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How Generative AI Is Changing Study Habits of University Students

كيف يُغيّر الذكاء الاصطناعي التوليدي عادات الدراسة لدى طلاب الجامعة

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Abstract:

The recent developments regarding generative artificial intelligence such as ChatGPT and Bard systems have triggered a paradigm shift in the field of education .These advancements are significantly impacting the study habits of students. This paper aims to analyze the impact of artificial intelligence on university-level EFLstudents' study patterns, time management, and autonomy. By using a mixed methods research approach. The current research gathered data from 150 university EFL students using structured research questionnaires, and 15 students participated in a semi-structured research interview process. The research concludes that despite the fact that artificial intelligence systems have the potential to provide effective learning methods, overdependence on such systems may affect students' critical learning abilities.

Keywords: generative AI, study habits, learning strategies, autonomy, higher education.

ملخص:

أحدثت التطورات الأخيرة في مجال الذكاء الاصطناعي التوليدي، مثل أنظمة ChatGPT وBard، نقلة نوعية في قطاع التعليم .وتؤثر هذه التطور ات بشكل كبير على عادات الدراسة لدى الطلاب .تهدف هذه الورقة البحثية إلى تحليل تأثير الذكاء الاصطناعي على أنماط دراسة طلابا للغة الإنجليزية كلغة أجنبية في الجامعات، وإدارة وقتهم، واستقلاليتهم .وقد تم ذلك باستخدام منهجية بحثية مختلطة .جمعا لبحث

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الحال ببيانا تمن 150 طالبًا جامعيًا يدرسون اللغة الإنجليزية كلغة أجنبية باستخدام استبيانا منظما، كما شارك 15 طالبًا في مقابلات بحثية شبه منظمة .وخلصا لبحث إلى أنه على الرغم من أن أنظمة الذكاء الاصطناعي لديها القدرة على توفير أساليب تعليمية فعالة، إلا أن الاعتماد المفرط عليها قد يؤثر سلبًا على قدرات الطلاب على التعلم النقدي..

اكلمات المفتاحية: الذكاء الاصطناعي التوليدي؛ عادات الدراسة؛ استراتيجيات التعلم؛ الاستقلالية؛ التعليم العالي.

1. Introduction

The present effect caused by Generative AI is significantly influencing the education sector. The students and learners are able to use services such as ChatGPT to create their written work and come up with answers to their difficulties in a matter of seconds. The technology has extremely significant effects concerning the study behaviors among the students. It has various effects concerning the methods the students follow in carrying out their learning processes.

Additionally, research suggests that despite the potential for enhancement of learning productivity through AI, this technology can both develop a form of dependence and hinder independent cognitive interaction (Zhang et al., 2024). It is imperative to comprehend these issues or dynamics, even for higher education institutions to leverage these synergies.

1.1 Background of the Study

The way people learn inuniversity is changing rapidly because of the emergence of Generative Artificial Intelligence (henceforth GenAI)Since tools like ChatGPT became available to everyone ,students have started to move from the old ways of doing research thatcan be considered as time consuming . Nowadays,on the contrary, students like to have their tasks done quickly. These new AI tools help students to do so in a short limited time. Thus,GenAI can be a helpful tool for students to learn but some new studies, like the one by Zhang et al in 2024,are saying that people are getting too used to relying on it. This is shift the way students learn. They used to have to think and struggle to write their assignments, which helped them understand the material. Now they are just focused on getting the answer. GenAI makes students care only on getting ready data without efforts ,it encourages learners to depend only on technology and neglect their cognitive abilities .

1.2Research Objectives

This research tends to investigate the multidimensional effect of Generative AI on the higher education students academic life. More precisely, it aims at

-Investigating how students can do tasks on their own without using Artificial Intelligence. This means looking at how students can perform complex cognitive activities, like problem solving and decision making without relying on Artificial Intelligence to help them. This enables us,as teachers to recognize if students can really think for themselves and come up with their solutions to problems or they rely on Artificial Intelligence to get the job done.

-Identifying how students use GenAI for coming up with ideas writing drafts and finding data.

-Examining how students manage their time by checking if the time they save because of Artificial Intelligence is actually used for academic purposes or not.

-Figuring out how universities are changing their programs to work with Artificial Intelligence while still letting students make their choices and have control over their own learnining .Thats to say, this investigation aims at identify how higher education institutions are adapting to Artificial Intelligence integration when it comes to protecting the autonomy of learners .

1.3Significance of the Research

This study is essential for participants in the academic field:

-For learners: This is a plan to help students understand the difference between using Artificial Intelligence to get things done and relying on Artificial Intelligence that may hurt their cognitive ability. The main goal is to support students in recognizing when Artificial Intelligence is helping with productivity and when it is causing problems with their thinking skills, which is what we call Artificial Intelligence-induced cognitive atrophy or the decline of thinking abilities due to over- reliance on Artificial Intelligence.

-For Educators: This is, about how teachers should think about the assignments they give to students. If Artificial Intelligence can do a task in a few seconds then that task is not a good way to see if students are really learning the Educators material. The Educators need to think about how to make the assignments better so that they're a good measure of what the students are learning from the Educators.

-For universities: this study signals the urge for policies that exceeds "policing" and toward "literacy," ensuring graduates remain independent thinkers in an AI-saturated workforce.

2.Literature Review

The use of artificial intelligence tools like ChatGPT to get quick answers is widely spead among university students not only to learn concepts but also to generate texts,do homework,and look for ready resources for their study.

According to a study at the USC Center for Generative AI and Society ,both students and teachers rely on AI. This research emphasises the way generative AI is employed in higher education classrooms and learning activities.

The researchers carried out two surveys and one new investigation: one national survey of U.S. college students, and experimental research of the updated AI writing means and a world survey of teachers from five countries."Generative AI is here and already having an impact," said Stephen J. Aguilar, associate professor at the USC Rossier School of Education. "What matters now is whether we use it to deepen learning or to avoid it. Our research is important to understand how students and teachers alike are integrating AI into their work and studies."

Led by Aguilar and William Swartout, chief science officer at the USC Viterbi School of Engineering's Institute for Creative Technologies and co-director of the Center for Generative AI and Society, the report shows that generative AI is reshaping education and identifies practices for students and teachers to effectively use these technologies. With intentional design, clear guidance and equitable access, these reports suggest that generative AI can deepen learning rather than replace it.

Acoording to the new national survy,college students opt for artificial intelligence tools like ChatGPT to find rapid replies rather than to exhend their knowledge.To look at the way the participants are using AI tools like ChatGPT, the scholars surveyed 1,000 U.S. college students and found that most use AI for what they named "executive help" — looking for rapid keys with the least effort. On the contrary , "instrumental help" involves using AI to search for terms, develop skills and encourage autonomous learning.

On the other hand, the research indicated that students who are encouraged by their teachers to approach AI promply are significantly more likely to use the technology in their studies oriented ways. This emphasises the teachers guidance which plays a critical role in the way students use AI , not merely as a means for convenience, but as a resource for

intellectual advancement."The growth of AI has created both optimism and anxiety," Aguilar declaed "What matters most is ensuring that AI use is controlled by experts in the content domains, and that students aren't left to figure things out on their own."

2.1AI and Learning Strategies

In addition, AI has a significant impact on learning strategies employed by students because it provides them with 'personalized learning supports' that help improve understanding and organization. Smith & Liu (2024) observed that '"students using AI tools demonstrate more structured learning plans and a sound understanding of tough concepts"' (p. 22) that indicate it has positive effects on cognitive scaffolding. It is supported by Self-Regulation Theory according to which tools influence planning 'to control monitoring or regulation activity' during learning processes (Zimmerman, 2013).

However, the positive aspects of generative AI are also associated with some challenges associated with overuse or blind faith in the use of generative AI. Smith and Liu (2024) warn about the "possible detrimental effect" associated with overusing generative AI because it may result in "reducing students' engagement in analytical reasoning and independent problem-solving" (p. 24). Zhang et al., in support of the concern above, state that overusing generative AI may act as a "cognitive shortcut rather than a cognitive support when learners depend on it to generate answers in place of constructing knowledge" (p. 30).

Therefore, AI both supports and potentially undermines learning. While AI's adaptive learning capabilities can influence students' cognitive and metacognitive strategies in positive ways, its uninhibited use may violate academic autonomy. Mazaheriyan and Nourbakhsh (2025) go on to note that, without institutional direction, students are often left to their own devices in what they call a "shadow pedagogy" of AI (p. 8). This unregulated, informal world of learning may be highly negatively impacting academic study habits and raises profoundly ethical considerations, not the least being those about academic integrity, transparency, and responsible use of AI.

Moreover, scholars argue that in the absence of explicit AI literacy training, students cannot successfully engage in critical judgment of information generated with the assistance of AI. According to Holmes et al. (2023), "students commonly overestimate the accuracy and neutrality of AI outputs, leading to uncritical acceptance of generated information" (p. 41).

This reveals a need for pedagogical frameworks that stimulate reflective engagement with AI rather than passive consumption. Finally, ethical training, critical judgment capabilities, and reflective learning practices should all be incorporated into higher education to ensure that AI improves learning without undermining intellectual independence.

2.2AI and Time Management

Time management is very important in academic performance, and there are huge benefits that can be derived from using AI in such matters. There are tools that are capable of creating schedules, reminding, or assisting in prioritizing, which helps students manage their time more effectively. Chen, Kumar, & Patel (2025) indicated that students who incorporated AI into their learning routines "would save up to 30% of their study time" (p. 14).

However, according to the same studies, over-reliance on AI for organization can undermine intrinsic motivational levels and self-regulatory capabilities of students. A delicate balance between the two is therefore needed for effective academic success.

2.3AI and Student Autonomy

It is important to point out that the autonomy of learning - the ability to independently plan the learning algorithm and monitor and evaluate the learning process .It is supposed to be a crucial factor determining learning results. However, on the one hand, the ability of AI to promote independent learning is likely true, and on the other hand, a number of concerns have arisen suggesting that some learners may over-rely on automated learning assistance.

These reflective practices and interventions will help overcome this challenge. According to Smith (2024), "The challenge is not in restraining the use of AI, but rather in showing students how to use it as a tool to augment their cognition rather than as a replacement for hard work" (p. 28).

2.4Regional Context: Algeria

While most of the literature emerges from around the world, literature focused on the Algerian universities may indicate a similar results. In the Algerian context, Gacemi (2025) states that "the widespread uptake of AI by Algerian university students has run ahead of ethics consciousness and strategies" (p. 112). Today, Algerian students are increasingly using AI to support their homework and test preparation tasks in their studies.However, there is a corresponding lag in terms of education strategy and policies to support students in addressing key issues related to those tasks. Djemoui (2025) adds to the literature by suggesting that while AI provides opportunities to enhance and support personalized

education and learning discourse in higher education institutions, there are also increased "risks associated with over-reliance and shortcuts" in the process (p. 55).

These results highlight the urge and the necessity for Algerian universities, including the Relizane University, to develop programs aimed at ethics and literacy in the use of artificial intelligence.

3.Methodology

3.1Research Design

A mixed-design study was employed to examine the impact of AI on learning strategies, time management, and autonomy. Data was generated using a structured questionnaire and semi-structured interviews.

3.2Population: The survey was conducted on 150 university students from letters and foreign languages faculty.

Interviews: 15 voluntary participants from different departments in the Faculty of letters and foreingn languages (namely the departments of Arabic/French/English).

3.3Data Collection

Factors such as the usage frequency of artificial intelligence, its effects on learning strategies, time management skills, and perceived autonomy were covered through the questionnaire. In contrast, personal experiences, perceived benefits, and challenges related to artificial intelligence for learning purposes were covered during the interviewing process.

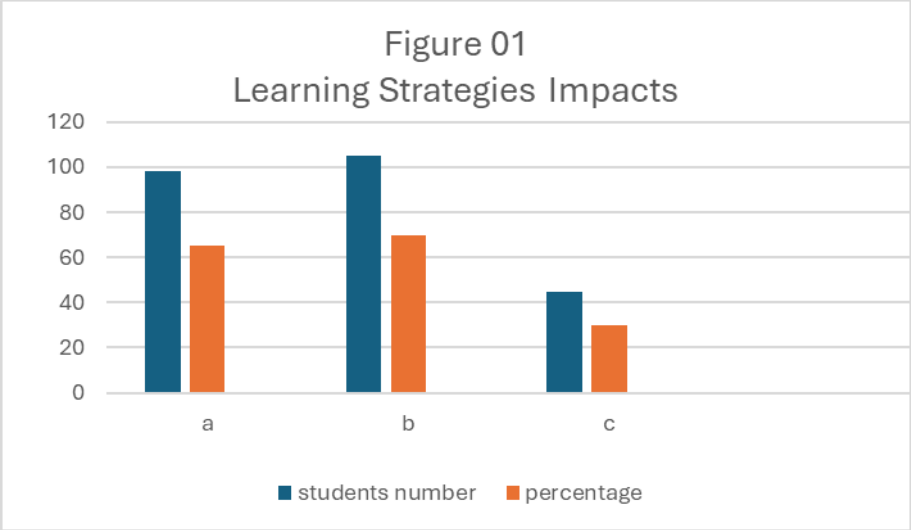
To ensure credibility and transparency,the response was anonymous and voluntary. Also, The present study sought approval from a university board of review.

3.4**Results**

3.4.1Learning Strategies

Table 1. Effects of AI on Learning Strategies

Learning Strategy Impact	Number of Students	Percentage %
a-Improved Planning	98	65%
b-Enhanced Comprehension	105	70%
c-Reduced independent thinking	45	30%

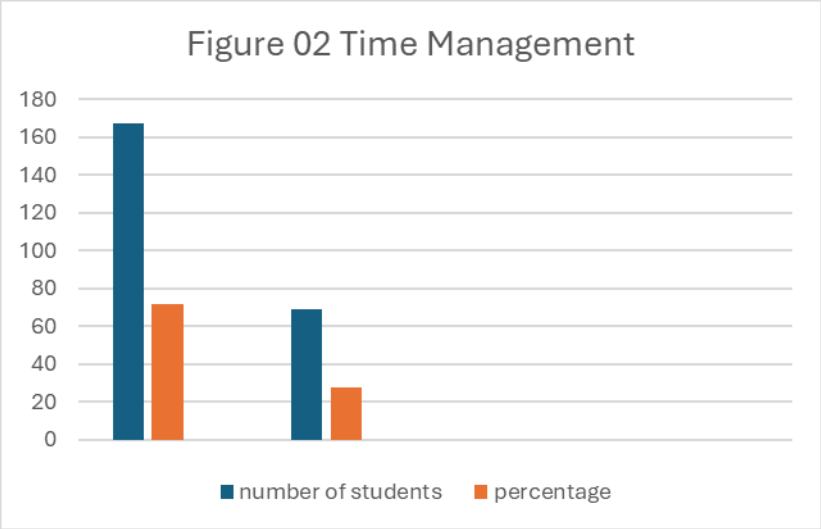


The findings of the curent research indicated that 80% of the students used AI for drafting, summarizing, or problem-solving. (especially ChatGPT).While,65% believed that it helpful for them in planning their study resources effectively.On the other hand 30% of them ,believed that it hindered them to develop their ways of thinking independently.

3.4.3Time Management

Table02.Time Management

Time Management	Number of students	Percentage %
a-The use of AI save time during srudy	176	72%
b-Overdependence to AI destroy students critical ability.	69	28%

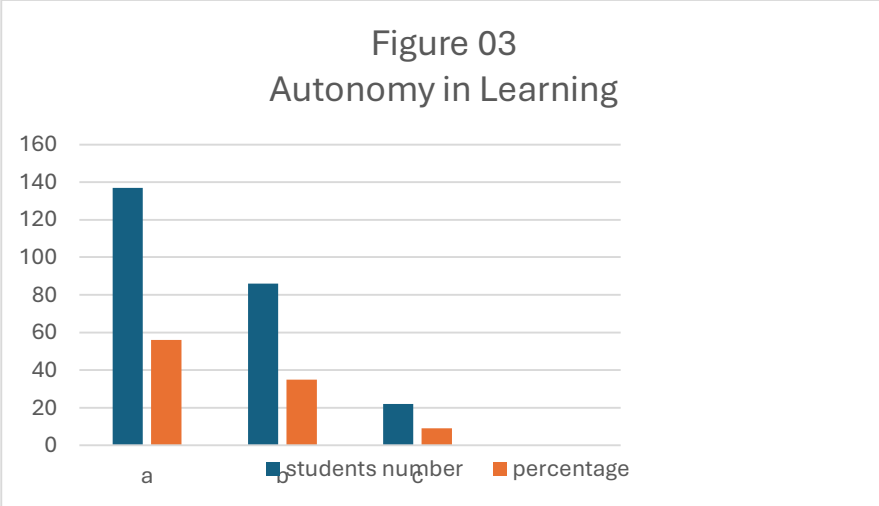


As far as time management is considered,72% of respondents indicated that the use of AI resulted in time saved during study,and 28% from the whole number of participants believed that over dependence on AI can destroy the students critical ability .

3.4.4Autonomy in Learning

Table 03. Autonomy in Learning

Autonomy in Learning	Number of Students	Percentage%
a-AI improved he independent study capacity	137	56%
b-AI decreases self directed learning because of overdependence	86	35%
c-It depends on the way it is used	22	9%



With regard to autonomy,55% of students thought that AI improved the independent study capacity they possess.Furthermore,35%of them suggested that it might decrease self-directed learning because of overdependence on AI.

4.Discussion

The results show a double-edged effect of Artificial Intelligence (AI) on learning behavior in higher education. In one sense, AI technology improves learning efficiency, the retrieval of information, and meta-cognitive study behaviors related to planning and allocating learning time. It enables learners to cope with their learning loads systematically and appropriately and is consistent with cognitive load theory and the belief that cognitive loads can be reduced or mitigated with the use of supports (Sweller, 2019).

On the flip side, overdependence on AI technologies could impede the cultivation of critical thinking skills and metacognitive control and autonomy in learning. If students merely rely on AI tools for purposes of substitution rather than support, then learning could merely be surface-level and passive. This forms a rationale for Zhang et al. (2024) when it states: "AI can be both a facilitator and a crutch, depending on how it is integrated into study practices" (Zhang et al., 2024). Adopting a constructivist theory platform and from a learning point of view, significant learning occurs when students interact with material in a very active way—are curious about assumptions and engaged in a process of reflecting on their

meanings. Therefore, the educative potential of AI is not inherent to the technology itself but is embedded in the pedagogical space where the technology is placed. If the use of AI involves its cognitive scaffolding capability in areas such as brainstorming, feedback, and revision, the technology can have a deeper learning effect on the learners. Otherwise, the technology can negatively impact the learners' cognitive ability.

5.Conclusion

The generative AI system is greatly revolutionizing the learning patterns in higher education institutions, and this is being facilitated by optimized learning approaches, time management, and academic support. However, despite the benefits, difficulties are involved, mainly regarding autonomy in learning, academic integrity, and developing critical thinking skills.

Moreover, it is important for institutions of higher learning to incorporate AI ethics education, reflective learning exercises, and metacognitive training programs. Such measures will enable learners to critically analyze AI-produced content, its limitations, as well as remain in control of their learning processes. Self-directed learning, problem-based learning, as well as reflective learning practices will also be essential in ensuring learners master independent learning capabilities while leveraging AI technology. AI can either be a positive catalyst or a disrupting force in higher education, depending on how students are guided to use it and how institutions design pedagogic and ethical frameworks that balance technological advance with the core aims of higher education-critical thinking, intellectual autonomy, and EFL learning.

In the context of Algerian universities, such as the Relizane University, it is imperative to define institutional policies regarding the use of AI, as well as ethics to guide the use of the technology. Policies should focus on not inhibiting innovation but leveraging the use of AI as a complement to learning instead of a substitute for intelligence.

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