



The Impact of ChatGPT on Autonomous Learning Behaviours of EFL Students in Bangladeshi Universities

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ABSTRACT

Emphasizing on the psychological aspects of autonomy, proficiency and relatedness, this study investigates the effect of ChatGPT on the autonomous learning behaviours of undergraduate EFL students in Bangladeshi universities. Including sixty-four students from two private universities, a qualitative phenomenological approach was applied. With sixteen participants, data were collected through semi-structured interviews and with the rest forty-eight participants, through eight focus group discussions. ChatGPT increases students' confidence and capability since it enables self-directed learning by delivering instant clarification, versatile practice opportunity and individualized feedback, which is revealed by reflexive thematic analysis. It is a fact that ChatGPT cannot fully reproduce human emotions and sense of connections, despite participants stating that while interacting with ChatGPT, they got mental support as well. Some setbacks involving excessive dependence and erratic mistakes are also noted. Besides teacher supervision, ChatGPT provides an effective instrument to facilitate autonomous learning if it can be incorporated mindfully.

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1. INTRODUCTION

In language education, learner autonomy is accepted as the primary goal from the very beginning. In Holec's foundational definition- "the ability to take charge of one's own learning," but according to Benson (2011) & Little (2007) point of view, this concept is not only about to take charge of own learning, others sides are there as well, for instance, metacognitive regulations, self-governance and thoughtful participation. It is necessary for lifelong learning, since alongside sustained academic development, it intrigues students' motivation (Little, 2007; Benson, 2011). However, including Bangladesh, in the South Asian higher educational system, some situations are widespread, for example, teacher-directed instruction, inflexible curriculum framework and test-oriented instruction, here, developing authentic autonomy is arduous.

These structural limitations can be resolved since there are some new developments in generative artificial intelligence. ChatGPT helps autonomous learning by providing immediate interaction, individualized feedback and easily available learning support (Kasneci et al., 2023; Zou et al., 2023). AI tools support developing skills in writing, vocabulary and grammar, and also boosts learners' involvement, encouragement and goal-oriented decision making (Karataş et al., 2024). This is how generative AI promotes independent and self-regulated learning.

On the other hand, there are some complications in the incorporation of AI in education. For real learning autonomy, learners' analytical thinking ability, effort and the deeper psychological process are mandatory which can be reduced by the overuse of AI (Kasneci et al., 2023; Dwivedi et al., 2023). Rather than independence, overdependence on AI can be created. Incorrect information and the low quality of the feedback of AI are also some drawbacks. Hence, in the educational environment and students' autonomous learning, AI has some adverse impact as well.

Despite limitations, since AI in learning is growing swiftly, studies are exploring the way AI shapes autonomous learning behaviors in Global South higher education systems (Dwivedi et al., 2023). Addressing this gap is necessary to ensure that integration of AI facilitates righteous, context-sensitive and meaningful learner development.

This study takes Self-Determination Theory (Deci & Ryan, 1985) as its theoretical framework to investigate. It will help to understand how ChatGPT may facilitate or hinder things that are necessary for autonomous learning. Essential motivational factors through which AI forms learner behaviour, this study explores those factors.

Offering evidence-based insights of the role of generative AI both as facilitator and inhibitor within the Bangladeshi higher education context is the goal of this study. It aims to present guidance for educators, policy makers and researchers to involve AI in such a way which will make authentic autonomous learning.

Learners' set their own objectives, adopt approaches, observe development and undertake introspection in autonomous learning, therefore, it's a diverse capacity (Benson, 2011; Little, 2007). Through communication with teachers, peers and the learning environment, autonomy is enhanced. By autonomous learning, EFL learners became able to do self-practice, broaden learning beyond the classroom, access genuine materials and apply self-monitoring approaches (Reinders & White, 2011; Lai & Gu, 2011).

In a conventional educational setting, attaining learner autonomy is difficult. Insufficient institutional resources and lack of direction impede learners to work autonomously (Reinders & White, 2011; Lai & Gu, 2011). In these cases, usually learners become dependent on the teacher's instructions, which hinder their self-learning.

Digital technologies and online platforms offer access to materials, scopes for self-learning, and tools for self-test. Technological literacy and facilitative teaching framework increase self-learning and learner empowerment (Reinders & White, 2011; Lai & Gu, 2011).

Although, only technology is not sufficient for autonomy. Strategic instructional incorporation and learner's metacognitive skills are also necessary.

AI tools provide dynamic feedback and persistent availability which are helpful for autonomous learning (Zawacki-Richter, Marín, Bond, & Gouverneur, 2019). However, it has ethical, accuracy and cultural concerns. When human interaction is lowered, social and emotional connection may be undermined (Zawacki-Richter et al., 2019).

Self-Determination Theory (Deci & Ryan, 1985) helps to understand the way AI tools enhance motivation and learner independence. Learners engage in self-centered, prolonged learning by autonomy, competence and relatedness. (Deci & Ryan, 1985).

In Bangladeshi higher education, the way AI tools affect learner autonomy, investigation of this study is insufficient. This study addresses this gap through the research questions:

1. On the autonomous learning behaviours of Bangladeshi EFL learners, What is the perceived effect of ChatGPT?
2. How does learners' autonomy, competence and relatedness are supported or impeded by the use of ChatGPT?
3. In fostering learner autonomy, how does the use of ChatGPT redefine the role of the teacher?

The study focuses on presenting subtle understandings of autonomy developments by the use of AI and necessary instructions to involve ChatGPT in the learning process, by dealing with these questions.

2. METHODS

2.1. Research Design

This study adopted a qualitative research design. To illustrate the substance of participants' direct experience with AI supported learning, a phenomenological method was adopted (Moustakas, 1994; Creswell, 2013). The study's aim was investigating the psychological aspects of autonomy, competence and relatedness, within the SDT, and this goes well fitted to this design (Deci & Ryan, 1985).

2.2. Participants

From two private universities in Bangladesh, total sixty-four undergraduate EFL students were chosen through purposive sampling. Experience of using ChatGPT for academic purposes for at least three months was the selection requirement. It ensured that they could deliver insightful reflections on its impact on their learning. The demographic profile of participants is presented in Table 1.

Table 1. Participant Demographic Profile

Characteristic	Category	Number of Participants
Gender	Male	34
	Female	30
Age	19–20	22
	21–22	28
	23–24	14
CGPA	3.5–4.0	18
	3.0–3.49	26
	2.5–2.99	16

Characteristic	Category	Number of Participants
	2.0–2.49	4
Academic Year	First	16
	Second	20
	Third	18
	Fourth	10

Reporting was anonymous to ensure transparency. Forty-eight students, participating in focus group discussions were coded as FGD1–FGD48 and the remaining sixteen, participating in semi-structured interviews were coded as P1–P16.

2.3. Data Collection

Between March and April 2025, data were collected through semi-structured interviews and focus group discussions.

- *Semi-structured interviews*: Sixteen participants (P1–P16) involved in individual interviews, each lasting nearly 10–15 minutes. To investigate students' experiences of autonomy, competence and relatedness while using ChatGPT, there were open-ended questions.
- *Focus group discussions*: Each with six participants, a total of eight focus groups were conducted (FGD1–FGD48). These sessions continued approximately 30 minutes and analysed collective views of ChatGPT in helping or obstructing learner autonomy.

Based on participants' predilection, sessions were conducted in English and Bengali. With approval, interviews were audio-recorded, which were later transcribed word-for-word. Till thematic saturation was gained, data collection continued. It was also confirmed that no new theme appeared from additional interviews (Guest, Bunce, & Johnson, 2006; Braun & Clarke, 2013).

2.4. Data Analysis

Using reflexive thematic analysis, the data were analyzed (Braun & Clarke, 2023). The process involved six stages:

1. After multiple reading, transcripts will be acquainted.
2. Merge theory-driven and data-driven categories, generate codes.
3. Group codes into initial themes.
4. Through recurrent comparison, examine and refine themes.
5. Themes that capture the basics of participants' experiences, define them.
6. With explanatory quotations, structure the findings.

Many researchers coded a subset of transcripts before discussing and aligning contrasts, to secure consistency. The consistency of theme development is reinforced by this collaborative process (Braun & Clarke, 2023; Nowell et al., 2017).

2.5. Ethical Considerations and Trustworthiness

Before data collection, ethical consent was gained, following established guidelines for educational research (American Educational Research Association [AERA], 2011; British Educational Research Association [BERA], 2018). Participants were guaranteed secrecy. They were well informed of their right to skip any question and to withdraw at any stage. Anonymity

(P1–P16; FGD1–FGD48) was maintained. With permission, data were safely stored with certified research data management standards (UK Data Service, 2019).

Through authenticity, adaptability, reliability and consistency, trustworthiness was confirmed (Lincoln & Guba, 1985). Among participants, member checking and among researchers, peer debriefing were conducted. To ensure contextual understanding, in-depth methodological outlines were delivered.

3. RESULTS AND DISCUSSION

3.1. Results

Expressing the effect of ChatGPT on Bangladeshi EFL students' autonomous learning behaviors, the assessment of interviews and focus group discussions disclosed some interconnected themes. Four thematic domains appeared: (1) promoting independence (2) improving skills (3) experiences of relatedness and (4) evolving role of teachers. To elucidate each theme, exemplary quotations are delivered.

3.1.1. Promoting Independence

ChatGPT increases the capability of taking control of one's own learning, which is confirmed by almost all the participants. Participants valued ChatGPT for allowing them immediate clarification, methodical guidance and open access. These all help them to make their own decision about their learning which fosters autonomous learning.

Table 2. Promoting Independence

Theme	Illustrative Quote	Source
Autonomous learning	"I don't have to wait for class to learn. ChatGPT explains everything to me step by step. Whenever I don't understand something, I simply rely on it."	P3
Learner-driven study	"ChatGPT makes me accountable for my own learning. Now I just decide when and what I want to learn."	FGD7
Individualized pacing	"Now I control my own learning path. I can repeat exercises according to my wish."	P6
Accelerated learning	"Now I don't need to wait for my teacher. I can study myself. It saves a huge amount of time."	FGD12
Risk of over-dependence	"It's true that copying answers from ChatGPT saves time and energy, but in that case we actually don't learn things."	FGD25

AI tools like ChatGPT can foster learner independence by delivering instant feedback and adaptive learning experiences (Chiu et al., 2024; Xiao & Zhi, 2024), and these findings support this idea.

3.1.2. Improving Skills

Both in writing and comprehension, ChatGPT helps students to grow confidence and skill. Students appreciated ChatGPT's instant correction and clarifying examples.

Table 3. Improving Skills

Theme	Illustrative Quote	Source
Improved confidence	"I always ask ChatGPT to check my sentences after my writing. It gives proper correction to my mistakes. So I am improving day by day."	P6

Theme	Illustrative Quote	Source
Explicit explanation	“ChatGPT explains slowly, step by step providing examples unlike teachers. Usually teachers are quite fast. I can follow and understand ChatGPT easily.”	FGD14
Error correction and reflection	“ChatGPT makes me well understand the way my answer is incorrect. Now I have become more conscious about my answers.”	P10
Skill trials	“I can try new words and phrases now. ChatGPT helps me in this practice”	FGD21
Misconceptions from inaccuracies	“Sometimes ChatGPT’s answers are incorrect, which leads me to the wrong knowledge.”	FGD32

Learners learn how to critically assess their progress by the use of ChatGPT. However, Students need to be critically aware because of the misinformation provided by ChatGPT.

3.1.3. Experiences of Relatedness

ChatGPT provides a sense of fellowship in spite of being an artificial tool. It alleviates stress regarding learning. It interacts with students non-judgmentally.

Table 4. Experiences of Relatedness

Theme	Illustrative Quote	Source
Non-judgmental interaction	“ChatGPT never gets impatient though I ask the same repeatedly. So I feel relaxed.”	P8
Simulated companionship	“Now I don't feel lonely in learning because it listens to me when I practice speaking.”	FGD19
Mental support	“I don't get nervous when I use ChatGPT. I don't get embarrassed even when I make mistakes. ChatGPT gives me a sense of companionship.”	P5
Lack of empathy	“It cannot control my feelings. I need my teachers for real support.”	P14
Encouraging persistence	“ChatGPT never discourages me even when I make repeated mistakes. It always motivates.”	FGD27

It is a fact that ChatGPT cannot replace human interaction, however, it gives a psychologically supportive environment in learning.

3.1.4. Evolving Role of Teachers

Rather than only distributors of knowledge, teachers are becoming mentors and facilitators. Their roles are now shifted in learning environments.

Table 5. Evolving Role of Teachers

Theme	Illustrative Quote	Source
Teacher’s guidance	“Teachers show how to use answers properly. Our process of learning could be wrong without their help.”	FGD9

Theme	Illustrative Quote	Source
Teacher as mentor	“Teachers teach how to use ChatGPT for real learning. They help us think critically.”	P2
Correct misinformation	“ChatGPT might provide misinformation, and teachers inform us which one is incorrect.”	P15
Proper human encouragement	“Emotional support is a must which teachers can provide perfectly, ChatGPT cannot.”	FGD27

AI tools cannot replace humans although it gives a complement. It creates a collaborative learning environment.

3.2. Discussion

How Bangladeshi EFL students experience autonomous learning through ChatGPT, focusing on independence, competence and relatedness within the Self-Determination Theory (Deci & Ryan, 1985) is explored by this study. AI tools' effect on learners and learning environment can be understood by the analysis of participants' quotations.

3.2.1. Autonomy: Independent Learning and Over-Reliance

ChatGPT helps students to study independently, which is mentioned by the students themselves. According to P3, “*I don't have to wait for class to learn. ChatGPT explains everything to me step by step. Whenever I don't understand something, I simply rely on it,*” which indicates that AI supports self-learning reducing reliance on teachers, which was also founded by prior research (Kasneci et al., 2023; Zou et al., 2023; Almusharraf & Khahro, 2023) where it was argued that self-practice is enriched with the help of AI.

On the other side, contrasting views also exist. FGD25 mentioned, “*It's true that copying answers from ChatGPT saves time and energy, but in that case we actually don't learn things.*” Hence, it is clear that autonomy has dual-nature. It leads to minimal learning although encouraging autonomy. Learner's consciousness and self-strategies shape autonomous learning with the help of AI, as mentioned by Almusharraf & Khahro (2023).

3.2.2. Competence: Confidence Increases, but Critical Judgment Needed

Improving *confidence* level with the use of ChatGPT is a wide practice. P6 stated, “*I always ask ChatGPT to check my sentences after my writing. It gives proper correction to my mistakes. So I am improving day by day.*” Prior investigations also support the idea that immediate feedback enhances self-efficiency (Almusharraf & Khahro, 2023; Kasneci et al., 2023; Zou et al., 2023).

However, another *opinion* was raised by FGD32, “*Sometimes ChatGPT's answers are incorrect, which leads me to the wrong knowledge.*” AI can provide misinformation as well, which learners should examine properly. They should have the capacity to cross-check. Hence, gaining proficiency by using AI depends on learners' active engagement.

3.2.3. Relatedness: Psychological Safety versus Human Connection

ChatGPT provides a secured and non-judgmental environment which is mentioned by the students recurrently. Mentioned by P8, “*ChatGPT never gets impatient though I ask the same repeatedly. So I feel relaxed,*” which was again supported by FGD19, “*Now I don't feel lonely in learning because it listens to me when I practice speaking.*” Their opinion indicates that ChatGPT provides psychological support which is also similar to prior findings on AI-driven learning (Almusharraf & Khahro, 2023; Zou et al., 2023).

Yet, P14's opinion is, *"It cannot control my feelings. I need my teacher for real support."* This comment emphasizes the limitations of AI in emotional support as an artificial tool. It can never be a replacement for human interaction. Examining these divergent opinions emphasizes the need for teacher-student relationships since AI supported learning is not properly genuine.

3.2.4. Evolving Teacher Role: Guiding Critical Engagement

There is an observed shift in the teacher's role. FGD9 commented, *"Teachers show how to use answers properly. Our process of learning could be wrong without their help."* This comment is similar to P15's, *"ChatGPT might provide misinformation, and teachers inform us which one is incorrect."* Hence, it is clear that now teachers act as a facilitator of learning rather than a solo provider of knowledge. Synthesis of the support of both AI and teachers develop the proficiency of learners (Chen & Jang, 2023).

3.2.5. Integration with Theory and Literature

The applicability of Self-Determination Theory is ensured by the participants' statement. ChatGPT enhances autonomy and skill, however, relatedness is partially enhanced by it. Without human facilitation, relatedness is not possible properly. These findings echo with Kasneci et al. (2023) and Zou et al. (2023), who emphasized the conditional effectiveness of AI in advancing self-learning.

ChatGPT is both empowering and restricting. ChatGPT alone can never be a learning tool for autonomous learning. Along with it, learners' active awareness, ability of critical analysis and teacher support foster autonomous learning.

4. CONCLUSION

By enabling self-directed learning and constant feedback, ChatGPT strengthens autonomous learning which boosts learner confidence. The results of this study echo with prior studies about AI supporting the environment in autonomous learning (Kasneci et al., 2023; Zou et al., 2023). However, over-dependence, repeated misinformation in content and lack of emotional assistance indicate that AI cannot be a replacement for teachers' guidance (Almusharraf & Khahro, 2023; Kasneci et al., 2023).

The use of ChatGPT should be there to complement the autonomous learning environment. However, to secure real learning, rather than over-relying on the tool, analytical engagement of AI suggestions is necessary. Teachers' support is essential to ensure psychological support and proper guidance, which ChatGPT cannot recreate (Almusharraf & Khahro, 2023; Kasneci et al., 2023). Students will get a proper self-driving learning environment by combining both teacher and AI support.

This study has some limitations as well as several directions for future research. The external validity of this research is limited since data were collected from only sixty-four undergraduate students from only two private universities in Bangladesh. Students from public universities and different educational levels should be examined under future research. Moreover, at a single point in time, the data were collected but longitudinal studies could explore the effects of AI on autonomous learning over time (Almusharraf & Khahro, 2023; Kasneci et al., 2023). Additionally, the study focused on student perspectives merely, whereas integrating teachers point of view would convey a wide range of idea of AI's benefits and detriments. Alongside, comparing ChatGPT with other AI tools will provide a clear idea of how much ChatGPT is helpful in gaining autonomous learning.

With teacher direction, thoughtful integration of ChatGPT among EFL students enhance independent learning. If students analytically evaluate AI-generated outputs, its effectiveness

will be optimised. To secure significant, self-guided and sustainable learning, thoughtful instructional incorporation of AI and involvement of teacher support are crucial.

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