2021, has rapidly become a widely used tool in academic environments. Leveraging natural language processing and contextual responsiveness, ChatGPT generates coherent outputs ranging from essays, translations, and summaries to programming code and creative writing (Zhao et al., 2023). With 175 billion parameters, it stands as one of the largest language models, capable of handling diverse linguistic tasks with little or no task-specific training (Khurma et al., 2023). Recent work by Davar et al. (2025) also highlights the capabilities of AI chatbots in higher education: acting as virtual tutors to clarify difficult concepts, deliver real-time feedback, and support language learning; integrating with Learning Management Systems to personalize learning and boost engagement and retention; while also acknowledging risks such as privacy concerns, ethical implications, reliance on incorrect outputs, and challenges in supporting complex tasks without human oversight.

Nevertheless, the rapid adoption of ChatGPT has sparked debates regarding its impact on student learning behavior. While some educators view it as a catalyst for personalized learning and innovation, others express concerns about academic integrity and diminished critical thinking (Bin-Nashwan et al., 2023; Sullivan et al., 2023). Earlier studies have primarily focused on ChatGPT's functional contributions in academic tasks (Memarian & Doleck, 2023; Othman et al., 2024), but limited attention has been given to its influence on students' psychological and pedagogical experiences. Two constructs are especially pertinent in this regard: academic engagement and creative self-efficacy.

Academic engagement refers to the behavioral, emotional, and cognitive effort students devote to purposeful academic activities (Fredricks et al., 2004; Karki et al., 2021). It is widely recognized as a predictor of persistence, learning outcomes, and overall academic success. Creative self-efficacy, meanwhile, is defined as students' belief in their ability to generate novel and meaningful ideas (Tierney & Farmer, 2011; Beghetto, 2006). In higher education, where learners are expected to apply original thinking to complex problems, understanding how AI influences this belief is crucial.

This study therefore seeks to explore student perceptions of ChatGPT's influence on these two domains. Specifically, it aims:

1) To examine the extent of ChatGPT usage among higher education students for academic purposes.
2) To investigate the perceived impact of ChatGPT on students' academic engagement.
3) To analyze how ChatGPT influences students' creative self-efficacy in higher education settings.

By addressing these objectives, the study contributes to the ongoing discourse on AI integration in higher education. It provides empirical evidence on how ChatGPT shapes student engagement and creative confidence, while also highlighting the importance of responsible, guided, and reflective use to maximize its benefits in the digital university.

2. Literature Review

This section reviews past studies relevant to the present research. It first discusses the role of ChatGPT in higher education, focusing on its opportunities and challenges as an academic tool. Next, it examines academic engagement, a key factor influencing student success across behavioral, emotional, and cognitive dimensions. Finally, it explores creative self-efficacy, which reflects students' confidence in generating new ideas and solving problems innovatively. Together, these themes provide the basis for understanding how ChatGPT may shape student learning experiences.

2.1 ChatGPT in Higher Education

The rapid adoption of artificial intelligence (AI) tools has reshaped the higher education landscape, with ChatGPT emerging as one of the most widely discussed applications. Released in 2021, ChatGPT utilizes natural language processing to generate outputs such as essays, summaries, translations, code, and creative texts, making it a versatile academic support tool (Zhao et al., 2023). Its technical sophistication, powered by 175 billion parameters, enables it to perform a wide range of linguistic tasks with little task-specific training (Khurma et al., 2023).

Studies consistently highlight its accessibility and immediacy as key advantages. Parajuli et al. (2022) found that ChatGPT's ability to instantly clarify complex concepts deepens students' understanding, while Imran and Almusharraf (2023) emphasized its role in encouraging independent learning and digital literacy. Similarly, Baek et al. (2024) observed that user-friendly design and immediate responses help sustain students' momentum, reducing frustration during learning. More recently, Davar et al. (2025) underscored its capacity to act as a virtual tutor, offering real-time feedback, integrating with Learning Management Systems (LMS), and promoting continuous engagement.

Patterns of use, however, vary among students. Kaarre et al. (2023) reported that ChatGPT generated correct responses in 65% of orthopaedic test cases, demonstrating its reliability as a supplementary resource. Meanwhile, Caratiquit and Caratiquit (2023) confirmed that regular interaction with ChatGPT can improve academic performance, positioning it as both a knowledge source and motivator. Within the Malaysian context, Othman et al. (2024) revealed that language lecturers perceive ChatGPT as beneficial for personalized support and skill practice, though concerns about overreliance and weakened critical thinking remain. Building on this, Shah (2025) showed that students perceived ChatGPT as helping them remain motivated, focused, and creative in their academic activities. Collectively, these findings

establish ChatGPT as both a supplementary and central tool in higher education learning processes, though careful guidance is required to ensure ethical and reflective use.

2.2 Academic Engagement in Higher Education

Academic engagement has become a nationally and globally recognized priority. As Witkowski and Cornell (2015, p. 56) asserted, "student engagement and learning are issues that have become nationally important in the 21st Century." Engagement is broadly conceptualized across three interconnected components: behavioral, emotional, and cognitive (Zepke, 2015). It predicts persistence, performance, and overall success, and is also a central emphasis of the Malaysia Education Blueprint 2015–2025, which highlights the need for innovative, resilient, and globally competitive graduates (Ministry of Education Malaysia, 2015).

Research demonstrates that AI tools like ChatGPT influence all three dimensions of engagement. Heung and Chiu (2025) found that students using ChatGPT showed sustained focus on cognitively demanding tasks, greater participation in online discussions, and higher emotional satisfaction, indicating holistic engagement. Lin et al. (2024) similarly reported that students felt more engaged and academically satisfied when supported by ChatGPT's immediate feedback and diverse responses.

Cognitive engagement, in particular, benefits from ChatGPT's scaffolding functions. Students can explore multiple perspectives (Ibrahim et al., 2025), evaluate comprehension (Parajuli et al., 2022), and refine structured responses (Elkhatat, 2023), enabling them to approach tasks with confidence. In language learning, ChatGPT also offers unique advantages: Huang et al. (2022) showed that it provides authentic linguistic input, while Kohnke (2022) highlighted its ability to stimulate learner interest and motivation. Extending this perspective, Kohnke et al. (2023) described ChatGPT as a multifunctional partner capable of simulating authentic interactions, correcting errors, generating varied texts, and creating quizzes, making it highly relevant for communicative learning. These findings align with Shah's (2025) results, where students reported that ChatGPT sustained their concentration and promoted persistence, reinforcing its role in academic engagement.

2.3 Creative Self- Efficacy

Creative self-efficacy refers to a learner's belief in their ability to generate new ideas, solve problems creatively, and approach tasks with originality. In the context of higher education, this construct has gained attention as a crucial factor for preparing graduates to be adaptable, innovative, and competitive in a rapidly changing global environment. As noted in previous research, creative self-efficacy not only enhances academic outcomes but also influences how students perceive challenges and opportunities for innovation (Tierney & Farmer, 2002; Beghetto, 2006).

Recent scholarship highlights the potential of generative AI tools, such as ChatGPT, to play a meaningful role in strengthening students' creative confidence. For example, an experimental study conducted by Toma and Yanez-Perez (2024) demonstrated that students who used ChatGPT to support creative problem-solving tasks reported higher self-efficacy, with measurable improvements in originality and elaboration of their ideas. Similarly, Hwang and Wu (2025) found that ChatGPT reduced students' anxiety while boosting their innovative thinking, mediated by an increase in self-efficacy. These findings suggest that ChatGPT does not simply provide answers but can foster an environment where students feel more capable of exploring multiple solutions and expressing their creativity.

At the same time, research has revealed that the impact of AI on creativity is not always uniform. Liu et al. (2024) noted that while ChatGPT may temporarily elevate creativity and confidence, students' levels of creative self-efficacy tended to decline once the tool was removed, suggesting a risk of overreliance. This echoes findings from Shah (2025), who argued that while ChatGPT encourages originality in idea development, students must be guided to reflect critically and avoid superficial dependence on AI outputs. In this way, creative self-efficacy is best cultivated when AI is integrated as a scaffold, rather than as a substitute, for students' own cognitive efforts.

Taken together, the evidence underscores that ChatGPT has the potential to enhance creative self-efficacy by reducing anxiety, expanding idea generation, and encouraging confidence in problem-solving. However, it also calls for thoughtful integration strategies in higher education to ensure that students build enduring creative capacities rather than transient reliance on AI support.

3. Research Methodology

3.1 Research design

This study employed quantitative, cross-sectional survey design to investigate student perceptions of ChatGPT's influence on academic engagement and creative self-efficacy in higher education. A cross-sectional approach was chosen because it allows researchers to collect data from a population at a single point in time, providing a snapshot of current attitudes, behaviors, and perceptions. This design is especially suitable for exploring patterns and relationships among variables within a specific academic setting.

3.2 Participants

The participants consisted of 57 undergraduate students from Universiti Teknologi MARA (UiTM). Respondents were selected through convenience sampling, targeting students who had used ChatGPT and were willing to participate in the online survey.

3.3 Data Collection Procedure

Data were collected using a self-administered online questionnaire developed via Google Forms. The instrument was structured into five key sections: (1) demographic profile, (2) use of ChatGPT, (3) academic engagement (behavioral, emotional, and cognitive), and (4) creative self-efficacy. All items, except those in the demographic section used a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

The questionnaire was adapted based on existing validated constructs in academic engagement and creative self-efficacy literature and reviewed for content clarity and relevance. The instrument was designed to be completed within 5–10 minutes, allowing for quick yet comprehensive responses.

Data were collected online through a structured Google Form distributed via institutional email, student WhatsApp groups, and class Telegram channels. Participants were informed about the purpose of the study, their rights as respondents, and the voluntary nature of their participation. The survey took approximately 5–10 minutes to complete and ensured anonymity and confidentiality throughout the process.

4. Results and Findings

4.1 Sample Characteristics

This study involved a total of 57 undergraduate students from Universiti Teknologi MARA (UiTM), selected through purposive sampling based on their exposure to and use of ChatGPT for academic tasks. The sample was diverse in terms of gender, age group, residency, and socio-economic background, allowing for a meaningful interpretation of ChatGPT's influence across student subgroups.

In terms of gender distribution, the majority of participants were female (n = 45, 78.9%), while male respondents comprised 21.1% (n = 12). This gender imbalance reflects the actual gender composition of several academic programs at UiTM, particularly those in the arts and social sciences, where female enrolment is typically higher.

The age distribution was predominantly within the 18–22 years range (n = 51, 89.5%), with a smaller segment aged 23–26 years (n = 6, 10.5%). This indicates that most respondents were in the early years of their undergraduate studies, likely still adapting to independent learning strategies, which may influence their adoption of AI tools like ChatGPT.

Residency data revealed that urban students made up the majority (n = 35, 61.4%), followed by those from rural areas (n = 22, 38.6%). Students from urban environments may have greater digital exposure and internet access, potentially shaping their attitudes toward adopting AI tools for academic support.

Regarding socio-economic background, most students identified as middle class (n = 39, 68.4%), with lower class students accounting for 21.1% (n = 12) and upper class students comprising 10.5% (n = 6). This distribution suggests that access to digital resources such as ChatGPT is increasingly normalized across economic tiers, though financial privilege may still influence the extent and manner of use.

The detailed demographic breakdown provides context for the subsequent analysis and supports the generalizability of the findings within similar higher education settings.

Table 1: Demographic Profile of Respondents (N = 57)

Variable	Category	Frequency	Percentage (%)
Gender	Male	12	21.1%
	Female	45	78.9%
Age Group	18–22 years	51	89.5%
	23–26 years	6	10.5%
Place of Residence	Urban	35	61.4%
	Rural	22	38.6%
Socio-Economic Class	Lower Class	12	21.1%
	Middle Class	39	68.4%
	Upper Class	6	10.5%

4.2 ChatGPT Usage Among Higher Education Students for Academic Purposes

This section explores the extent to which students utilize ChatGPT to support their academic activities. Descriptive statistics were generated for five key items designed to measure

frequency, purpose, and intensity of use. Overall, the results demonstrate a high level of engagement with ChatGPT as an academic tool among the surveyed cohort.

The highest mean score was recorded for the item *"I use ChatGPT for my course assignments"* (M = 4.67, SD = 0.56), suggesting that students heavily rely on the tool for completing structured academic tasks. This finding aligns with broader trends in digital learning, where generative AI is increasingly being used to support content generation and task planning.

Similarly, *"I use ChatGPT for my academic activities"* also recorded a high mean score (M = 4.60, SD = 0.61), indicating that the tool plays a general and consistent role across multiple academic domains beyond just assignments. Furthermore, responses to *"I use ChatGPT for my course projects"* (M = 4.58, SD = 0.59) reinforce the utility of ChatGPT for more complex, collaborative, or extended academic tasks that require creativity, planning, and synthesis of ideas.

Notably, *"I rely on ChatGPT for my studies"* (M = 4.33, SD = 0.71) received a moderately high mean score, reflecting that students see ChatGPT not merely as a supplementary tool, but as a regular component of their academic routine. However, the item *"I am addicted to ChatGPT when it comes to studies"* received a comparatively lower mean score (M = 3.76, SD = 1.02), indicating that while usage is high, most students do not perceive their reliance as excessive or problematic. This suggests a healthy balance in how students incorporate AI into their learning strategies.

These results collectively demonstrate that ChatGPT has become deeply integrated into the academic workflows of higher education students. The high means and relatively low standard deviations across items suggest not only widespread use but also consistent patterns of interaction with the tool.

Table 2: Descriptive Statistics of ChatGPT Usage (N = 57)

Item	Mean	SD
I use ChatGPT for my course assignments.	4.67	0.56
I use ChatGPT for my academic activities.	4.60	0.61
I use ChatGPT for my course projects.	4.58	0.59
I rely on ChatGPT for my studies.	4.33	0.71
I am addicted to ChatGPT when it comes to studies.	3.76	1.02

4.3 ChatGPT's Impact on Students' Academic Engagement

This section examines the degree to which students perceive ChatGPT as contributing to their academic engagement, which includes behavioral, emotional, and cognitive dimensions. The descriptive statistics indicate that students report a consistently high level of engagement when using ChatGPT in their academic routines.

The highest mean score was observed for the item *"I use ChatGPT to stay focused when I cannot understand something"* (M = 4.25, SD = 0.78). This suggests that ChatGPT serves as a cognitive anchor during moments of confusion or cognitive fatigue, enabling students to maintain academic concentration. Similarly, students agreed strongly with the statements *"I put effort into completing my language tasks even when using ChatGPT"* (M = 4.18, SD = 0.68) and *"I keep trying to understand difficult concepts with ChatGPT"* (M = 4.17, SD = 0.73), indicating that ChatGPT use does not diminish academic effort but rather sustains it.

Items reflecting emotional engagement, such as *"I feel motivated when I use ChatGPT for my language class"* (M = 4.11, SD = 0.73) and *"I enjoy learning new things about language with the help of ChatGPT"* (M = 4.09, SD = 0.77), also received high ratings. This indicates that ChatGPT not only serves a functional academic role but also contributes to students' emotional connection to learning.

Moreover, cognitive engagement was evident through statements like *"I think about different ways to solve problems with ChatGPT"* (M = 4.10, SD = 0.72) and *"I connect ChatGPT with what I've learned in class"* (M = 4.15, SD = 0.75). These responses suggest that ChatGPT prompts students to apply critical thinking and integrate new knowledge with prior learning.
To further support this finding, a Pearson correlation analysis was conducted between ChatGPT usage and academic engagement. The result showed a strong positive correlation ($r = 0.770$, $p < .001$), implying that increased usage of ChatGPT is significantly associated with higher levels of academic engagement. This indicates that students who engage more frequently with ChatGPT are also more likely to be behaviorally active, emotionally invested, and cognitively involved in their academic work.

Table 3: Descriptive Statistics of Academic Engagement (N = 57)

Item	Mean	SD
I use ChatGPT to stay focused when I cannot understand something.	4.25	0.78
I put effort into completing my language tasks even when using ChatGPT	4.18	0.68
I keep trying to understand difficult concepts with ChatGPT.	4.17	0.73
I connect ChatGPT with what I've learned in class.	4.15	0.75
I feel motivated when I use ChatGPT for my language class.	4.11	0.73
I look forward to using ChatGPT to support my language learning.	4.11	0.80
I think about different ways to solve problems with ChatGPT.	4.10	0.72
I enjoy learning new things about language with the help of ChatGPT.	4.09	0.77
I use ChatGPT to clarify answers I don't understand in class.	4.05	0.76

Table 4: Correlation Between ChatGPT Usage and Academic Engagement

Variable Pair	Pearson r	p-value
ChatGPT Usage vs Engagement	0.770	< .001

The strength and significance of the correlation emphasize the vital role of ChatGPT in fostering meaningful academic participation. These findings align with prior research suggesting that the use of digital learning tools enhances student engagement when integrated effectively into learning environments.

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4.4 ChatGPT's Influence on Students' Learning Self-Efficacy

This section addresses how students perceive ChatGPT in relation to their learning self-efficacy, particularly in terms of their creative confidence and cognitive flexibility. Self-efficacy in this context refers to students' beliefs in their ability to generate original ideas, solve academic problems, and adapt their thinking when engaging with AI-driven learning tools.

The highest mean score was recorded for the item *"I am good at coming up with creative ideas when using ChatGPT"* (M = 3.88, SD = 0.91), suggesting that students feel empowered to think creatively when using the tool. Similarly, the statement *"I often use ChatGPT to explore and expand on my own original ideas"* (M = 3.86, SD = 0.93) reinforces the perception that ChatGPT supports students in ideation and creative development. These findings highlight the role of ChatGPT not just as a source of answers but as a catalyst for higher-order thinking and self-expression.

Moderately high mean scores were also noted for items such as *"I can develop unique outputs with ChatGPT"* (M = 3.79, SD = 0.89), indicating students' confidence in producing work that reflects personal input and originality even when using AI. However, lower scores were observed in items measuring cognitive flexibility. For instance, *"I stick with my original thinking even when ChatGPT suggests a different idea"* (M = 3.54, SD = 0.96) and *"I don't easily change my mind about language topics"* (M = 3.40, SD = 1.02) suggest some degree of cognitive rigidity among respondents. These responses imply that while ChatGPT may stimulate new ideas, students do not always revise or rethink their perspectives based on the AI's output.

To explore the relationship between ChatGPT usage and learning self-efficacy, a Pearson correlation analysis was conducted. The results revealed a strong, statistically significant correlation ($r = 0.731$, $p < .001$), indicating that students who use ChatGPT more frequently tend to report higher confidence in their creative and academic capabilities.

Table 5: Descriptive Statistics of Learning Self-Efficacy (N = 57)

Item	Mean	SD
I am good at coming up with creative ideas when using ChatGPT.	3.88	0.91
I often use ChatGPT to explore and expand on my own original ideas.	3.86	0.93
I can develop unique outputs with ChatGPT.	3.79	0.89
I stick with my original thinking even when ChatGPT suggests a different idea.	3.54	0.96
I don't easily change my mind about language topics.	3.40	1.02

Table 6: Correlation Between ChatGPT Usage and Learning Self-Efficacy

Variable Pair	Pearson r	p-value
ChatGPT Usage vs Learning Self-Efficacy	0.731	< .001

These findings suggest that ChatGPT contributes to students' academic confidence, especially in areas requiring creative thought and idea generation. However, the moderate scores on cognitive rigidity items indicate a potential limitation which is students may use AI to validate pre-existing views rather than challenge or expand them. This insight calls for instructional scaffolding to help students critically evaluate AI-generated outputs and reflect on their own reasoning.

4.5 Correlation Between ChatGPT Usage, Academic Engagement, and Learning Self-Efficacy

To examine the interrelationship among the three core constructs, ChatGPT usage, academic engagement, and learning self-efficacy, Pearson correlation analyses were performed. The findings reveal that all three constructs are significantly and positively correlated, indicating that greater use of ChatGPT is associated with higher academic engagement and increased learning self-efficacy among students.

A strong positive correlation was found between ChatGPT usage and academic engagement ($r = 0.770$, $p < .001$). This suggests that students who use ChatGPT more frequently also demonstrate greater behavioral, emotional, and cognitive involvement in their academic tasks. This strong association highlights the instrumental role ChatGPT plays in maintaining attention, motivation, and active participation in academic work.

Additionally, ChatGPT usage showed a strong correlation with learning self-efficacy ($r = 0.731$, $p < .001$), indicating that regular users of ChatGPT are more confident in their academic skills, particularly in terms of creativity, ideation, and problem-solving. The accessibility and responsiveness of the tool may empower students to take academic risks, test new ideas, and complete tasks with greater autonomy.

The correlation between academic engagement and learning self-efficacy was also statistically significant ($r = 0.607$, $p < .001$), indicating a moderate to strong relationship. This suggests that engaged students tend to perceive themselves as more academically capable, and vice versa. The reciprocity of this relationship supports existing educational theories that link motivation, engagement, and self-perception as mutually reinforcing constructs.

These correlations not only affirm the relevance of ChatGPT in the academic lives of students but also imply that its use may catalyze a positive feedback loop, where higher engagement leads to greater confidence, which in turn promotes more effective and sustained use of AI tools for learning. These findings underscore the potential of integrating generative AI technologies within formal education systems while also highlighting the need for critical digital literacy to ensure thoughtful and ethical use.

Table 7: Correlation Matrix Between Key Constructs (N = 57)

Variable Pair	Pearson r	p-value	Strength
ChatGPT Usage vs Academic Engagement	0.770	< .001	Strong
ChatGPT Usage vs Self-Efficacy	0.731	< .001	Strong
Engagement vs Self-Efficacy	0.607	< .001	Moderate–Strong

5. Discussions

The findings from this study offer some valuable insights into how students are using ChatGPT as part of their academic lives. Consistent with studies by Parajuli et al. (2022) and Baek et al. (2024), many students described the tool as helpful, especially in making learning more manageable. Its ease of access, quick feedback, and user-friendly interface allowed them to interact with course content more effectively. Farazouli et al. (2023) further demonstrated that ChatGPT enhances personalization, increases accessibility of resources, and enables formative assessment, showing how AI tools can extend learning beyond traditional classrooms. For some, ChatGPT seemed to act like a personal learning companion, ready to help clarify confusing points, offer structure when they were stuck, and generally keep them on track. It wasn't just sitting in the background. For these students, it played an active role in keeping their academic momentum going.

That said, not all students used it the same way. As noted by Farazouli et al. (2023) and Bin-Nashwan et al. (2023), there were clear differences in how and why students turned to ChatGPT. Some used it as a quick idea generator or to check details, while others admitted to using it more extensively, sometimes even to draft full sections of their work. Kaarre et al. (2023) also picked up on this variability, suggesting that how students use the tool really

depends on the task and their own study habits. On one level, this shows that the tool is flexible and can support different learning needs. On another, it raises questions about dependency. For a few students, ChatGPT was more than just a study aid as it was doing a lot of the thinking for them. And when that happens, there's a risk that the tool starts to replace, rather than support, active learning.

Looking at academic engagement, the responses showed a mixed but generally positive picture. Students said ChatGPT helped them make better sense of course materials, kept them motivated, and made learning feel a bit less overwhelming. This ties in with what Witkowski and Cornell (2015) described about engagement being essential in today's learning environments. By helping with the summarising information or organising messy thoughts, ChatGPT gave students more room to focus on higher-level thinking. That echoes Zepke's (2015) suggestion that reducing mental clutter can open the door to deeper learning. Students also felt more confident and less anxious, which shows the emotional side of engagement was affected too. Still, a few students pointed out that this ease might be a double-edged sword. While the tool helped them get started, it may also be making it a little too easy to avoid deeper, more independent thought.

Perhaps the most encouraging part of the findings was the boost in creative self-efficacy. Quite a few students said they felt more confident in developing ideas after using ChatGPT. Some mentioned feeling more "inspired" or "encouraged" to try something new. That fits well with Tierney and Farmer's (2002) take on creative self-efficacy as the belief that one can produce original work. ChatGPT didn't seem to stifle creativity, it often sparked it. Students weren't blindly copying what it gave them. Instead, they were tweaking, adjusting, and using the suggestions as a launchpad for their own thinking. This supports Memarian and Doleck's (2023) idea that generative AI, if approached with the right mindset, can actually increase student agency rather than limit it.

Still, all of this has to be viewed in context. Feeling more confident or engaged doesn't always mean long-term skills are being built. Sullivan et al. (2023) reminded us that if students become too comfortable leaning on AI, some of the key academic skills like critical thinking, writing, and reflection could slowly erode. That's why it's so important for educators to step in. Instead of banning the tool, the focus should be on teaching students how to use it responsibly. Encouraging them to question the outputs, revise thoughtfully, and reflect on their own ideas will help keep the learning meaningful. Students should be supported in using the tool, not dependent on it.

In short, the study suggests that ChatGPT can have a positive role in education when used with care. It helps with academic tasks, boosts confidence, and even encourages creativity. But it needs to be part of a well-designed learning environment where students are guided, not left on their own. With the right support, ChatGPT can be a valuable ally in helping students grow, not just get by.

6. Conclusion

This study set out to examine how higher education students perceive the role of ChatGPT in their academic lives, with a focus on its influence on usage patterns, engagement, and creative self-confidence. The findings reveal that ChatGPT is widely relied upon for assignments and projects, indicating that students view it as a dependable academic assistant. Its use also appears to enhance student engagement, as many reported improved focus, motivation, and emotional

involvement; however, concerns remain about overdependence and the possibility of shallow learning. In terms of creativity, most students felt that ChatGPT supported their confidence in generating ideas, though this benefit was closely tied to their ability to adapt and critically evaluate the AI's outputs. Overall, the study highlights a strong link between ChatGPT usage, academic engagement, and creative self-efficacy, suggesting that when used thoughtfully, the tool has the potential to enrich the academic experience.

These insights underscore the need for educators and universities to embed AI literacy into their programs. This means going beyond simply allowing AI use and instead equipping students with the skills to ask meaningful questions, critically evaluate responses, and apply AI ethically in their academic work. At the same time, institutions must adopt clear strategies to mitigate risks such as academic dishonesty and the erosion of critical thinking skills.

Looking to the future, further research should explore these effects over longer periods of time and incorporate qualitative approaches to gain deeper insights into how students actually think about and interact with AI. Comparisons across institutions and academic fields would also provide valuable perspectives on how different contexts shape AI adoption and its impact on learning.

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Conflict of Interest Statement
The authors declare that there is no conflict of interest regarding the publication of this study.

References

Baek, C., Tate, T., & Warschauer, M. (2024). "ChatGPT Seems Too Good to be True": College Students' Use and Perceptions of Generative AI. *Computers and Education Artificial Intelligence,* 100294. https://doi.org/10.1016/j.caeai.2024.100294

Beghetto, R. (2006). Creative Self-Efficacy: correlates in middle and secondary students. *Creativity Research Journal, 18*(4), 447–457. https://doi.org/10.1207/s15326934crj1804_4

Bin-Nashwan, S. A., Sadallah, M., & Bouteraa, M. (2023). Use of ChatGPT in academia: Academic integrity hangs in the balance. *Technology in Society, 75,* 102370.https://doi.org/10.1016/j.techsoc.2023.102370

Caratiquit, K. D., & Caratiquit, L. J. C. (2023). ChatGPT as an academic support tool on the academic performance among students: The mediating role of learning motivation. *Journal of Social Humanity and Education, 4*(1), 21–33. https://doi.org/10.35912/jshe.v4i1.1558

Davar, N. F., Dewan, M. A. A., & Zhang, X. (2025). AI Chatbots in Education: Challenges and Opportunities. *Information, 16(*3), 235. https://doi.org/10.3390/info16030235

Elkhatat, A. M. (2023). Evaluating the authenticity of ChatGPT responses: a study on text-matching capabilities. *International Journal for Educational Integrity, 19*(1). https://doi.org/10.1007/s40979-023-00137-0

Farazouli, A., Cerratto-Pargman, T., Bolander-Laksov, K., & McGrath, C. (2023). Hello GPT! Goodbye home examination? An exploratory study of AI chatbots impact on university teachers' assessment practices. *Assessment & Evaluation in Higher Education, 49*(3),363–375. https://doi.org/10.1080/02602938.2023.2241676

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59–109.

Fung, L. Y., Albert, F., Chun, H. C., Ling, L. L. U & Kong, M. Sustainable Development Goal 4 Quality Education: Implications on higher educational institutions in Malaysia. *International Journal of Novel Research in Education and Learning, 11*(4), 28-37

Hazmilah, H., Jano, Z., Abdullah, N., & Noraini, S. (2016). Analyzing employability competency: Impact of quadruple helix model to prospective graduates. *People: International Journal of Social Sciences, 2*(1), 665–684.

Heung, Y. M. E., & Chiu, T. K. (2025). How ChatGPT impacts student engagement from asystematic review and meta-analysis study. *Computers and Education Artificial Intelligence, 8,* 100361. https://doi.org/10.1016/j.caeai.2025.100361

Hwang, Y., & Wu, Y. (2025). The influence of generative artificial intelligence on creative cognition of design students: A chain mediation model of self-efficacy and anxiety. *Frontiers in Psychology, 15*.

Ibrahim, I., Saad, M. S. M., & Rajikon, M. a. N. (2025). Exploring Student perspectives on ChatGPT: Knowledge, attitudes, concerns, and usage Patterns at Universiti Teknikal Malaysia Melaka. *International Journal of Research and Innovation in Social Science, VIII*(XII), 2497–2503. https://doi.org/10.47772/ijriss.2024.8120209

Imran, M., & Almusharraf, N. (2023). Analyzing the role of ChatGPT as a writing assistant at higher education level: A systematic review of the literature. *Contemporary Educational Technology, 15*(4), ep464. https://doi.org/10.30935/cedtech/13605

Kaarre, J., Feldt, R., Keeling, L. E., Dadoo, S., Zsidai, B., Hughes, J. D., Samuelsson, K., & Musahl, V. (2023). Exploring the potential of ChatGPT as a supplementary tool for providing orthopaedic information. *Knee Surgery Sports Traumatology Arthroscopy,31*(11), 5190–5198. https://doi.org/10.1007/s00167-023-07529-2

Karki, P., Chaudhury, S., & Patangia, B. (2020). Academic Engagement among College Studentsin Urban Bangalore: Exploring Institutional and Individual Level Determinants of Academic Engagement. *i-manager's Journal on Educational Psychology, 14*(2), 24-33. https://doi.org/10.26634/jpsy.14.2.17487

Khurma, A., et al. (2023). Large language models in education: A systematic review. *Education and Artificial Intelligence, 3*(2), 1–12.

Kohnke, L. (2022). A pedagogical chatbot: a supplemental language learning tool. *RELC Journal, 54*(3), 828–838. https://doi.org/10.1177/00336882211067054

Lin, X., Luterbach, K., Gregory, K. H., & Sconyers, S. E. (2024). A case study investigating the utilization of ChatGPT in online discussions. *Online Learning, 28*(2). https://doi.org/10.24059/olj.v28i2.4407

Liu, Q., et al. (2024). When ChatGPT is gone: Creativity reverts and homogeneity persists. *arXiv.*

Mahande, R. D., Fakhri, M. M. Suwahyu, I. & Sulaiman, D. R. A. (2024). Unveiling the impact of ChatGPT: Investigating self-efficacy, anxiety and motivation on student performance in blended learning environments. *Journal of Applied Research in Higher Education 2025, 07*. https://doi.org/10.1108/JARHE-07-2024-0372

Memarian, B., & Doleck, T. (2023). ChatGPT in education: Methods, potentials, and limitations. *Computers in Human Behavior Artificial Humans, 1*(2), 100022.https://doi.org/10.1016/j.chbah.2023.100022

Othman, S., Nik Ismail Azlan, N. M., Shah, D. S. M., Mohandas, E. S., & Azhari, M. A. (2024). ChatGPT: Examining language lecturers' perspectives on its integration in teaching and learning. *Journal of Creative Practices in Language Learning and Teaching, 12*(3), 49-67. 10.24191/cplt.v12i3.2637

Parajuli, S. K., Mahat, D., & Lingden, B. (2022). Organization learning, dissemination ofknowledge and organizational performance in Nepalese banking sectors. Nepal *Journal of Multidisciplinary Research, 5*(5), 75–85. https://doi.org/10.3126/njmr.v5i5.51806

Salman, F. (2019, 17 November). We need future-proof graduates with humanistic values, says Maszlee. *Malay Mail.* https://www.kln.gov.my/web/fra_paris/news-from-mission/-/blogs/we-need-future-proof-graduates-with-humanistic-values-says-maszlee-malay-mail-17-november-2019-

Sani, R. (2017, 27 December). Entrepreneurship: Pushing the agenda further. *New Straits Times.* https://www.nst.com.my/education/2017/12/318730/entrepreneurship-pushing-agenda-further

Shah, D. S. M., Ahmad. E. A., Tahir, M. H. M., Othman, O. & Darazi, A. M (2025). Exploring student perception of ChatGPT's influence in academic engagement and creative self-efficacy in higher education. *International Conference on Management, Education, Social Sciences and Innovation, 6*(2025), 310-320

Sullivan, M., Kelly, A., & McLaughlan, P. (2023b). ChatGPT in higher education: Considerations for academic integrity and student learning. *Journal of Applied Learning & Teaching, 6*(1), 1-8. https://doi.org/10.37074/jalt.2023.6.1.17

Tierney, P., & Farmer, S. M. (2011). Creative self-efficacy development and creative performance over time. *Journal of Applied Psychology, 96*(2), 277-293. https://doi:10.1037/a0020952

Toma, R. B. & Yanez-Perez, I. Effects of ChatGPT use on undergraduates students' creativity: a threat to creative thinking? *Discover Artificial Intelligence, 4*(74). https://doi.org/10.1007/s44163-024-00172-

Universiti Teknologi MARA. (2019). UiTM Academic Compass: Navigating the Future. UiTM Press. Retrieved from https://penang.uitm.edu.my/images/hea/EDU5.0/Education_5_at_UiTM_-_UiTM_Academic_Compass_352019-min.pdf

Witkowski, P., & Cornell, T. (2015). An Investigation into Student Engagement in Higher Education Classrooms. *Insight a Journal of Scholarly Teaching, 10*, 56–67. https://doi.org/10.46504/10201505wi

Zepke, N. (2015). Student engagement research: thinking beyond the mainstream. *Higher Education Research & Development, 34*(6), 1311–1323. https://doi.org/10.1080/07294360.2015.1024635

Zhao, W., et al. (2023). ChatGPT and the future of education: A review. *Computers in Human Behavior, 139*, 107590.