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PATTERNS OF CHATGPT UTILIZATION BY DUAL-DEGREE STUDENTS IN ETHICAL CONTEXTS

Abstract. In the context of the rapidly changing educational landscape due to the development and implementation of AI in almost all areas of life, ChatGPT has become an important topic for discussion. The use of ChatGPT in the educational process gives rise to a number of ethical issues related to academic honesty and independence in learning. This issue is most relevant among students of dual-degree programs at Kozybayev University and the University of Arizona. As part of the study, a literature review and a survey of 86 first- and second-year students in the areas of biotechnology, information systems and pedagogy of dual-degree programs were conducted. The results showed that most students use ChatGPT to complete educational tasks in the academic process. Some respondents note their dependence on AI and the need to verify the reliability of the information received. To increase students' ethical awareness, an activity using the AI Incident Database (AIID) was proposed within the English language classes. As a result, students noted the importance of critical thinking when working with AI and the need for the constant implementation of such educational practices in the educational process.

Keywords: ChatGPT, academic integrity, dual degree programs, language development, AI Incident Database.

Introduction

Modern educational technologies inevitably transform the academic environment, influencing the educational process such as with the Internet or online learning. One of the most significant tools of digital education has become ChatGPT – artificial intelligence capable of generating text based on entered data, simplifying access to information and providing support in educational activities. Since ChatGPT was launched in November 2022, this tool has become an integral part of many students' learning, particularly for dual degree students whose course load and academic demands are significantly higher than usual. The dual degree programs, implemented in partnership between M. Kozybayev North Kazakhstan University and the University of Arizona, offer students a unique opportunity to receive an international education without leaving Kazakhstan. The program begins with intensive study of English, which allows students to master the necessary language skills for further study. After mastering English, all specialized disciplines are taught exclusively in English, which meets international educational standards and the requirements of the University of Arizona. This structure of study allows students not only to deepen their knowledge in the chosen field, but also to develop academic and professional competencies in English. It should be noted that the academic workload within this program is extremely high, requiring maximum concentration, self-organization, reflection, and resistance to academic, and sometimes personal, challenges from students. Thus, the integration of AI solutions into students' educational practice seems to be a logical and predictable phenomenon. However, their use gives rise to several ethical questions related to the acceptable and unacceptable use of AI tools in the educational environment.

The rise of large language models (LLMs), particularly ChatGPT by OpenAI, has sparked a global debate among educators, ethicists, and policymakers. Since its public release in late 2022, ChatGPT has rapidly transitioned from a novel experiment to a mainstream tool in academic environments. It is now employed in a variety of contexts – from writing assistance and coding help to more controversial uses such as automatic essay generation. This sudden integration has challenged long-standing educational norms, especially those concerning originality, academic integrity, and assessment design. The educational system was unprepared for such a disruptive force, emphasizing the need for both institutional policies and

pedagogical frameworks that guide ethical AI usage. While some universities have embraced AI tools with structured guidance, others have banned them outright due to concerns over plagiarism and authenticity. In this context, exploring students' ethical reasoning becomes critical – not only to adapt educational practices but also to prepare future professionals for responsible AI engagement in society at large.

The integration of AI, and particularly ChatGPT, into educational processes has been the subject of intense research in recent years. Current research highlights both the benefits and challenges associated with the use of AI in higher education, especially in the context of ethical aspects and academic integrity. E. Kasneci with co-authors describe ChatGPT as a powerful tool to support the educational process, promoting the development of critical thinking and improving students' writing skills (Kasneci et al., 2023). They note that students actively use ChatGPT for essay writing and exam preparation. Similar ideas are found in the studies of J. Dempere, which emphasize the transformative potential of AI in teaching and research (Dempere et al., 2023). X. Song investigated the impact of ChatGPT on medical students and concluded that AI contributes to improved access to information and increased interactivity in the learning process (Song et al., 2024). However, the authors also note the need for clear instructions and restrictions to prevent abuse and overreliance on the use of AI in educational activities. M. Seitova, Z. Halmatova, L. Kazykhankyzy and P. Bhullar highlight that the use of ChatGPT raises serious concerns about academic integrity, especially in the context of plagiarism and substitution of students' independent work, and also note that ChatGPT may reduce students' ability to create original and creative works and threaten the development of independent thinking (Seitova et al., 2024). Similar concerns are shared by G. Makimova and S. Baisultanova, who note that without proper control, AI tools can lead to a decrease in the quality of education and superficial assimilation of the material. The most valuable conclusion of the researchers is that the ethical side of using AI in educational activities needs to be taught, not only through the creation of norms or policies for regulation (Mbwambo & Kaaya, 2024).

This study aims to analyze the patterns of ChatGPT use among dual-degree students, identify the associated ethical risks, and propose an example activity to address inappropriate patterns of AI use in learning English. The paper addresses the following questions:

– What are the main patterns for using ChatGPT among dual-degree students?

– How do the results obtained compare with the global experience of using AI in educational processes?

– What role can the activity of working with the AI Incident Database (AIID) play in English lessons in increasing ethical awareness and developing students' language competencies?

Thus, analyzing the patterns of ChatGPT use in the context of dual degree programs is an important research task that will not only identify key trends, but also offer strategic solutions to minimize ethical risks.

Literature review

The release of ChatGPT in late 2022 transformed the educational landscape, becoming the fastest-growing consumer application in history. Generative Artificial Intelligence (GenAI), which uses large language models (LLMs) to create human-like text and media, has introduced both revolutionary opportunities and significant challenges for higher education institutions. The following literature review examines current research on publications associated with GenAI and ideas of its ethical integration into academic settings. According to RSR Online (2024), "more than 40% of students use AI technologies in their studies," which indicates that AI is no longer a marginal tool but a mainstream educational resource.

Several researchers have explored what students actually do with these tools, for instance, Bhullar et al. (2024) identify common patterns: drafting texts, generating ideas, getting help with assessments, and improving communication. Chan and Hu (2023) describe something very similar, noting that students turn to AI mostly for brainstorming, language support, and organizing their thoughts. What neither group of authors finds surprising is that these patterns repeat across very different educational contexts. The consistency itself is worth paying attention to, because it suggests that ChatGPT use is not random or experimental but has already settled into recognizable habits.

Kasneci et al. (2023) warn that relying on LLMs too heavily can weaken critical thinking over time and create problems with academic integrity. Dempere et al. (2023) raise a similar concern, pointing out that

while ChatGPT offers personalized feedback and saves time, it also makes plagiarism easier than it has ever been. Mbwambo and Kaaya (2024) go further and list misinformation, dishonesty, and lack of transparency as ongoing issues that institutions have been slow to address. Reading these studies together, one pattern becomes hard to ignore: the very features that make ChatGPT useful (speed, fluency, accessibility) are the same features that make it dangerous when students use it without reflection. Song et al. (2024) report that learners describe their AI experiences as helpful but also somewhat troubling, because efficiency sometimes comes at the expense of actually understanding the material. Chan and Hu (2023) found that students worry about accuracy and fairness even while they continue using these tools daily. This kind of ambivalence is not unique to AI of course (students have always had complicated relationships with shortcuts), but the scale here is different.

Seitova et al. (2024) show that English teachers in Kazakhstan recognize AI as a valuable classroom resource, though they insist on methodological control and clear guidelines. Makimova and Baisultanova (2024) make a point that resonates well beyond Kazakhstan: having access to digital technology does not automatically improve teaching, what matters is how instructors design their lessons around it.

One direction that deserves more attention is teaching students to think critically about AI itself. Feffer et al. (2023) propose using the AI Incident Database (AIID) in the classroom, which exposes learners to documented cases where AI systems caused harm. This is not about scaring students away from technology but about building the kind of awareness that lets them use it responsibly. For the present study, this approach is particularly relevant because it connects language learning with ethical reasoning in a way that feels natural rather than forced.

To conclude, students do use ChatGPT in broadly the same ways, and these ways are already well established (Bhullar et al., 2024; Chan & Hu, 2023). The ethical risks that accompany this usage are also well documented, even if solutions remain scarce (Kasneci et al., 2023; Mbwambo & Kaaya, 2024). Students recognize both the benefits and the dangers, which means they are not naive about what they are doing (Song et al., 2024). And perhaps most importantly, there is a growing agreement that what is needed now is not more warnings about AI but concrete pedagogical strategies that help students engage with it thoughtfully (Feffer et al., 2023).

Materials and Methods

The study was conducted in several stages. At the first stage, a comprehensive literature review on the use of AI in educational practice was conducted, with an emphasis on the use of AI by students in the learning process. The theoretical basis of the study was formed by the works of such scientists as E. Kasneci, J. Dempere, X. Song, M. Seitova, Z. Halmatova, L. Kazykhankyzy, P. Bhullar, G. Makimova and S. Baisultanova and others.

The second stage was a survey of students studying in dual-degree programs. The survey was aimed at identifying the frequency and purposes of using ChatGPT, as well as students' attitudes towards the ethical aspects of its use. The survey results helped determine the level of students' awareness of the risks of academic dishonesty associated with excessive dependence on AI. The questionnaire was designed following principles of clarity, neutrality, and relevance to the study's objectives. It was pre-tested with a small focus group of five students from the same academic tracks to identify ambiguous formulations and ensure alignment with local academic contexts. Feedback from this pilot group led to the refinement of language and the addition of open-ended questions to capture more nuanced perspectives. Questions were structured to minimize bias and provide both quantitative and qualitative insights into student behaviors and ethical reasoning.

Our survey was based on previous studies, in particular M. Feffer, N. Martelaro, H. Heidari (RSR Online, 2024), C. Chan, W. Hu. Through the lens of this research, we were able to identify key trends and patterns in the use of AI-based chatbots by international students. The questions in the survey were also adapted to the realities of our educational process. The study employed a mixed-methods approach. Quantitative data from closed-ended questions provided measurable patterns of behavior and perception, while open-ended responses offered qualitative insights into individual motivations, ethical reasoning, and cognitive challenges. This methodological triangulation enhanced the reliability of findings by allowing for cross-validation of data and a more holistic understanding of students' interactions with ChatGPT.

The survey consisted of closed and open questions and was structured as follows:

1. General information: questions about age, specialty, year of study, and level of English proficiency.

2. Frequency and purposes of using ChatGPT: how often students use AI and for what tasks (options were suggested by students with the opportunity to supplement the answer with their own ideas).

3. Impact on the educational process: questions were aimed at assessing how the use of AI affects the completion of educational tasks and the development of independent skills.

4. Ethical aspects and critical perception of information: students assessed the admissibility of using ChatGPT for educational purposes and awareness of the risks of academic dishonesty and questions about checking the accuracy of information received from AI and their degree of trust in it.

Qualitative data from open-ended questions were analyzed using thematic coding. Recurrent themes – such as autonomy, trust, ethical boundaries, and dependency – were identified through inductive analysis. Responses were reviewed by two researchers (authors of the given article) independently to ensure inter-rater reliability. Discrepancies in coding were resolved through discussion and consensus. This allowed the researchers to identify underlying concerns not captured by the quantitative results alone.

The questionnaire was anonymous and filled out by 86 first- and second-year students of the following specialties: Information Systems in Management (2024 admission year), Special Pedagogy and Inclusive Practice (2023 admission year), Psychology in Education (2023 admission year), Biotechnology (2024 admission year) via Google Forms. The sample size of 86 students represents approximately 60% of the total population enrolled in dual-degree programs during the 2023–2024 academic year, ensuring high representativeness. Stratified sampling was implicitly achieved due to the inclusion of students from three different specializations and two academic years. English proficiency levels were also considered to account for differences in access to and interpretation of English-language AI tools.

Results

We considered several case studies that served as the basis for our study. According to a study conducted in Hong Kong (Chan & Hu, 2023), university students have a positive attitude towards the use of generative AI tools in the learning process. The students actively use AI for writing essays, preparing for exams, completing written homework, and other complex tasks for which a certain amount of time is allocated. However, despite the recognized benefits, there are concerns: the information that AI provides is not always reliable, due to such a problem as “hallucination,” the information is fictitious or shuffled by AI in order to solve the problem faster. Moreover, questions related to privacy and ethical aspects of using technology are acute (Chan & Hu, 2023). The next study was conducted among medical students and revealed mixed reactions to the use of ChatGPT. Students noted easier access to information and increased interactivity in learning but expressed concerns about the reliability of the data provided as well as the lack of clear ethical standards for the use of AI in education (Song et al., 2024). A Russian study conducted by the online campus of the Higher School of Economics found that 43% of students are already actively using AI for educational purposes. Mostly they use it for solving various educational tasks, writing term papers, lab work, reports, abstracts, essays, etc. More than half of students note the need to double-check the information received from AI, while 22% rely entirely on AI when performing various educational tasks. Researchers note the possible development of technology dependence (RSR Online, 2024). These studies and international experience served as the basis for developing our survey, which was adapted to the specifics of dual degree programs and the local context. Our findings highlight both similarities and differences in students’ approaches to using AI, and deepen our understanding of the ethical implications of this practice, allowing us to identify potential solutions to these issues based on the most common patterns. Consider the data we obtained in our empirical study.

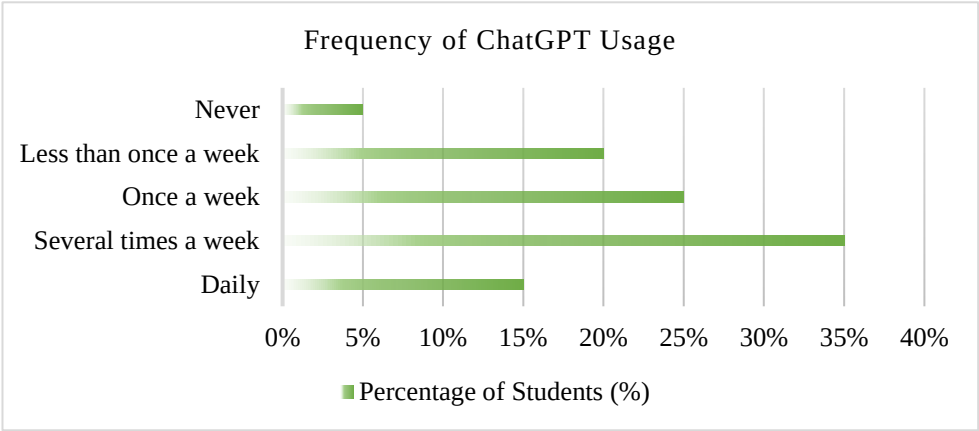
As noted earlier, the survey involved first- and second-year students of dual-degree educational programs aged 18 to 22. The first question of the questionnaire was devoted to collecting demographic data of the participants. Among the respondents, 34% are studying in the biotechnology program, 38% in information systems, and 28% in pedagogy. The distribution by courses is as follows: 47% of first-year students and 53% in the second year. The level of English proficiency varies from beginner (20%) to intermediate (50%) and advanced (30%) (Table 1).

Table 1.
Demographic Profile of the Participants

Category	Parameters	Percentage of Participants (%)
Age	18–22 years	-
Field of Study	Biotechnology	34%
	Information Systems	38%
	Pedagogy	28%
Year of Study	1st Year	47%
	2nd Year	53%
English Proficiency Level	Beginner	20%
	Intermediate	50%
	Advanced	30%

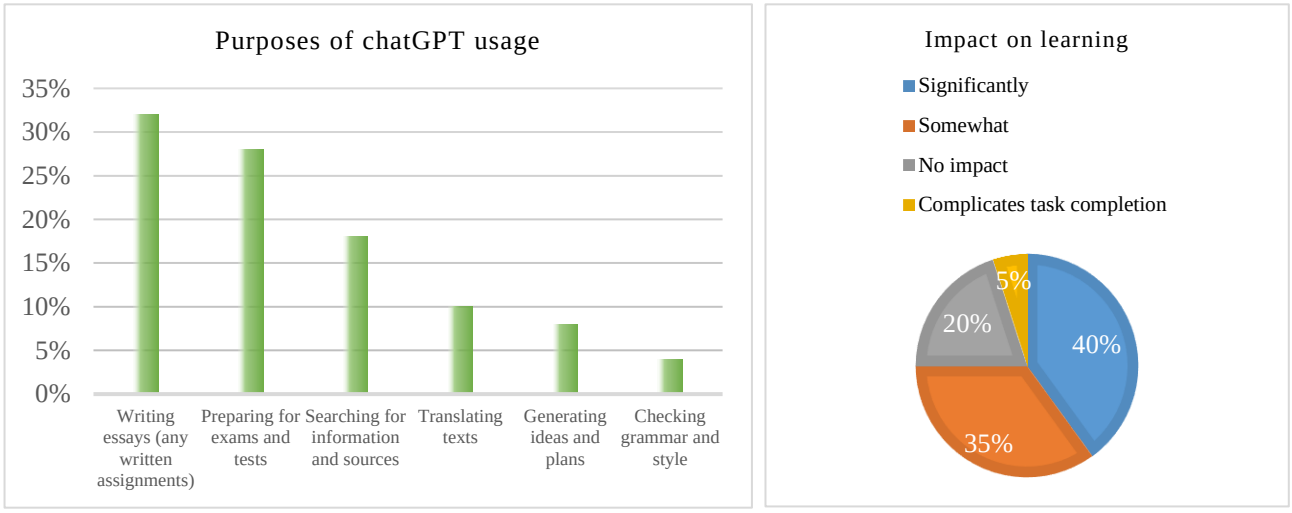
The second question of the survey is related to how often students use AI for personal and non-academic purposes. The results revealed that the frequency of ChatGPT use varies among students: 15% use it daily, 35% use it several times a week, 25% use it once a week, and 20% use ChatGPT less than once a week. Only 5% of students have never used this tool for academic purposes. 15% of students use ChatGPT daily, 35% use it several times a week, 25% use it once a week, 20% use it less than once a week, and only 5% have never used ChatGPT for academic purposes. More detailed data are presented in Diagram 1.

Diagram 1.
Frequency of ChatGPT Usage



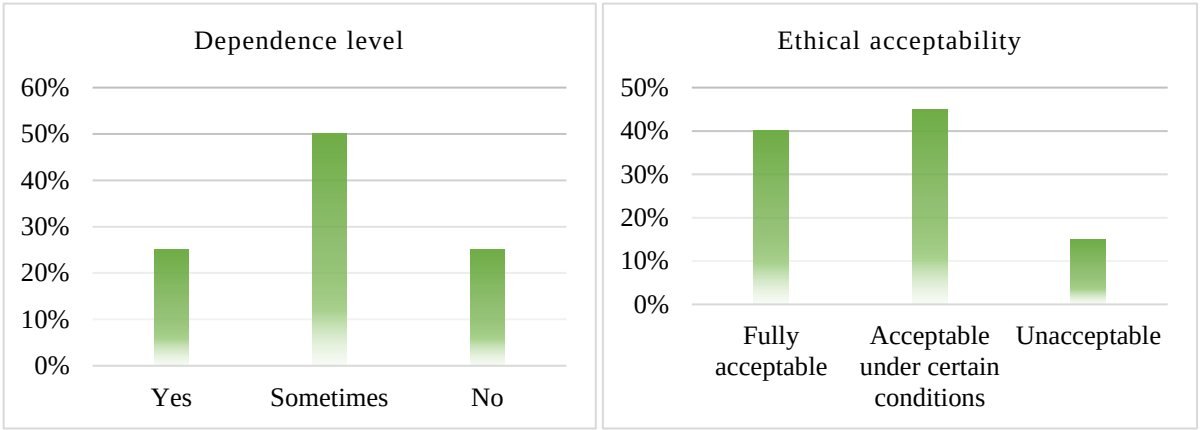
The third and fourth questions were aimed at identifying the specific purposes of using the chatbot in the educational process and getting students' opinions on how it affects their learning in general. Regarding the third question, students note that they use ChatGPT for various academic tasks: 32% use it to write essays and term papers, 28% to prepare for exams and tests, 18% use AI to search for information and sources, 10% to translate texts, 8% to generate ideas and plans, and 4% to check grammar and style. As one student noted in the "other" column: "I use ChatGPT to structure essays and find arguments. It helps me cope with assignments faster." In the fourth question, the impact of ChatGPT on the learning process is assessed differently: 40% of students believe that AI makes it much easier to complete learning tasks, 35% note that it simplifies the work to some extent, 20% do not see any impact on the learning process, and 5% believe that using ChatGPT complicates the completion of tasks, creating a false sense of confidence in the reliability of the information. The data are presented in more detail in Diagram 2.

Diagram 2.
Purposes and impacts of ChatGPT usage



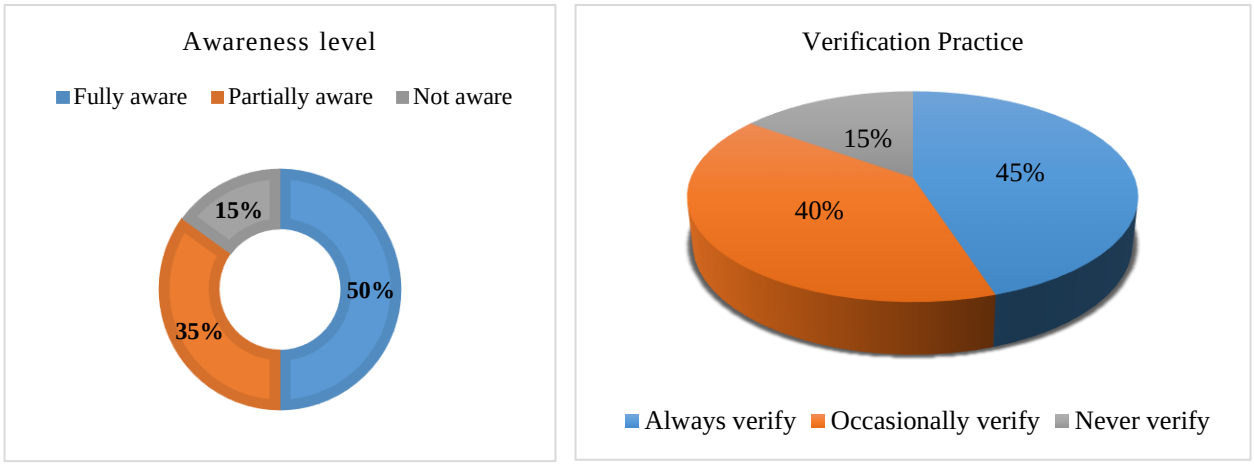
The fifth question of the survey was devoted to identifying the degree of students' dependence on chatbots, in their own opinion, and the sixth question revealed the ethical aspects of such dependence. Dependence on ChatGPT varies among students: 25% admitted that they depend on AI when completing academic tasks, 50% use it from time to time as an auxiliary tool, and 25% said that they do not depend on ChatGPT and use it exclusively to check their own knowledge. When asked to consider the ethical aspects of using ChatGPT, the students surveyed also had different opinions: 40% of students consider the use of AI completely acceptable for educational purposes, 45% believe that its use is acceptable only under certain conditions, such as mandatory verification of information or indication of the source, and 15% of respondents are sure that the use of ChatGPT in the academic environment is unacceptable (Diagram 3).

Diagram 3.
Dependence on ChatGPT and Ethical Aspects of ChatGPT Usage



The seventh and eighth questions assessed the students' awareness of the risks of academic misconduct and how often they check the information generated by AI. The awareness of the risks of academic dishonesty varies among students: 50% are fully aware of the possible threats associated with the use of AI, 35% of respondents partially understand these risks, while 15% of students do not see any threats in using ChatGPT in their academic activities. The verification of information from ChatGPT also demonstrates different approaches: 45% of students always double-check the information received from AI with additional sources, 40% do it from time to time depending on the complexity of the task, and 15% completely trust the data without checking its accuracy (Diagram 4).

Diagram 4.
Awareness of Academic Dishonesty Risks and Verification of Information from ChatGPT



In addition to structured responses, students were invited to provide open-ended comments reflecting their personal experiences and ethical considerations when using ChatGPT. Open-ended responses (n=62) were analyzed thematically using inductive coding. The analysis revealed four recurrent themes:

– Autonomy vs. Dependence – reflections on reliance on ChatGPT for task completion and concern over losing independence in academic work.

– Trust vs. Verification – statements showing either blind trust or a cautious approach to AI-generated content.

– Ethical ambivalence – emotional responses such as guilt, justification, or rationalization of AI use.

– Instrumental use for language support – focus on linguistic or structural assistance (grammar correction, idea generation).

These themes illustrate the cognitive dissonance and ethical complexity experienced by students as they navigate the benefits and drawbacks of integrating AI into their academic routines. The excerpts below are representative of these thematic patterns:

"I use ChatGPT mostly when I get stuck and don't know how to begin writing. It gives me ideas, but I never copy the answers directly." (2nd-year student, Pedagogy)

"Sometimes I trust it too much and later find mistakes. I realized I have to check facts more carefully." (1st-year student, Biotechnology)

"I feel guilty when I use it for homework, especially when it gives me the whole solution. But it's hard not to use it when you're tired." (2nd-year student, Information Systems)

"It helps with grammar and vocabulary, but I always try to rewrite the answer in my own way." (1st-year student, Psychology in Education)

"In my opinion, ChatGPT is just a tool. It depends on how we use it. If we use it wisely, it can be helpful and not harmful." (2nd-year student, Information Systems)

Additionally, some students demonstrated uncritical trust in ChatGPT or lacked awareness of its ethical implications in academic contexts:

"I don't really check the information from ChatGPT. It usually sounds correct, and it saves time." (1st-year student, Biotechnology)

"Why would it be a problem to use ChatGPT? It's just like asking Google or a friend." (2nd-year student, Information Systems)

"I use it for all writing tasks like essays, reports, everything. I didn't know it could be considered cheating." (1st-year student, Pedagogy)

"I thought as long as I change some words, it's not plagiarism. I'm not stealing somebody's work." (2nd-year student, Psychology in Education)

Beyond frequency and ethical reflections, student responses also revealed diverse functional patterns of ChatGPT use, reflecting the multifunctional role of generative AI in students' lives and underscore its impact not only on academic performance, but also on cognitive strategies and language development. These

patterns can be grouped into four major categories based on the type of academic activity and cognitive engagement involved:

– Academic utility tasks – ChatGPT was used for concrete academic outputs, such as essay writing, test preparation, source identification, and report structuring. These were the most frequently reported applications, often tied to high-stakes assignments or exams.

– Language and communication support – students employed the tool to improve their academic English, including grammar correction, vocabulary enhancement, and sentence rephrasing. For many students, this function was especially valuable given the English-medium instruction of their programs.

– Idea generation and cognitive scaffolding – several students reported using ChatGPT to brainstorm ideas, develop outlines, or clarify abstract concepts: thus, AI served as a cognitive partner, helping students approach tasks with more clarity.

– Non-academic and personal exploration – although less common, some responses pointed to using ChatGPT for non-curricular learning, personal interests, or casual information-seeking. This suggests that students may integrate AI into broader self-directed learning beyond formal education.

In summary, the data reveals a complex interplay between such dimensions as pragmatic, cognitive, and ethical and, generally speaking, in how dual-degree students engage with ChatGPT. The combination of structured responses, open commentary, and thematic categorization paints a multifaceted picture of AI integration into their academic routines. These findings serve as a foundation for deeper analysis in the following section.

Discussion

Our findings support global trends in integrating AI into education, highlighting both positive and potentially problematic aspects of AI use among dual degree students.

1. Widespread frequency of ChatGPT use: our survey found that over 75% of students use ChatGPT at least once a week (taking into account that 25% - once a week, 35% - more than once a week), which is consistent with international research (Chan & Hu, 2023), (RSR Online, 2024). These figures demonstrate that AI is becoming an integral part of the learning process, especially among students facing high course loads in dual degree programs. Intensive use of AI is associated with the need to optimize time for completing assignments and finding ways to simplify complex academic tasks. Furthermore, the frequency of use suggests that ChatGPT has become embedded not just in the students' academic routines but in their broader cognitive behavior. For many, the AI tool is no longer viewed as a temporary support but as a default mechanism for handling intellectual load. This shift reflects a deeper transformation in students' problem-solving strategies. While frequent usage may appear to signal efficiency, it may equally suggest avoidance of deeper engagement with course material. The distinction between strategic use and habitual reliance is thus essential for future curricular considerations because ChatGPT is now becoming an “invisible” assistant and students tend to rely on it too much. Thus, the question raises: “is frequency a marker of effectiveness or of avoidance behavior (of more complex tasks)?”

2. Main purposes of use and impact on the learning process: the majority of students use ChatGPT for essay writing (32%) and exam preparation (28%). This indicates that AI is perceived as a tool that can improve academic performance. At the same time, 40% of students note that ChatGPT makes it much easier to complete assignments, which confirms its functional value in the educational process. It indicates a risk of reducing student autonomy and developing academic laziness and corresponds with the opinions from X. Song’s research work (Song et al., 2024). The perceived simplification of academic tasks raises critical pedagogical concerns because when students repeatedly turn to AI to handle demanding assignments, the effort-reward structure of learning changes a lot. Cognitive endurance, creativity, and even reflective and critical thinking (obviously, qualities fostered through grappling with complex tasks) may be undermined. While students report increased ease in task completion, it is unclear whether this ease corresponds with meaningful knowledge acquisition. This presents a risk that students conflate task execution with learning, potentially leading to shallow engagement and overestimation of their understanding, in other words, there is the tension between surface-level performance and deep learning outcomes Educators must, in this case, distinguish between efficient support and cognitive outsourcing in how they interpret AI-related learning outcomes.

3. Ethical dilemmas and academic honesty: despite the widespread use of AI, the results of the study show the presence of ethical controversies. 40% of students consider the use of ChatGPT completely acceptable, while 45% allow its use only under certain conditions. Additionally, 50% of students are aware of the risks of academic dishonesty. The finding that nearly half of respondents perceive AI use as acceptable under certain conditions suggests that students are developing their own informal ethical frameworks, often detached from institutional policies. These justifications, such as modifying AI outputs or using them as templates, indicate a sliding scale of acceptability rather than a binary moral stance. To be more explicit, there is a certain ambiguity in students' understanding of what constitutes ethical AI use because students tend to demonstrate the "conditional acceptability" logic: what conditions students tend to impose (e.g., "as long as I check it," "as long as I rewrite it"), leading to normalization of AI involvement without recognizing it as a breach. This may reflect a broader cultural shift where digital assistance is normalized to such an extent that students no longer view it as academically questionable. Such an interpretive gap requires deliberate clarification and open discussion within academic programs to ensure alignment between student practices and institutional standards of academic honesty.

4. Technology addiction and critical thinking: a quarter of the students surveyed admitted to being addicted to ChatGPT, and another 50% use it as an auxiliary tool. Most of the students verify the information they receive (45% always check, 40% sometimes), 15% completely trust the AI without additional verification. Even though such students seem to be small in number, such behavior is unacceptable in the academic and scientific environment because it can lead to significant consequences in the professional activities of students. Therefore, fact-checking should become a priority skill of students turning to AI, since such a skill is extrapolated both to the professional activity and personal life of the future specialist.

Additionally, the issue of dependence on ChatGPT raises more than just ethical or regulatory questions; it strikes at the heart of academic identity formation emphasizing the need to differentiate between instrumental dependence (efficient use) and emotional or cognitive dependency (anxiety if not used). Students who rely on AI not just for language or structure, but for direction and decision-making, may gradually lose confidence in their own academic voice and such overreliance may affect the development of resilience, perseverance, and academic self-efficacy. Some participants even acknowledged feelings of guilt or confusion, suggesting that their internal sense of right and wrong is in tension with their actions. This conflict is a clear signal that ethical and emotional literacy around AI needs to be addressed alongside policy development. Moreover, when students begin to feel anxious or helpless without AI assistance, it reveals a deeper cognitive displacement that can compromise long-term educational goals. Strengthening students' self-regulatory abilities and reinforcing their confidence in their own academic competencies must be a parallel priority therefore.

5. Comparison with international studies: the results of our study are consistent with the findings of international studies [3], [7]. However, we also observe unique aspects related to the context of dual-degree programs, where high academic workload stimulates increased use of AI. In contrast to international data, students in our sample are more cautious about academic honesty and verification of information. One of the effective practices for raising students' awareness of the ethical aspects of using artificial intelligence is interactive work with the AI Incident Database (AIID). This method has been successfully applied in courses aimed at studying the ethical and social consequences of using AI [9]. We will describe our experience of introducing this practice into the educational process in foreign language classes as independent work of a student with a teacher. It is important to note that since this activity was carried out within the framework of English language teaching, it not only increases ethical awareness, but also develops the basic academic language competencies according to the curricula. Although this aspect is not the aim of our study, we will briefly provide examples of how this is carried out (Table 2).

Table 2.
Linguistic Value of the AI Incident Database Activity

Language Skill	Description	Examples
Academic Vocabulary Development	Expansion of professional and ethical terminology.	*bias, privacy breach, misinformation, algorithmic decision-making.*
Working with English-Language Sources	Critical reading and analysis of authentic academic texts.	Analyzing articles from *The Verge*, *Wired*, *BBC Tech*; identifying key ideas and arguments.
Argumentation, Discussion, and Presentation Skills	Formulating arguments, defending opinions, and public speaking.	Group discussions on AI ethics, presenting incident reports, using persuasive language.
Academic Writing Practice	Structuring formal texts and proper citation of sources.	Writing structured reports on incidents, using formal connectors (*therefore*, *in conclusion*).
Intercultural Communication	Understanding cultural differences in ethical issues and expressing them in English.	Comparing AI-related incidents from different countries, discussing cultural approaches to ethics.

The computer lab session begins with students learning the importance of analyzing real AI-related incidents. The teacher demonstrates the AIID database interface, the main incident categories, and shows students the basics of navigating the site. The teacher shows how to use filters to search for incidents by different categories (students can choose them themselves depending on their specialization, for example, autonomous vehicles, recommender systems, language models, identification systems, and more). The work in the class is divided into three stages: individual, group, and reflection.

Individual work was carried out according to the following instructions: each student is assigned a database page number to avoid analyzing the same incidents. Students go to the site https://incidentdatabase.ai and select 10 incidents on their page. Table 3 below provides examples of incidents that students selected and questions for analysis.

Table 3.
Relevant AI Incidents and Critical Thinking Questions

Incident	Field of Study	Questions for Analysis
Google Photos Mislabeling (2015)	Information Systems	What caused the mislabeling of images? How can bias in AI datasets be reduced? Who was responsible for this error?
Microsoft Tay Chatbot Incident (2016)	Pedagogy / Information Systems	How did user interaction lead to unethical outputs? What safeguards could prevent this? What are the educational lessons?
Tesla Autopilot Crash (2022)	Information Systems	How did the autopilot system fail? What are the ethical responsibilities of developers in ensuring safety?
TikTok Recommending Dangerous Content (2021)	Pedagogy	How can algorithms influence behavior, especially among youth? What role should regulation play in content moderation?
Meta's AI Misclassification Incident (2021)	Biotechnology / Pedagogy	How can AI misclassification affect social trust? What are the implications for future AI development in sensitive fields?

The group work was organized as follows:

– Students are divided into groups (in our case, four students per group using a randomizer).

– The task is the following: each group must find a new incident (from 2019 to 2025) that has not yet been entered into the AIID database or is fairly recent (2024-2025) and reported in other websites or mass media platforms.

Students are provided with step-by-step instructions for completing the task:

– Use news sites and specialized resources: The Verge (https://www.theverge.com), Wired (https://www.wired.com), TechCrunch (https://techcrunch.com), BBC Tech (https://www.bbc.com/news/technology) or AI Incident Database to check already registered incidents.

– Use keywords in the search: "AI incident", "AI ethical failure", "AI bias", "AI harm case study".

– Check the reliability of sources and the relevance of information.

– Report creation: groups compile a report on the incident found and present it to their classmates and optionally add it to the AIID database.

Discussion of the work done, as well as reflection, are important stages of this work and were carried out using the following prompts:

– Which sources of information are most often missing from the database?

– Were there any difficulties in finding incidents? Why?

– What conclusions can be made about the current state of ethics in AI based on the incidents found?

– What measures can be taken to prevent similar incidents in the future?

Another task based on the AI Incident Database (AIID) was implemented as part of the same course. The goal of this activity was to develop students' ethical reasoning skills and academic speaking abilities through analysis and public discussion of controversial real-world AI incidents. In this task, students were required to prepare and participate in a classroom debate using data from the AIID platform. One of the most engaging examples used in this activity was the "Apple Card Gender Discrimination" case, registered in the AI Incident Database under the following link https://incidentdatabase.ai/cite/56. For additional information students were told to turn to CNN, New York Times, the Guardian official web-sites. Students were given the following problem: "*Several customers began reporting that women were receiving much lower credit limits than men, even when both had similar financial backgrounds. One of the most public statements came from tech entrepreneur David Heinemeier Hansson, who claimed that his wife received a limit 20 times lower than his own, although she had a better credit score. Later, Apple co-founder Steve Wozniak reported the same situation. These stories quickly went viral and raised serious questions about bias in the AI algorithm responsible for calculating credit limits. Despite public pressure and a formal investigation launched by New York regulators, both Apple and Goldman Sachs denied any gender discrimination, stating that the algorithm was fair and did not use gender as a factor. However, many people remained unconvinced due to the lack of transparency in the algorithm's decision-making process*." This case was selected because it clearly demonstrates the complexity of AI ethics in real life. The same event was interpreted in different ways by the public, companies, media, and regulators. Some believed it showed clear gender discrimination by the algorithm, while others suggested it was a misunderstanding or a result of weak regulation. Such diversity of opinions made the case suitable for student debate and ethical reflection.

As part of their preparation for the classroom debate, students were asked to conduct a web-based investigation of the selected AIID case. The goal was to help them gather reliable, diverse, and up-to-date information and to practice using academic English for analysis and argument construction. Students were provided with guiding questions to structure their search and prepare meaningful arguments, such as: "*Use the AIID link provided and search for additional information using English-language news websites, expert blogs, or official company statements. Write short notes in English for each question. Be ready to discuss your findings in class.*"

Additionally, we suggested the following questions for their web-quest:

– What was the main complaint about the Apple Card in 2019? Who were the first people to report it? (Look for names, roles, quotes.)

– How did Apple and Goldman Sachs respond to these complaints? (Find official statements or interviews.)

– Did the companies or developers explain how the credit algorithm works? (Look for mentions of "transparency," "bias," or "factors used in the model.")

– Was there any investigation by government agencies or regulators? What did they find? (Find articles about the New York Department of Financial Services or other institutions.)

– What do experts say about algorithmic bias in finance? (Search for "AI bias in credit scoring" or "gender discrimination in financial algorithms.")

– Are there similar cases involving AI in other areas (e.g., hiring, housing, health)? Briefly describe one.

– What is your personal opinion: Was the algorithm biased, or was it a human misunderstanding? Why?

To support students in preparing for the debate, a focused **lexical set** was introduced to help students describe ethical issues, express opinions clearly, and participate in formal academic discussions. The words and phrases were practiced in class through short tasks before the debate session (see table 4).

Table 4.
Key Terms from the Incident

Term / Phrase	Definition / Use in Context
algorithmic bias	unfair outcomes caused by patterns in data used by AI systems. *E.g., "The case shows possible algorithmic bias in credit decisions."*
gender discrimination	treating people differently based on gender. *E.g., "Was this case an example of gender discrimination?"*
credit limit	the maximum amount of money a person can borrow. *E.g., "The woman received a lower credit limit than her husband."*
transparency	openness in how something works. *E.g., "The company refused to explain the algorithm, showing a lack of transparency."*
regulatory oversight	control or investigation by government institutions. *E.g., "The incident led to regulatory oversight by financial authorities."*

Students were given one week for preparation. They worked in groups of 4. Each group researched the Apple Card incident and prepared two sides: one defending the company, the other criticizing the AI decision-making. In-class debates took 45 minutes and were structured as following:

– Opening statements (2 min per side).
– Rebuttals (2 min per side).
– Q&A from audience.
– Final arguments (1 min per side).

The final stage was the post-debate reflection where each student submitted a short paragraph on what they learned and how their opinion changed.

This table below (see table 5) clearly outlines how students' performance was measured and emphasizes the interdisciplinary nature of the task (ethical literacy and language learning).

Table 5.
Assessment Criteria for the AI Ethics Debate Task

Assessment Area	Description	Max Points
Ethical Reasoning and Analysis	Demonstrates clear understanding of ethical issues in the incident; provides balanced, logical, and well-supported ethical arguments.	30
Use of Evidence and Research	Uses relevant data from the AIID and external sources; shows awareness of different viewpoints.	20
Academic English and Specialized Vocabulary	Uses appropriate ethical/legal/AI-related terminology; language is clear, formal, and well-structured.	15
Debate Performance	Clear structure, confident delivery, and effective response to opposing arguments and audience questions.	15
Team Collaboration and Participation	Equal participation in preparation and presentation; smooth role sharing in debate.	10
Reflective Writing	Insightful and honest personal reflection on what was learned and how perspectives evolved.	10
Total		**100**

As a result of this activity, students deepened their understanding of the ethical risks associated with AI-based decision-making, particularly in relation to fairness, transparency, social responsibility, etc. Also, students developed their ability to express and justify complex ideas using formal academic English, including ethical and technical vocabulary relevant to the field of artificial intelligence. In addition, the activity fostered critical thinking, as students were required to consider multiple perspectives on a controversial incident and evaluate the reliability of different sources. The structured debate also strengthened collaboration skills because students worked in teams to research, prepare, and deliver coherent arguments. The written reflection allowed students to connect ethical knowledge with personal values. We consider such activity essential for developing students' academic integrity and professional responsibility in

future contexts.

The AIID activities we presented are part of a series of educational practices aimed at raising students' awareness of the ethical principles of using AI in education. The activity not only demonstrated the importance of ethical considerations when using AI but also provided a platform for developing key language skills.

We asked students to share their thoughts about the activity: some of them, when reflecting on their experiences, noted both the challenges and the insights gained from analyzing real-life AI incidents. Many reflected on the complexity of ethical decision-making and the need for critical thinking when evaluating AI-generated information. Students discovered not only interesting and useful web resources, but also authentic vocabulary which can be used in their future professional field. We believe that this dual-focus approach of raising ethical awareness while simultaneously developing language competencies has the potential to be an effective educational strategy that could be further integrated into the curriculum on a more permanent basis.

Conclusion

The results of the study show that ChatGPT is playing an increasingly important role in the learning activities of dual-degree students. The data reveals characteristic patterns of AI use that highlight ethical controversies and varying levels of dependence on such tools. ChatGPT has become a habitual tool for many students. Indeed, this is a global trend that we cannot fight. Such regular use highlights the importance of AI as a learning assistant for students with a high academic workload. However, easy access to information may reduce the level of independent work and assimilation of necessary knowledge. AI makes it easier to complete academic tasks, and we are concerned that this tends to reduce engagement in the learning process and contribute to the development of dependence on technology. On the other hand, our study revealed differing views on the ethics of using ChatGPT: some students consider the use of AI entirely acceptable, while others believe that it should be used with reservations. The second important aspect is related to checking the information provided by AI: although many check the information received from AI, some students do not, which can lead to errors in their academic and future professional activities. Developing a habit of fact-checking is necessary to prevent excessive dependence on technology.

The integration of the AIID based activities into English language classes emerged as a productive method for enhancing both ethical awareness and language proficiency. Activities such as incident analysis and structured debate allowed students to engage with real-world dilemmas as well as to improve their language skills. This dual-focus strategy such as combining critical thinking with language acquisition proved effective in reinforcing academic integrity and preparing students for ethically responsible professional practice.

While this study has provided valuable insights, it also opens several ideas for future exploration:

– To learn more about the long-term effects of generative AI in education, future studies should look at how students' use of AI and their moral views change over multiple school years.

– Comparative research in different fields of study may show if students in technical, social science, or humanities subjects use AI technologies in different ways when it comes to ethics and reliance.

– Looking at how teachers feel about and are ready to deal with ethical problems connected to AI can help with making decisions about professional development programs and institutional policies.

– We need to find out how well certain digital literacy programs help students learn how to think critically about information created by AI and how to use these tools without becoming too dependent on them.

Conflict of Interest Statement

The authors declare no potential conflicts of interest regarding the research, authorship, or publication of this article.

Author Contributions

Murzalinova A.: Data curation, Writing – Original draft preparation, Software, Supervision, Writing - Reviewing and Editing, Investigation, Project administration. Shannon A., Yensegenova G.: Conceptualization, Methodology, Resources. Mochshenko Y., Bunina A., Zhaxylykova Y.: Validation,

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