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Dependency vs. Empowerment: Student Views on AI's Dual Role in University Learning[1]

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Abstract: As generative AI tools like ChatGPT increasingly shape the higher education landscape, this study makes an original contribution by foregrounding university students' own perspectives on AI's role in learning. While these technologies offer promising applications, their adoption also introduces concerns about long-term skill development and academic integrity. This investigation draws on qualitative data from open-ended survey responses provided by 309 students at a leading English-medium university in Kazakhstan. Thematic analysis uncovered nine interrelated themes. Among the positive impacts, students viewed AI as a creative assistant that helps simplify complex tasks and as a virtual tutor offering short-term feedback. However, concerns emerged about dependency on AI, the erosion of critical thinking skills, technological limitations, and challenges in distinguishing AI-generated from original student work. By capturing this student-centered viewpoint, the study contributes new insights into how learners navigate AI in educational contexts and offers practical recommendations for structured student training and updated course documentation to support responsible and gradual AI integration. These findings offer timely guidance for educators and policymakers adapting to this technological shift.

Keywords: Artificial intelligence, higher education, student perspectives, educational technology

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Introduction

This section begins with a brief overview of the investigation's context and internationally-significant contributions. The second subsection presents the aims in the form of specific research questions (RQs).

Background

The technologization of university education had been a steady glacial process up until it was catalyzed by the recent Covid-19 pandemic (Acuyo Cespedes, 2025). The social distancing regulations catapulted universities into a "sink or swim" scenario whereby technology suddenly became an operational necessity and thus gained significant prominence across higher education (HE) (Acuyo Cespedes, 2024). Back then, conferencing platforms like "Zoom" were the focal point. Today, the focus has shifted to the latest advancement: artificial intelligence (AI). The recent mainstreaming of AI chatbot models, most notably Open AI's "ChatGPT" application in 2023, has put AI's applicability to a range of industries in the spotlight. Artificial intelligence in education (AIED) represents one of these areas that have sparked sudden intrigue in the tool. As an isolated concept, Generative Artificial Intelligence (GenAI) can be defined as a system that creates its own content, whether text in the example of ChatGPT or visuals in the "DALLE" model example. More significantly, GenAI generates this content based on user prompts that range from summarizing existing information right through to generating altogether new information by problem-solving for instance (Lim et al., 2023). More impressive still, is the model's capability to engage with users interactively in a conversational manner (Chan & Colloton, 2024) that demands no real specialist knowledge from the user. From a university student's perspective, this creates a range of educational opportunities that include AI-generated ideas to help them get started on projects to personalized feedback on drafted written assignments for example. AIED does also pose risks to university students however, most notably related to assessment integrity (Lim et al., 2023) and cognitive skill degradation.

To help students maintain pace with a HE landscape that is rapidly changing as a result of GenAI, this investigation targets both the potential rewards as well as pitfalls that these learners are likely to encounter. This was achieved by exploratory thematic analysis of participant-written responses of over 300 foundation year students at a leading English-instruction university (EMI) in Kazakhstan's capital city of Astana. The international diversity of this research site, with faculty and students from 50 different countries and a Western-oriented liberal arts model, makes the findings widely applicable to a global audience. The sentiment among academics that opinions on AIED are currently polarized (Passey et al., 2024), whether this is manifested in the advocation of an outright ban of AI in universities or via making its implementation mandatory, explains the lack of readiness that is felt among many leading stakeholders (Pelletier et al., 2022). This wide-angled investigation therefore aims to pull the concerned parties away from these opposing ends of the spectrum by presenting a balanced account of how the phenomenon is viewed by students. Moreover, the specific targeting of students' perceptions helps to give these under-represented stakeholders a voice (Sullivan et al., 2023) in a HE environment that is increasingly pressured into prioritizing finances (OfS, 2024) over student concerns. This contributes to a rapidly increasing body of wider literature on AIED (Bittencourt et al., 2024; Nemorin et al., 2022; Xia et al., 2022).

Aims

This study's overarching aim is to explore, from the viewpoint of university students, the extent to which GenAI should be integrated or restricted for the purposes of learning in the context of HE. This is underpinned by two interrelated RQs that seek to make a meaningful contribution to the ongoing discourse on GenAI's penetration into the HE community.

RQ1: To what extent do students perceive GenAI as beneficial for enhancing learning experiences in higher education?

RQ2: To what extent do students perceive GenAI as challenging for enhancing learning in HE?

Literature Review

This section begins with a broad overview of AIED and subsequently narrows down to its implications for HE students.

GenAI in Higher Education

At first glance, the popularization of specific large language models (LLMs), like ChatGPT, might be attributed to their titanic data-processing capability (Lim et al., 2023). That is, the speed with which they can trawl and synthesize existing data sets in order to produce large amounts of information in response to user prompts: "list the highest ranking schools in area X" or "describe scientific process Y." However, a closer look at GenAI points towards its user-friendliness, facilitated by its conversational chatbot platform (Chan & Colloton, 2024), as a more convincing explainer for its surge in popularity. After all, the dominant "Google" search engine has long provided access to troves of information aimed at general audiences, and specialist platforms like "Scopus" offer the same for academics. What these pre-GenAI era tools lack is the human simulation (Crawford et al., 2023) enabled by the language patterns used by ChatGPT-like platforms. This accessibility is magnified by AI's machine learning characteristic, which enables it to evolve with each interaction (Fesenmaier & Wöber, 2023) and essentially produce new content that is tailored to the individual user.

The user-perception of interacting back and forth with a "person," replicated by GenAI, opens up a range of educational roles. At the student level, these tools can act as virtual assistants to streamline students' work as well as tutors that provide bespoke feedback on the finished product (Kasneci, et al., 2023). More pessimistic learners might worry about the challenge associated with improving their AI-competency. Greater prominence is devoted to this in the subsequent subsection in line with the investigation's specific targeting of students' perceptions. Other stakeholders include teachers, who may be excited by the time-saving prospect of AI-automated scheduling or even grading certain types of assessment (Chan & Hu, 2023) for example. THe surprisingly high number of teachers with limited personal networks, brought to the fore during COVID-19 (Acuyo, 2022), can also benefit from using AI as a digital peer. Despite these incentives, these same teachers may also experience apprehension about GenAI's implications for assessment integrity for instance (Gao et al., 2023), given the inconsistent accuracy and opaqueness of some AI-generated content (Fesenmaier & Wöber, 2023). These fears also apply to university leadership, who may worry about the adverse effects of GenAI-assisted cheating on their brand optics for example. More optimistic executives will point to a scenario in which teachers are liberated from the role of feeding students new content, a task that can be delegated to GenAI, and are instead able to devote their teacher time to "dyadic activities supporting critical thinking, creativity, and real-world application" (Fesenmaier & Wöber, 2023, p2). The delicate balance between harnessing GenAI's potential to enrich HE, while at the same time steering clear from the pitfalls, is the target of this investigation. The target (and often silent) stakeholder is the student.

GenAI for Students

Observing AIED from the student perspective that is currently under-represented in literature (Sullivan et al., 2023), assessment integrity emerges as a standout theme (Kelly et al., 2023). Typical pre-GenAI era assessments that would be set as unsupervised coursework, such as the writing of an essay or analysis of a text, can now be carried out by chatbots like ChatGPT (Chan, 2023) subject to the right type of prompting from the student. The unreliability of AI-detection software (Ibrahim et al., 2023) makes it increasingly challenging for teachers to distinguish their students' original products from work that has received significant AI-intervention. This has led to a sense of ethical anxiety across HE (Gao et al., 2023), as universities are forced to factor GenAI into the re-evaluation of each assessment vehicle. It is therefore understandable that the atmosphere of uncertainty created by the recalibration of assessment tools likely filters down to affect the students themselves. The sudden possibility of AI-facilitated academic dishonesty, as the media homes in on egregious cases of students presenting assignments written mostly by GenAI as their own work (Sullivan et al., 2023), undoubtedly impacts not only the cheating minority, but also on their honest peers. The accessibility of free-to-use ChatGPT-like models with their user-friendly conversational interface (O'Dea, & O'Dea, 2023), casts a shadow of suspicion among the bulk of the student population. The onus is on institutions to adapt

their assessment policy to help students overcome this default state of "guilty until the teacher can prove otherwise."

Despite the aforementioned integrity concerns, there is literature that highlights the other side of the coin. Given enough time and training to adjust to AIED (Kelly et al., 2023), students have the potential to harness GenAI's potential as a virtual tutor that provides "plain language explanations to complex concepts, suggest organizational structures for writing an assessment task, give grammatical feedback, and develop sample practice quiz questions for test preparation" (Sullivan et al., 2023, p.36). This translates into a more equitable scenario (Pisica et al., 2023) whereby students are no longer subject to the limitations of their human teacher. This trained use of ChatGPT-like tools also helps to bridge the socioeconomic divide by offering students without access to well-qualified teachers and reputable institutions an AI alternative. The consensus that most students are both willing to use GenAI (Ibrahim et al., 2023) and have at least a basic understanding of the concept (Hornberger et al., 2023), makes the AI tutor scenario seem all the more realistic. The potential benefits of AIED do not need to be constrained between a false dichotomy of an AI-centric setting that replaces the teacher versus an AI-absent one. Instead, the current literature suggests a hybrid scenario whereby students cherry-pick the best elements from both parties. Examples of this include course content that is more targeted and engaging after the teacher has prompted improvements on the original material from GenAI (Pisica et al., 2023). A similar example of teacher-AI co-existence to enhance the student experience relates to the division of labor in the teaching process. EMI university students, like the ones at the focus of this study, may require additional English proficiency support given that the language of instruction is not their mother tongue. The teacher can outsource this support to a chatbot like ChatGPT, allowing students instant access to explained translations and linguistic feedback, which gives the teacher more time and cognitive load to dedicate to course content.

Methodology

The initial subsection provides an overview of the methodological approach, followed by data collection and sampling details. The section ends with a breakdown of the analysis.

Research Design

This investigation engaged in exploratory analysis of student-written survey responses with the aim of better-understanding the target phenomenon from the perspective of direct stakeholders (Hatch, 2023; Mertens, 2020); in this case students' views of the impact of GenAI on their learning. The aim is to provide a wide-angle lens on how a large group of university students perceive GenAI in their own learning contexts. While participants might be able to signal some of these multidimensional perspectives in response to closed Likert scale questions, it is the subsequent open-ended "briefly explain your answer" survey questions (Appendix 1) that truly provide a platform for them to articulate the subtleties and details of these perspectives in their own words. The aim of the open-ended response thematic analysis therefore provides a balance between capturing a sizable sample size but also in offering participants the freedom to explain their perceptions using their own words.

Despite the above rationale, it is important to acknowledge the potential limitations of this research design and clarify how these were mitigated. A prime example comes in the form of possible researcher bias as a result of the complex, and often opaque, thematic data analysis process. This can negatively impact the reproducibility and thus ultimately the credibility of the findings as audiences may question the objectivity of the results (Taherdoost, 2022). This has been mitigated through the provision of both a clear step-by-step explanation of the data analysis and multiple samples (Appendices 2, 3 & 4). Another common critique is the potential influence that the researcher can, knowingly or unknowingly, have on the participants. This is often framed in the context of power dynamics whereby a participant might feel pressured to provide a particular answer to a question in order to impress a researcher that might be their colleague or even their line manager for instance. Given that this critique is often attributed to interviews or focus groups (Mertens, 2020), this has been mitigated to an extent by this investigation's use of an anonymous online survey as a data collection tool that puts comfort distance between the investigator and participants.

Data Collection

A single, ethics-board approved, cross-sectional survey was employed as the data collection method (Appendix 1). This paper focussed on the open-ended survey responses in line with the adopted research design. Informed by a review of current literature related to GenAI in learning scenarios, the survey was ultimately structured into four subsections: general information, previous experience with GenAI, inside the classroom and outside the classroom settings. An advantage of anonymous online surveys includes a minimization of the researcher domination that can be associated with interviews. This can ultimately result in a more objective and thus honest account from the participant, as they express their perceptions anonymously away from direct or indirect pressure from others. A student might feel strain to respond in a particular way to a principal investigator who is also their teacher for example. Another important consideration is the potential of an online survey to alleviate temporal limitations for pragmatic researchers trying to balance a thorough investigation informed by as many participants as possible with their own physical limitations in collecting and processing this information. In contrast with labor intensive interviews and focus groups, "survey datasets can provide richness and depth, when viewed in their entirety, even if individual responses might themselves be brief" (Braun et al., 2020, p.642).

Sample

The online survey data was collected over August and September 2024 from an autonomous English-instruction research university in Kazakhstan. The specific research site within this institution was the foundation program, which delivers English for Academic Purposes (EAP), Leadership and Mathematics subjects to approximately 600 young adults by a team of 50 teaching fellows. A convenience sampling method eventually resulted in a total of 309 voluntary student participants chosen specifically from this program. This sample included variation across gender, previous school type, English proficiency and planned future major. This spread underlines the wide applicability of the findings to global audiences far outside of the specific Kazakh research site.

Data Analysis

In a bid to uncover nuances and depth related to the target phenomenon that cannot be defined numerically (Taherdoost, 2022), the data derived from the student-written responses to the open survey questions were analyzed thematically by the researcher. Given the relatively high number of responses, 309, the researcher was aided by a colleague who conducted a blind spot-check of some of the themes to ensure alignment with the principal investigator's findings. This helped to mitigate potential researcher biases (Hatch, 2023) in order to uphold the validity of the final themes.

Via a series of multiple iterations that aimed to extract patterns and insights (Creswell & Poth, 2018) relevant to the aforementioned RQs, the researcher was able to tease out themes related to student perceptions of GenAI in a university learning landscape. The inductive approach to analysis meant that these data trends arose somewhat unexpectedly from the data itself, rather than being pre-determined by the researcher (Merten, 2020). The initial themes were fortified by supporting survey excerpts and subsequently revisited multiple times in a bid to either strengthen them via greater excerpt corroboration, or modification of the theme accordingly into the final version of consolidated themes seen in the subsequent findings section. Table 1 below details the separate steps taken in the analysis process.

Table 1.
Data Analysis

Step 1. Familiarization	This involved the initial review (tidy up) of the open-question responses to ensure the data was coherent and reader-friendly.
Step 2. Coding	The survey responses were re-reviewed in more depth and annotated (color-coded) in accordance with their relationship to each of the RQs: benefits (RQ1) versus challenges (RQ2) (Appendix 2).

Table 1 continuing

Step 3. Preliminary Theme Generation	After multiple iterations with the data, preliminary themes began to emerge as the researcher was able to identify patterns and similarities related to the target phenomenon (Appendix 3).
Step 4. Final Theme Consolidation	Preliminary themes were reviewed multiple times against the data in order to generate more evidence in the form of supporting excerpts. In cases where not enough support could be found, these initial themes were either amended or discarded altogether (Appendix 4).
Step 5. Peer-Check & Final Review	The final stage involved the researcher asking a colleague to conduct their own blind spot-checks of the data analysis to ensure both researchers were in broad agreement before conducting one very final review.

Findings

The themes below represent students' perceptions of GenAI in the context of learning based on their open-ended responses to the aforementioned survey. The first subsection captures themes related to GenAI's potential benefits (RQ1) in Figure 1 and the second subsection centers on the challenges (RQ2) in Figure 2. Each individual theme is subsequently unpacked and supported with excerpts from the survey.

Benefits

The four themes on the right handside of Figure 1 combine to visualize the potential value that students attribute to GenAI divided according to two categories of significance. Many participants highlighted GenAI's significant potential benefit as a virtual tutor that is always on call and can promote learning by highlighting student input for them to notice and subsequently improve on. On a lesser impact scale, students also identified GenAI's potential to act as a virtual assistant by stimulating creativity and breaking down complex tasks.

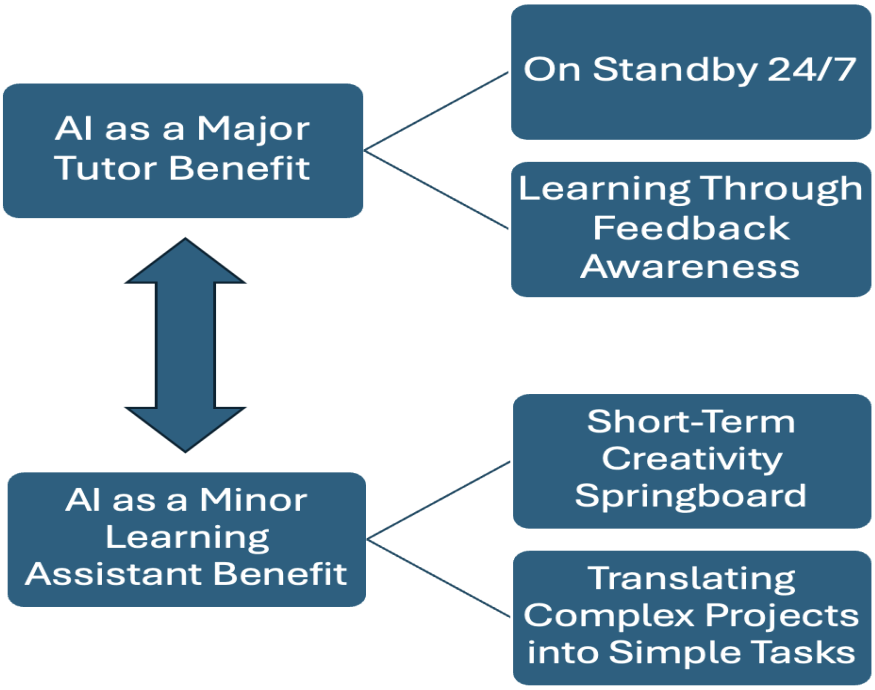

Figure 1. Benefits

On Standby 24/7

Students reported GenAI as fulfilling the role of a readily available, responsive tutor, capable of offering personalized support according to their individual learning needs. With its ability to deliver immediate feedback and guidance on various tasks, this virtual GenAI tutor bridges the gap where human tutors may not always be accessible. This accessibility enables students to use free chatbot models like ChatGPT as a convenient educational resource to supplement the time constraints of their course teacher.

It can give very quick feedback to you rather than waiting for the tutor

ChatGPT is a tool available for EVERYONE. In the right hands it can speed up any task

Most responses related to this category centered GenAI as a supplement to, rather than replacement of, the course teacher. This implies that the teacher is still the preferred source of knowledge, even if this requires students to wait for availability. However, it was noted that a minority of respondents reported their perceptions of GenAI chatbots as equal or superior to their course tutor.

AI can replace a tutor for a student, as it can already talk and maintain an online dialogue without delays. It can also compose texts where words or necessary terms are needed and help to remember them. It also gives useful tips on how to improve language learning

You can study, create plans or just talk with AI to develop your knowledge

Learning Through Feedback Awareness

Aside from around the clock availability, many of the surveyed students value GenAI for the way it promotes learning through awareness-raising. Students reported "learning through noticing" opportunities based on corrections and suggestions to work that they feed into models like ChatGPT. Instead of simply using the GenAI's improved version of their work, some students take time to assess and comprehend the AI model's feedback. This is viewed as a learning opportunity that is no different to learning from a teacher's corrections and explanations.

This indeed can be helpful when AI shows and corrects your grammatical errors because you can train yourself to write properly.

[AI] tools will not only correct your mistakes, but also you can learn how to write properly by looking at them

While translating words student will expand their vocabulary and improve grammar

Short-Term Creativity Springboard

Shifting away from the student perception of GenAI as a seminal advancement that could rival a teacher, some respondents view GenAI as having a mere incremental change on their educational experience. Perceiving tools like ChatGPT as virtual assistants, students report their potential in generating ideas. Students report GenAI models as their "go to" resource when they lose momentum in a writing task, or reach an impasse altogether.

They generate new ideas that may help students that are stuck and have no ideas

Sometimes people can stack [lose their rhythm in the writing process] and they need some ideas

This use of GenAI as an auxiliary aid that catalyzes a student's own creative process is also valued at the start of a longer task, to help them overcome their initial writer's block for example. Even while acknowledging the lack of specificity or abstractness of some of AI's responses, students feel that these examples (models) are enough for them to make a start.

It is hard to find a starting point, so AI is helpful in these kinds of situations.

It gives general information and sometimes generic. However, it is able to give ideas or inspire you to start

Translating Complex Projects into Simple Tasks

Many of the respondents appreciate GenAI's potential to translate larger scale and more complicated information into succinct and more comprehensible sub-points. Some students, as non-native English speakers, reflected on their English-instruction educational settings. This often centered on GenAI's use of more straightforward language that they perceive to be more comprehensible than that of their teacher's instructions or feedback.

It is a bit complicated when teacher says in academic language [but AI can simplify this]

[AI is useful] because there might be some difficult terms to understand.

If a person does not understand his/her fault [mistakes], the individual can ask GenAI to interpret [explain] it, using simple words or examples

In addition to language simplification, students also place value on GenAI's ability to filter and summarize relevant information from large academic sources. Students even gave examples of GenAI use for the layman explanation of technical terms related to niche subjects, such as data coding.

AI tools answer all of your questions and can briefly explain everything you don't know or understand.

GenAI can provide a really interesting ideas that is too complicated for human to think about.

It helps me to learn programming. explains me in simple words. Using AI is much faster than googling

Challenges

The three themes at the top of Figure 2 represent students' perceptions of GenAI's personal challenge to each student at the individual level. The three themes point to current technological constraints coupled with GenAI's potential to stifle creativity and criticality in the long-term; both of which can result in a student becoming addicted to GenAI use in an educational setting. The two themes at the bottom focus on the wider institutional implications by highlighting the challenge of attributing ownership to GenAI-assisted work and the subsequent implications this presents for course assessment.

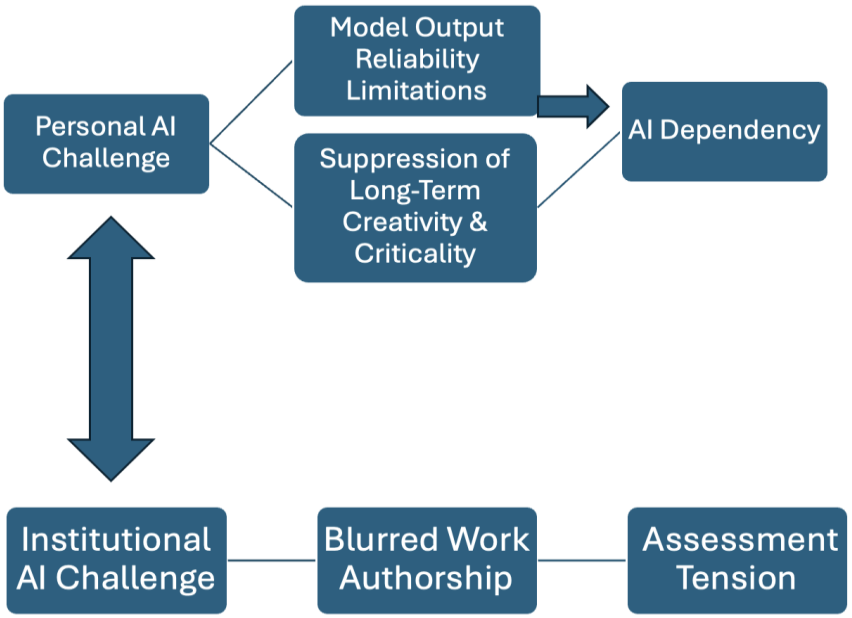

Figure 2. Challenges

Model Output Reliability Limitations

Many of the participating students acknowledged that GenAI, while useful, has inherent technological limitations that affect its reliability. They express concerns over the accuracy and credibility of GenAI-generated content in its current form by highlighting potential response biases and even downright inaccuracies.

Answers of AI are not 100% trustworthy

AI can skip some of the relevant information, only showing biased information, regarding of how AI model was coded

AI tools mostly provide false statements and facts, which is not appropriate for the academic success

This theme therefore captures the skepticism students have regarding AI's ability to replace human judgment and creativity, emphasizing the importance of critical thinking and personal effort in academic tasks. This explains why some students feel more comfortable tackling tasks themselves without the assistance, as they perceive it “hindrance”, of a tool like ChatGPT.

If AI will write YOUR statement it will write it incorrectly.

It is their [students’] task, they should complete it by themselves. AI also is usually incorrect while analyzing

Some of the respondents were not overly critical of GenAI’s limitations, but instead argued that chatbots like ChatGPT are no better or worse than other tools at a student’s disposal. From these students’ perspective, GenAI serves as one of many options for gathering information, but they do not see it as inherently unique or irreplaceable. A GenAI model is perceived as an educational source that is just as available to them as the Google search engine or campus library.

There are other sources not just AI

Sometimes it is better to get ideas from [a variety of] other sources, no matter is it a human written article nor book or ai generated response

Suppression of Long-Term Creativity & Criticality

Aside from GenAI’s technological limitations, it can also be perceived as detrimental for the building and maintaining of a student’s creative and critical thinking skills. The “brainstorming of ideas” stage that is instrumental to many open tasks that students are required to produce, such as essay writing or presentation delivery, was often cited as an example. Other commonly cited examples revolve around

the criticality required for students to create balanced arguments and consider multiple perspectives. Many students feel that regular use of ChatGPT-like tools for these processes is likely to stifle their creativity and critical thinking skills in the long-term.

I think generating ideas is one of the main parts of essay. Using the help of AI tools will negatively affect the creativity of students.

AI can demonstrate students different approaches to think; but it should not be used every time, so that students could develop their thinking skills better

People are slowly but steadily losing the ability to write, comprehend and use creative skills. We lose what we don't use, and it's convenient to have a computer do anything for you.

Some of the respondents explicitly voiced dramatic concerns about this loss of creativity and their predictions regarding how it would disadvantage them in the future. This GenAI-induced loss of creativity development makes them feel a sense of lost opportunity with regards to their educational aspirations.

Students are going to brain rot, only using AI tools to think on a problem

I really want to be able to do everything by myself. That is the reason why I came to university. If I wanted to rely on AI, I could just do it in my hometown.

AI Dependency

Taking the aforementioned limitations combined, students worry that their continued use of a (currently) flawed GenAI model for tasks that would typically require their own cognitive engagement is likely to lead to addiction to tools like ChatGPT. Firstly, the biases and inaccuracies in some of the GenAI responses are likely to be subconsciously absorbed. Secondly, using the tool as a substitute for their own thinking is likely to erode these little-used skills.

AI makes many students lazy. They ignore their homework and instead of doing it themselves they make it through AI.

I think that using AI in brainstorming will decrease the creativity level of a student and maybe student become somehow addicted to AI for ideas

Aside from essay writing, language learning is also cited as a common example of a skill that is likely to suffer degradation as a result of over-reliance on GenAI. The perceived implication is that, in the long-term, students will initially opt for and eventually depend on AI-assisted translation. This would come at the loss of language learning through the traditional means of grammar and vocabulary.

To overcome linguistic barriers students should not lean on AI

Some people may lack the knowledge of languages such as English or Kazakh, but by using AI to overcome these difficulties students may develop a habit of relying on AI and not on their personal experience

Blurred Work Authorship

At a more collective institutional level, some students voiced concerns regarding the ambiguity over work ownership that results from GenAI-assisted learning environments. The issue at core relates to whether the finished product, whether a written assignment or an oral presentation for instance, is more the result of the student themselves or the chatbot. This leads to tension as to who, or what, is really being assessed in accordance with pre-ChatGPT assessment criteria.

Exams are designed to evaluate students skills, not how we use AI

Students should give their own answers. Assessments are about checking students' skills, not their ability to use AI properly

This theme represents some students' desire for assessment vehicles to be re-calibrated with the factoring in of models like ChatGPT. Students want clarity over how coursework authorship is established and what specifically is being assessed. Rather than calling for an outright ban on

ChatGPT-like models, these students pose critical questions that need to be considered for GenAI to be integrated into AI-era assessment.

How does tutors know if its student or computer

That work [created using AI] would not be fully a student's work

Assessment Tension

Some students voiced dramatically negative, even nihilistic, views of GenAI's wide impact on assessment. These signal a desire for a more definitive ban on AI, rather than a pivot towards its integration into existing assessment as alluded to in the previous theme.

I find this question baffling to me… …Allowing GenAI to write assignments for students will be the equivalent of giving a GenAI an assignment and will not involve a student in any way. Completely ruining the education core system

If AI will be used in assessments, they [the assessments] will become meaningless.

Some students do not distinguish between GenAI use and what has traditionally been considered "old-fashioned" plagiarism. They perceive any use of GenAI as a deliberate breach of institutional academic integrity regulations and do not try to contrast this with acts of cheating that do not involve GenAI, such as copying from an online source or colluding with another student.

it's fine to use it except in the assignments, because it violates the academic honesty

It [AI use] will be considered as plagiarism, students should write such tasks by themselves.

Discussion and Conclusions

This section explores the aforementioned themes by infusing relevant literature and identifying possible relationships between them. Based on the surveyed students' perceptions of both the benefits of GenAI in their learning contexts (RQ1), but also the perceived challenges that need to be accounted for (RQ2), specific institutional recommendations related to training and course documentation are made. The section closes with reference to the paper's limitations and future research recommendations.

A key link between the GenAI benefits showcased in the RQ1 themes and the challenges in the subsequent RQ2 ones is their paradoxical relationship, in the sense that students stand to both benefit and lose depending on their approach to chatbots and the time-frame in question. The use of a model like ChatGPT as a virtual teacher replacement that is always available and can even "teach" students indirectly via awareness-raising strategies (Figure 1) is likely to produce palpable rewards quickly. Concerns about the current limitations of GenAI models, whether in the form of false or biased information, are likely to be quickly overcome given the lighting speed of LLM development to date. With this in mind, Vygotsky's (1986) Zone of Proximal Development (ZPD) theory, which showcases how learning can be facilitated by the temporary guidance from a teacher, can be applied (Cong-Lem & Daneshfar, 2024). GenAI's ability to produce detailed and personalized feedback (Chan & Colloton, 2024) creates the opportunity for students to develop their writing skills for instance. However, this ZPD learning is contingent on the student using the tool in a manner that is conducive to scaffolded learning (Cai et al., 2024). That is, a student who invests the time and cognitive effort needed to review their original work critically in comparison with the GenAI improved version is likely to reap the benefits of learning by noticing. This is particularly applicable to EMI universities, like this investigation's research site for example, and is supported by Schmidt's (1990) noticing hypothesis. This emphasizes that English language students learn from feedback by noticing the "gap" between their own product and the corrected (improved) version. Circling back to the relationship between the two findings Figures, the aforementioned benefits related to GenAI as a tutor risk leading to delayed detriment in the longer-term as some students grow dependent on using the chatbot as a "quick-fix" or even essay mill service (Figure 2). This avoidance of the critical thinking process that can facilitate learning through noticing and awareness raising (Schmidt, 1990) is likely to eventually produce a scenario in which some students become dependent on GenAI (Darvishi et al., 2024). What is not used is gradually lost, which means that these students' critical and creative skills are likely to diminish over time. Universities need to respond accordingly by updating their courses, not only assessment but

also course descriptions and learning outcomes, to reflect the growing omnipresence of GenAI in their students' educational experiences.

Another element of tension between the benefits and challenges centers on students' use of GenAI not as a whole tutor replacement, but as an ancillary cyber assistant (Figure 1). Some of the more recent literature spotlights the use of models like ChatGPT in assisting students with the foundational underpinnings of courses (Chen et al., 2023). The conversational interface of these tools (Chan, 2023) make them well-suited for aiding students even through specialist subjects, like Chen et al.'s (2023) example of Information Systems. Some authors provide specific examples of delegated roles that GenAI models can adopt to assist students, including task completion reminders and bespoke recommendations on target areas in future study (Darvishi et al., 2024). However the same literature articles also warn about the longer-term degradation of students' self-regulated learning strategies as they come to depend on chatbots that are seemingly more disciplined and consistent than their own, AI-absent and thus perceivably less reliable, learning strategies (Darvishi et al., 2024). University assessment vehicles that were designed prior to the popularization of ChatGPT in early 2023 therefore do not cater for students who have had exposure to, and are therefore at the risk of dependency on, these GenAI tools (Figure 2). The balance between utilizing chatbots for their potential to assist with elements like brainstorming or simplifying more complex tasks, while also protecting against the risks of addiction and assessment-rule infringement, will come down to each individual student. This is unlikely to be a dichotomy between the GenAI proponents versus opponents. It is more likely to be a balancing act for each student that institutions should facilitate by providing comprehensive training and guidelines. The consensus that GenAI-detection software is currently incapable of reliably distinguishing between human and GenAI authorship (Ibrahim et al., 2023) means universities need to plan ahead for ethical GenAI use (Chaaban, 2025). Furze et al. (2024) offer an example of a user-friendly traffic-light system model that labels the degree to which GenAI is permitted in a particular assessment. Visually-intuitive models like this can be used to communicate clearly-defined assessment regulations to students in advance, to help them decide for themselves the degree to which they choose to include GenAI in their preparation for this assessment. Again, this is an individual decision, much in the same way that each student favors group versus solo preparation or online versus hard copy sources. Institutions therefore need to respond firstly by providing GenAI training that levels the playing field to ensure all students have access to AI-assistants for support with their lessons throughout the course. Secondly, they need to clearly signal permissible levels of GenAI use across each assessment to create well-defined boundaries between rule-abiding and misconduct.

With the aforementioned findings in mind, the following recommendations are made:

1. Foundational GenAI Student Training:

GenAI should be included into course curriculums and introduced in the context of the subject being taught. A Bachelor's in Architecture, for example, could include references to automated design generation, whereas a Masters in Business Administration might showcase analytics to help predict financial risks. This should be taught as a core or introductory module at the beginning of the course, much in the same way students are exposed to "Introduction to Research Methods" or "Digital Literacy" type modules at the start of the academic year.

2. Representation of GenAI Across Course Documentation:

Supporting course documents, including curriculum and syllabi, should be updated to reflect GenAI's growing prominence in HE. The aim should be to build on existing documents, rather than starting over. In the same way that lesson plans include reference to "interaction type" or "supplemental material" for instance, they should now include a new GenAI-related section. Assessment guidelines should be given particular attention and aided with illustrative examples that contrast specific scenarios in which penalties are applied (or not) related to GenAI use.

This study contributes to the existing knowledge of how university students perceive GenAI in their own teaching contexts. The theoretical contributions offer a balanced picture of both the potential short-term support that this phenomenon can offer students, but also the longer-term complications that need to be carefully considered. More practically, the paper offers actionable recommendations for institutions to implement in order to better-cater to their students as GenAI continues to penetrate HE

into the future. These conclusions and recommendations are applicable to a global audience far outside of Kazakhstan. This is attributed both to the diversity of the participant sample, with students from a wide range across previous school types and socioeconomic status for example, and also due to the international-orientation of the research site as an EMI university with a diverse faculty base and a multitude of global partnerships. Regardless of these strengths, the study was somewhat limited by its reliance on a single cross-sectional survey from one institution without the follow-up triangulation from other data collection methods. The absence of in-depth qualitative instruments, such as interviews or focus groups, limited the investigation's depth of exploration into the phenomenon. Future investigations can fill this gap by experimenting with student interviews from multiple universities to enrich the qualitative data content and also provide the greater generalizability that comes with representing a range of institutions.

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References

Acuyo, A. (2022). Reviewing the literature on professional development for higher education tutors in the work-from-home era: Is it time to reconsider the integration of social media? *Education and Information Technologies, 27*(1), 89-113. https://doi.org/10.1007/s10639-021-10603-2

Acuyo Cespedes, A. (2024). Moving on from emergency-remote-teaching: University teachers' perceived challenges of networked learning. *Computers and Education Open, 7*, 100217. https://doi.org/10.1016/j.caeo.2024.100217

Acuyo Cespedes, A. (2025). Teachers in transition: A qualitative exploration into the impact of emergency remote teaching on professional development. *International Journal of Educational Research, 130*, 102548. https://doi.org/10.1016/j.ijer.2025.102548

Bittencourt, I.I., Chalco, G., Santos, J., Fernandes, S., Silva, J., Batista, N., Hutz, C., & Isotani, S. (2024). Positive artificial intelligence in education (P-AIED): A roadmap. *International Journal of Artificial Intelligence in Education*, 34, 732-792. https://doi.org/10.1007/s40593-023-00357-y

Braun, V., Clarke, V., Boulton, E., Davey, L., & McEvoy, C. (2020). The online survey as a qualitative research tool. *International Journal of Social Research Methodology, 24*(6), 641–654. https://doi.org/10.1080/13645579.2020.1805550

Cai, L., Msafiri, M. M., & Kangwa, D. (2024). Exploring the impact of integrating AI tools in higher education using the zone of proximal development. *Education and Information Technologies*, 30, 7191-7264. https://doi.org/10.1007/s10639-024-13112-0

Chaaban, Y. (2025). Exploring research ethics through the lens of critical posthumanism in the age of artificial intelligence. *Teaching in Higher Education*, 1–16. https://doi.org/10.1080/13562517.2025.2465995

Chan, C.K.Y. (2023). A comprehensive AI policy education framework for university teaching and learning.. *International Journal of Educational Technology in Higher Education* 20, 38. https://doi.org/10.1186/s41239-023-00408-3

Chan, C.K.Y., & Colloton, T. (2024). *Generative AI in higher education: The ChatGPT effect* (1st ed.). Routledge. https://doi.org/10.4324/9781003459026

Chen, Y., Jensen, S., & Albert, L. J. (2023). Artificial intelligence (AI) student assistants in the classroom: Designing chatbots to support student success. *Information Systems Frontiers, 25*(1), 161–182. https://doi.org/10.1007/s10796-022-10291-4

Cong-Lem, N., & Daneshfar, S. (2024). Generative AI and second/foreign language education from Vygotsky's cultural-historical perspective. In H. P. Bui & E. Namaziandost (Eds.*), Innovations in technologies for language teaching and learning* (Vol. 1159). Springer. https://doi.org/10.1007/978-3-031-63447-5_10

Crawford, J., Cowling, M., & Allen, K. (2023). Leadership is needed for ethical ChatGPT: Character, assessment, and learning using artificial intelligence (AI). *Journal of University Teaching & Learning Practice*, 20(3). https://doi.org/10.53761/1.20.3.02

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.

Darvishi, A., Khosravi, H., Sadiq, S., Gašević, D., & Siemens, G. (2024). Impact of AI assistance on student agency. *Computers & Education*, *210*, 104967. https://doi.org/10.1016/J.COMPEDU.2023.104967

Fesenmaier, D. R., & Wöber, K. (2023). AI, ChatGPT and the university. *Annals of Tourism Research*, 101, 103578. https://doi.org/10.1016/j.annals.2023.103578

Gao, C.A., Howard, F.M., Markov, Dyer, E.C., Ramesh, S., Luo Y. & Pearson A.T. (2023). Comparing scientific abstracts generated by ChatGPT to real abstracts with detectors and blinded human reviewers. *NPJ Digital Medicine*. 6, 75. https://doi.org/10.1038/s41746-023-00819-6

Hatch, J. (2023). Doing qualitative research in education settings. *SUNY Press*. https://doi.org/10.1515/9781438494623

Hornberger, M., Bewersdorff, A., & Nerdel, C. (2023). What do university students know about artificial intelligence? Development and validation of an AI literacy test. *Computers and Education: Artificial Intelligence,* 5, 100165. https://doi.org/10.1016/j.caeai.2023.100165

Ibrahim, H., Liu, F., Asim, R., Battu, B., Benabderrahmane, S., Alhafni, B.,…Zaki, Y. (2023). Perception, performance, and detectability of conversational artificial intelligence across 32 university courses. *Scientific Reports*, 13, 12187. https://doi.org/10.1038/s41598-023-38964-3

Kelly, A., Sullivan, M., & Strampel, K. (2023). Generative artificial intelligence: University student awareness, experience, and confidence in use across disciplines. *Journal of University Teaching & Learning Practice, 20*(6), 1-12. https://doi.org/10.53761/1.20.6.12

Lim, W. M., Gunasekara, A., Pallant, J. L., Pallant, J. I., & Pechenkina, E. (2023). Generative AI and the future of education: Ragnarök or reformation? A paradoxical perspective from management educators. *The International Journal of Management Education*, *21*(2), 100790. https://doi.org/10.1016/J.IJME.2023.100790

Mertens, D. (2020). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods* (5th ed.). SAGE.

Nemorin, S., Vlachidis, A., Ayerakwa, H. M., & Andriotis, P. (2022). AI hyped? A horizon scan of discourse on artificial intelligence in education (AIED) and development. *Learning, Media and Technology, 48*(1), 38–51. https://doi.org/10.1080/17439884.2022.2095568

O'Dea, X., & O'Dea, M. (2023). Is artificial intelligence really the next big thing in learning and teaching in higher education? A conceptual paper. *Journal of University Teaching & Learning Practice*, *20*(5), 1-25. https://doi.org/10.53761/1.20.5.05

Office for Students (OfS). (May 16, 2024). Financial sustainability of higher education providers in England: 2024. Retrieved from https://www.officeforstudents.org.uk/publications/financial-sustainability-of-higher-education-providers-in-england-2024/

Passey, D., Taggart, S., Leow, S., & Lee, C. E. (Catherine). (2024). Generative artificial intelligence and education: Research, policy and practice. *Studies in Technology Enhanced Learning*, *4*(1). https://doi.org/10.21428/8c225f6e.001efa82

Pelletier, K., McCormack, M., Reeves, J., Robert, J., Arbino, N., Al-Freih, w.M., Dickson-Deane, C., Guevara, C., Koster, L., Sanchez-Mendiola, M., Skallerup Bessette, L. & Stine, J. (2022). 2022 EDUCAUSE Horizon Report Teaching and Learning Edition. EDUCAUSE. Retrieved from https://www.learntechlib.org/p/221033/

Pisica, A. I., Edu, T., Zaharia, R. M., & Zaharia, R. (2023). Implementing artificial intelligence in higher education: Pros and cons from the perspectives of academics. *Societies*, *13*(5), 118. https://doi.org/10.3390/soc13050118

Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics*, *11*(2), 129–158.

Sullivan, M., Kelly, A., & McLaughlan, P. (2023). ChatGPT in higher education: Considerations for academic integrity and student learning. *Journal of Applied Learning and Teaching*, *6*(1), 31-40. https://doi.org/10.37074/jalt.2023.6.1.17

Taherdoost, H. (2022). What are different research approaches? Comprehensive review of qualitative, quantitative, and mixed method research, their applications, types, and limitations. *Journal of Management Science & Engineering Research*, *5*(1), 53-63. https://doi.org/10.30564/jmser.v5i1.4538

Vygotsky, L. S. (1986). Thought and language (A. Kozulin, Ed. & Trans.). MIT Press. (Original work published 1934)

Xia, Q., Chiu, T.K., Zhou, X., Chai, C.S., & Cheng, M. (2022). Systematic literature review on opportunities, challenges, and future research recommendations of artificial intelligence in education. *Computer Science Education Artificial Intelligence*, 4, 100118.

Appendices

Appendix 1 - Survey Questions

Part 1 - General Information

Please select your gender

Please select your previous school

Please select your overall IELTS Score

Please select your planned undergraduate school

Please select your planned major

Part 2 - Previous Experience with GenAI

How frequently do you use GenAI models, such as AI's ChatGPT or Google's Gemini?

How would you best describe your level of overall familiarity (competence) in using GenAI models, such as AI's ChatGPT or Google's Gemini?

What is your favorite or most commonly used GenAI tool?

What is your overall sentiment in relation to the impact of GenAI tools on teaching and learning on the whole?

Briefly explain your response

Part 3 - In the Classroom

"Teachers should allow students to use GenAI to help generate ideas in class (e.g. brainstorming essay topics or potential counterarguments)"

Briefly explain your response

"Teachers should allow students to use GenAI to help overcome linguistic barriers in class (e.g. translating from Kazakh or Russian into English or vice-versa)"

Briefly explain your response

"Teachers should allow students to use GenAI to help with basic tasks in class (e.g. proofreading for grammatical errors or conducting quick Google-like searches)"

Briefly explain your response

"Teachers should allow students to use GenAI to help with complex tasks in class (e.g. paragraph structure or analyzing large texts)"

Briefly explain your response

"Teachers should allow students to use GenAI for assessment in the classroom (e.g. help answering open-ended quiz questions or engaging with reading exam texts)"

Briefly explain your response

What is your overall sentiment in relation to the impact of GenAI in the classroom?

Briefly explain your response

Part 4 - Outside the Classroom

“Students should routinely use GenAI outside of class to help improve themselves as learners (e.g. writing support or language learning)”

Briefly explain your response

“Teachers should routinely use GenAI outside of class to help improve themselves as professionals (e.g. lesson planning or pedagogical development)”

Briefly explain your response

“Teachers should allow students to use GenAI for assessment-related work outside the classroom (e.g. help writing coursework essays or preparing presentations)”

Briefly explain your response

“Teachers should allow students to use GenAI to help with non-assessment related university tasks (e.g. creating personal statements for undergraduate applications or applying for funding)”

Briefly explain your response

“Teachers should use GenAI to help with non-professional development university tasks (e.g. writing student reports or lesson planning)”

Briefly explain your response

What is your overall sentiment in relation to the impact of GenAI outside the classroom?

Briefly explain your response

Use the space below for any other relevant comments you may have about GenAI

Appendix 2 - Coding Sample

Briefly explain your response	**In the Classroom** **вЂЊTeachers should allow students to use GenAI to help generate ideas in class (e.g. brainstorming essay**	**Briefly explain your response**
	Somewhat agree	
I am against using AI in the exams or quizzes which depend on our final assessment. But, I am not against using it while doing homework and etc. for improving some skills	Neither agree nor disagree	
For those who having hard time understanding long and complex scientific statements, there is always a tool that can help break it down realy fast.	Somewhat disagree	Brainstorming for ideas means flexing your mind not a capabilities of AI. However I would use to escalate my own ideas rather than letting it brainstorm for me.

Appendix 3 - Preliminary Theme Sample

Preliminary Themes - STUDENTS

RQ1: To what extent do students perceive GenAI as beneficial for enhancing teaching and learning experiences in HE?

RQ2: To what extent do students perceive GenAI as challenging for enhancing teaching and learning experiences in HE?

Preliminary Themes	Supporting Excerpts
AI as a creativity springboard	AI generates many ideas that can broaden student's horizons It gives general information and sometimes generated. However, it is able to give ideas or inspire you Sometimes people can stack and they need some ideas. AI is good idea generator They generate new ideas that may help students that are stuck and have no ideas Ai can create an example It is hard to find starting point, so AI is helpful in these kind of situations.
AI as a simplification tool Breaking larger more complex umbrella tasks into smaller more manageable subtasks	On the right hand, it helps to find necessary information easily and fastly. Not only GenAI is able to find and fix mistakes, but also explaining why this is a mistake. Moreover, if a person does not understand his/her fault, the individual can ask GenAI to interpret it, using simple words or examples… AI tools answer to all of your questions and can briefly explain everything you don't know or understand.

Appendix 4 - Consolidated Theme Sample

Consolidated Themes - STUDENTS

RQ1: To what extent do students perceive GenAI as beneficial for enhancing teaching and learning experiences in HE?

Consolidated Themes	Supporting Excerpts
AI as a Tool for Creative Inspiration and Overcoming Blocks Many students see AI as a resource that broadens their creative perspectives and helps overcome initial challenges in idea generation. For students who struggle with finding a starting point or feel "stuck," AI tools like ChatGPT provide foundational ideas, suggest examples, and offer inspiration that can act as a springboard for deeper exploration. Rather than serving as a substitute for original thought, students view AI as an auxiliary aid that catalyzes their own creative process.	AI generates many ideas that can broaden student's horizons It gives general information and sometimes generic. However, it is able to give ideas or inspire you to start Sometimes people can stack [lose their rhythm in the writing process] and they need some ideas. AI is good idea generator They generate new ideas that may help students that are stuck and have no ideas Ai can create an example It is hard to find a starting point, so AI is helpful in these kinds of situations.
AI as a Tool for Simplifying Complex Information and Tasks AI is valued by students for its ability	On the right hand, it helps to find necessary information easily and fastly. Not only GenAI is able to find and fix mistakes, but also explaining why this is a mistake. Moreover, if a person does not understand his/her fault, the individual can ask GenAI to interpret [explain] it, using simple words or examples