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Romanian Students' Perceptions of Artificial Intelligence Use in Higher Education: Benefits and Challenges

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Abstract: In recent years, a large number of tools based on artificial intelligence (AI) have been developed and enhanced, which can be used by students to support their educational process. The development of these technologies has also intensified the academic discussion on the opportunities and challenges of using AI in higher education. This paper aims to investigate Romanian students' perceptions of the advantages and risks associated with the use of AI in performing specific academic assignments. Empirical data were collected through a questionnaire administered to economics students at the University of Craiova. The results obtained can provide valuable information for decision-makers in higher education, both at the national level and within the University of Craiova, thus facilitating the adaptation and remodeling of educational processes for the effective integration of AI tools, in accordance with the principles of academic ethics and integrity.

Keywords: *artificial intelligence; higher education; student perceptions; academic ethics; digital literacy.*

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1. Introduction

In recent years, the incorporation of artificial intelligence (AI) in higher education has garnered significant attention from researchers, emphasizing AI's potential to fundamentally change teaching and learning methods (Ocaña-Fernández et al., 2019; Chatterjee & Bhattacharjee, 2020; Bates et al., 2020; Ali & Abdel-Haq, 2021; Akinwalere & Ivanov, 2022; Bucea-Manea-Țoniş et al., 2022; Crompton & Burke, 2023; Bearman et al., 2023; Ivanov, 2023; Rahiman & Kodikal, 2024; Escotet, 2024; McDonald et al., 2025; Mumtaz et al., 2025). Although AI has existed since the 1960s, its integration into educational practices has been a topic of scholarly interest for many years (Bond et al., 2024). However, the launch of ChatGPT in November 2022 has accelerated these developments, both practically and theoretically, marking what can be seen as a paradigm shift in the educational landscape (Tajik & Tajik, 2024).

This profound transformation of higher education demands an organized, systematic, and urgent response from universities (Korseberg & Elken, 2025). Although such a response, incorporating a proactive component, should have been initiated several years ago, it now appears that further delay is no longer viable.

Bearman et al. (2023) conducted a literature review on how universities are addressing the challenges posed by AI technologies. Their analysis identifies two distinct discourses. The first, the imperative response discourse, asserts that universities must react to rapid technological changes, with AI as a critical element. Within this discourse, two approaches can be distinguished: resistance for survival and positive transformation. Educators are expected to enhance their teaching practices to accommodate the changes driven by AI, while students must acquire new skills to adapt effectively to these changes.

The second discourse, concerning the altering of authority, conceptualizes AI as co-present in educational processes alongside other technological factors. Power dynamics between educators and AI are central to discussions within this discourse, raising questions about the evolving role of teachers in this context. Simultaneously, without adequate AI-related skills, students risk losing control over both what and how they learn.

Current research (Kuleto et al., 2021; Pisica et al., 2023; Özer, 2024) highlights the benefits of integrating AI into education. These include personalized learning, the creation of interactive and innovative teaching materials, better student monitoring, tailored educational resources, automation of repetitive tasks, and increased access to diverse learning materials.

However, the literature (O'Dea & O'Dea, 2023; Alotaibi & Alshehri, 2023; Nagaraj et al., 2023) also identifies significant challenges and limitations. These consist of disparities in AI infrastructure at the national, institutional, and individual levels; limited funding for AI applications and infrastructure at both the institutional and personal levels; varying levels of familiarity and awareness of AI technologies among teachers and students; as well as ethical concerns, data privacy issues, and the risk of reducing students' critical thinking skills.

Although experts agree on the need to adapt university education to technological changes driven by AI, there is intense debate among specialists about how to implement these changes, and approaches remain varied. Universities' adaptations to AI developments are shaped by specific economic, social, psychological, and cultural factors at the national, institutional, and individual levels.

In Romania, research on how local universities are addressing AI challenges is limited. Additionally, there is a lack of research on students' direct perceptions of these technologies. When considering studies on the impact and perceptions of AI-based technologies on Romanian society as a whole, only a few exist, and their findings are quite concerning.

According to an April 2025 study by the International Monetary Fund (Mish et al., 2025), Romania ranks among European countries with the lowest estimated productivity gains from AI. The study projects cumulative increases of 0.3% to 0.7% over the next five years, which is significantly lower than the European average of 1.1%. The primary reason is the economic structure, which features a smaller service sector that is more exposed to AI adoption (Pele, 2025). Currently, approximately 4-8% of companies utilize some form of AI, and this percentage is expected to reach 8-10% in the medium term, still below the European average of 18%. Regulations concerning AI may also play a role, as Romania's legal framework is not more permissive than European standards (Pele, 2025).

A 2023 IPSOS study (IPSOS, 2023) involving respondents from 31 countries found that 77% of Romanian participants understood what artificial intelligence (AI) is, compared to a global average of 67%. The same study showed that 50% of Romanians expressed concern about AI use (versus 52% globally), while 62% said they were optimistic about the opportunities it offers (compared to 54% worldwide). Romanians also appeared more optimistic and trusting toward AI. Specifically, 63% (vs. 56% globally) said they trust AI will not discriminate against any group; 62% (vs. 52% globally) said they trust companies using AI as much as other companies; and 61% (vs. 50% globally) said they trust companies using AI to protect their personal data. Regarding the future impact of AI, 73% of Romanian respondents believe AI-based products and services will significantly change their daily lives in the next five years (compared to 66% globally). Meanwhile, 32% of Romanians expect AI solutions to replace them in their current jobs (versus 36% globally).

Analyzing these results, Alina Stepan, Country Manager of IPSOS Romania, emphasized: "*Romania oscillates between ignorance, pragmatism, and perhaps naivety. We have not yet decided where we stand in a landscape where we see ourselves as more informed, more optimistic, and less threatened by the advance of artificial intelligence — a discourse that is almost parallel to that of the Western world. We still do not fully understand what AI truly represents, nor all the positive and negative implications it may have.*" (IPSOS, 2023)

The Vodafone Foundation conducted a study entitled "AI in European Schools", published in February 2025, based on a sample of 7,000 students aged between 12 and 17 (Vodafone Romania Foundation, 2025). Overall, the results of this study show that, although the potential of AI is widely recognized in the education sector, several issues can hinder the realization of this potential: inequality in access to connectivity and AI-based tools for students from low-income families; a lack of AI skills and guidance in the education sector; and insufficient resources for using AI tools in classrooms. Focusing on Romanian students, 70% believe that AI will play a significant role in their professional lives. However, 54% feel that their schools do not adequately prepare them to use this technology, while only 40% consider their teachers competent in using AI. Additionally, 70% have learned to use AI tools from their peers.

There are still a few studies on the transformations brought about by AI-based technologies in the Romanian academic environment, and even fewer analyses of

students' perceptions regarding their use in educational processes. However, in 2024, the prestigious Romanian economic journal "Amfiteatru Economic" dedicated an issue to the challenges of skills-oriented education in the context of artificial intelligence system development. Some of the articles published in that issue (which are referenced in this paper) provided, at the time, an overview of the penetration of AI in Romanian universities, including students' perceptions of the use of these technologies in their academic training. The subject is clearly still in its early stages, while pragmatic developments are advancing very rapidly.

Our research aims to provide another snapshot of these realities, one year after the above-mentioned study, using a sample of student respondents from another university center. To address this objective, the present study analyzes the perceptions of students from the Faculty of Economics and Business Administration in Craiova regarding the use of artificial intelligence tools in the educational process. The investigation is based on a structured questionnaire comprising three main components: perceived advantages and benefits, identified limitations and challenges, and measures recommended by students for the responsible implementation of AI in the university environment.

The paper is structured as follows: after this introduction, the relevant theoretical foundations are presented, followed by the methodology applied in the study, the analysis of the results obtained, their discussion in the context of the specialized literature, and, finally, the conclusions, recommendations, and directions for future research.

2. Literature review

Recent developments in AI, particularly in generative artificial intelligence, reveal that we are facing a potentially disruptive technology with a transformative impact on higher education, raising essential questions about the future of learning and teaching with AI technologies (Hutson et al., 2022; Nguyen et al., 2024; Wong, 2024). AI will not replace but rather augment what teachers do in the classroom (Hutson et al., 2022). However, educators will need to adapt their approach to interacting with students, as they must prepare them—both cognitively and technologically—to succeed in an uncertain future (Hutson et al., 2022).

Although the perceived impact of AI is high (at least in the not-too-distant future), its rate of adoption in higher education remains relatively low, and there is still a lack of clear evidence regarding the pedagogical impact of AI on teaching and learning processes (O'Dea & O'Dea, 2023). One possible explanation is that the use of AI in education has focused more on digital administrative management processes or reducing the administrative workload of academic and support staff, rather than on direct teaching and learning activities (O'Dea & O'Dea, 2023).

Universities should therefore develop strategies for effectively integrating AI into teaching and learning processes. Broadly speaking, such strategies should consider (Alqahtani & Wafula, 2025): creating equitable and effective learning environments; developing more complex ethical frameworks adapted to the challenges posed by AI in education; promoting transparency and efficient use; fostering critical thinking and independent analysis skills; and ensuring the protection of student data privacy.

Bollaert (2025) believes that higher education institutions should consider the following in their AI integration strategies: ensuring that all educators are trained and competent in using the AI tools they intend to integrate into teaching and learning; seeking feedback from staff and students on how AI should be implemented and on the effectiveness of AI integration in order to identify areas for improvement; identifying the

AI attributes that students and staff value; and defining guidelines for the use of artificial intelligence by staff and students to ensure accountability and maintain academic integrity.

To fully leverage the potential of AI in the educational process while ensuring its ethical, fair, and responsible use, universities should develop and implement a clear strategy for integrating artificial intelligence.

The development and implementation of an AI strategy for teaching and learning at the university level should consider the interests of all stakeholders, assign responsibilities and roles to each stakeholder group, and collect and process their feedback on the actions taken to implement the strategy.

Jin et al. (2025), after examining generative artificial intelligence (GAI) adoption strategies in 40 universities across six regions of the world, identified the following key "actors" and their responsibilities in developing and implementing these strategies: faculty (responsible for integrating GAI into curricula and assessment; communicating and educating on the use of GAI; establishing guidelines and policies; fostering students' critical thinking; and addressing ethical and security concerns); student (ensuring ethical use and academic integrity; understanding the capabilities and limitations of GAI and developing a critical perspective on it; engaging in ethical and practical discussions on the use of GAI in education; and improving learning by actively adopting GAI tools); administrator (developing and implementing policies on the use of GAI; providing support and resources for teachers and students; ensuring academic integrity and ethical use; and overseeing the procurement process for GAI services).

Another essential category of higher education stakeholders is employers. In the near future, graduates will be expected to use AI tools effectively and responsibly. Uncontrolled use of GAI tools may result in a generation of graduates lacking key critical thinking and writing skills and being unprepared for professional environments that require adaptability and innovation (Lo, 2023). Thus, AI literacy could improve student employability by enhancing academic performance, skills, and competencies needed in the labor market, while also strengthening the reputation of universities and academic disciplines (Wut et al., 2025).

Currently, most universities worldwide lack the strategic planning and institutional frameworks necessary to leverage AI-based technologies fully. Many institutions have adopted AI tools on an ad hoc basis, resulting in fragmented and inconsistent implementations (Barnes & Hutson, 2024).

Next, we identified and analyzed relevant articles on the use and prospects of AI-based tools in Romanian universities. Our investigation focused on studies based on samples consisting of students, examining their perceptions, attitudes, behaviors, and expectations regarding the implementation of AI-based tools in higher education.

Sova et al. (2024) conducted a study with a sample of 748 respondents, students enrolled in economics programs at several Romanian universities. The study revealed that although a substantial number of students are familiar with specific models of artificial intelligence, approximately 10% of respondents reported not being familiar with any such tool. Awareness and familiarity with AI tools positively influence perceived usefulness and attitudes toward AI. Structured training programs on AI tools improve students' perceptions of AI and help alleviate their concerns about this approach. At the same time, concerns about AI negatively affect perceived usefulness and positive attitudes.

The study also found that while chatbots and productivity tools are more widely recognized and used, applications such as data analysis and creative AI tools remain underutilized by students.

Based on their findings, the authors propose several measures for educational institutions: they should prioritize the integration of AI-based tools into educational programs by offering training programs for students and teachers; ensure student access to a variety of AI tools through university-provided subscriptions, partnerships with software providers, the recommendation and use of open-source AI tools; and improve the technological infrastructure.

Țală et al. (2024), in a study conducted on a sample of 364 Romanian students in the field of economics, revealed the following important aspects: a high level of awareness of AI for content generation, and a greater inclination among students with more advanced digital skills to use generative AI. However, somewhat surprisingly, 21% of respondents stated that they were not interested in learning how to use AI models. The reasons for this lack of interest were related to: the belief that knowledge in this field is unnecessary; the inaccuracy of AI-generated information; the anticipation of adverse effects on cognitive abilities; a preference for relying on their own skills; perceived ethical issues; and the perception of limited added value. From the respondents' perspective, the best way to learn about generative AI and its use is through exposure to these technologies within various university courses and disciplines.

Pisica et al. (2024) investigated Romanian students' opinions on the implementation of artificial intelligence in higher education, based on data collected from a sample of 70 social science students from three generalist universities in Romania. The advantages and opportunities of AI implementation identified by students were grouped into three major themes: the teaching–learning–evaluation process (easy, fast, inexpensive, and organized access to information; personalized learning; improved academic performance; curriculum development); administrative efficiency (automation of administrative processes such as enrolment, assessment, or course scheduling); and life improvements (in terms of quality of life and better jobs). The disadvantages and threats identified by students were: dependence on technology (which can affect critical thinking, social skills, and creativity); ethical issues (amplification of bias and discrimination, increased inequality); security risks; and high implementation costs.

Vieriu and Petrea (2025) conducted a study on a sample of 85 students from the National University of Science and Technology Politehnica Bucharest, enrolled in the Aerospace and Medical Engineering programs, which emphasize AI integration. Among the benefits of using AI-based tools, students mentioned: time savings (resulting from reduced time for research, information processing, and the automation of repetitive activities); optimization of information comprehension through the use of intelligent tutoring systems that present content in an accessible format; and better structuring of information (AI-based tools can help create outlines and visual representations that allow students to focus on key aspects when dealing with large volumes of information).

The main concerns regarding the use of artificial intelligence expressed by the students were the accuracy of AI-generated information, over-dependence on technology, and various technical issues in AI systems that may negatively impact the learning experience. When asked for suggestions on how to improve the use of AI in university education, the following themes emerged: proper integration of AI into educational activities (suggestions included personalized learning platforms, instant feedback applications, and algorithms for identifying knowledge gaps and recommending remedial

programs); limited and controlled use of AI (students emphasized the need for clear guidelines on AI use); suggestions for validating the accuracy of information provided by AI; and the provision of AI tools to students by higher education institutions, free of charge or at low cost.

In recent years, Romanian universities have taken steps to implement AI by adopting regulations on its use by students and teaching staff, including the Polytechnic University of Bucharest, the Carol Davila University of Medicine and Pharmacy in Bucharest, the Technical University of Cluj-Napoca, and the Alexandru Ioan Cuza University in Iași. However, we have not identified any Romanian universities (based on information available on their websites) that have developed a comprehensive strategy for integrating AI into educational and administrative processes.

Focusing on the regulations of the National University of Science and Technology Politehnica Bucharest, these state that "*the responsible use of AI is permitted and even recommended in activities such as generating preliminary ideas; data analysis; organizing and structuring information; identifying sources or trends; providing technical support in writing (while respecting the originality of the content); as well as synthesizing multiple sources*". To reduce the risk of incorrect or dishonest use of AI systems, the regulation also outlines several measures, such as extending the duration of oral presentations for completed papers, conducting individual interviews to validate personal contributions, and requesting critical justifications for content generated with AI support. Furthermore, the regulation promotes awareness-raising measures at the university level regarding the responsible use of AI systems.

In contrast, the University of Brașov has introduced, starting with the 2025–2026 academic year, a regulation on the professional activity of students, which prohibits the use of AI in drafting any text subject to evaluation. This regulation states that "*the detection of such violations is the responsibility of the evaluating teaching staff, based on evidence or their own judgment in assessing the facts*".

Romanian students perceive AI-based technologies as having great potential to transform higher education. At the same time, they are aware of many of the challenges posed by the use of these technologies in teaching and learning processes. At the institutional level, Romanian universities have taken only tentative steps toward realizing the potential of AI. While they have not yet developed coherent institutional strategies for integrating AI into educational processes, some universities have introduced regulations on the use of these technologies — a sign of growing awareness of the need for such an approach.

3. Methodology and results

The study sample consisted of students from the Faculty of Economics and Business Administration at the University of Craiova. An online invitation briefly outlining the research objectives was sent to 725 students, asking them to complete an online questionnaire via Google Forms. The process of sending invitations and collecting responses took place between July and September 2025.

A total of 302 completed questionnaires were received, of which 22 were excluded from the final analysis due to incompleteness (more than 30% of data missing). The collection of valid data was carried out between August and September 2025.

The final questionnaire consisted of 26 questions. Several studies addressing similar topics were consulted in the development of the questionnaire (Farhi et al., 2023; Blahopoulou & Ortiz-Bonnin, 2025; Slimi et al., 2025). The final form was obtained after

two stages of testing on groups of 15 students. The objective of these iterations was to ensure clarity and eliminate any potential ambiguities.

The composition of the sample by gender, age, and type of study programme is presented in Table 1.

Table 1. The structure of the sample

		Frequency	**Percent**
Gender	Female	187	66.8
	Male	90	32.1
	Rather not to say	3	1.1
Age	18-25 years	190	67.9
	25-30 years	29	10.4
	30-35 years	25	8.9
	35+ years	36	12.9
Type of study programme	Bachelor	225	80.4
	Master	50	17.9
	PhD	5	1.8

The fourth question in the questionnaire asked respondents to self-assess their level of digital skills. Figure 1 shows that only about 4% of them consider themselves to have a low level of digital competence. I consider there is a risk of encountering an "illusion of digital competence," a phenomenon identified by Ghiduc (2025) among Generation Z in Romania. Interested in technology from a very young age, Romanian youth (aged 18–25) display very high self-confidence in their own digital abilities, although, according to European statistics, Romania consistently ranks last in terms of basic digital skills. This discrepancy arises because intensive use of technology is (erroneously) equated with a deep understanding of it.

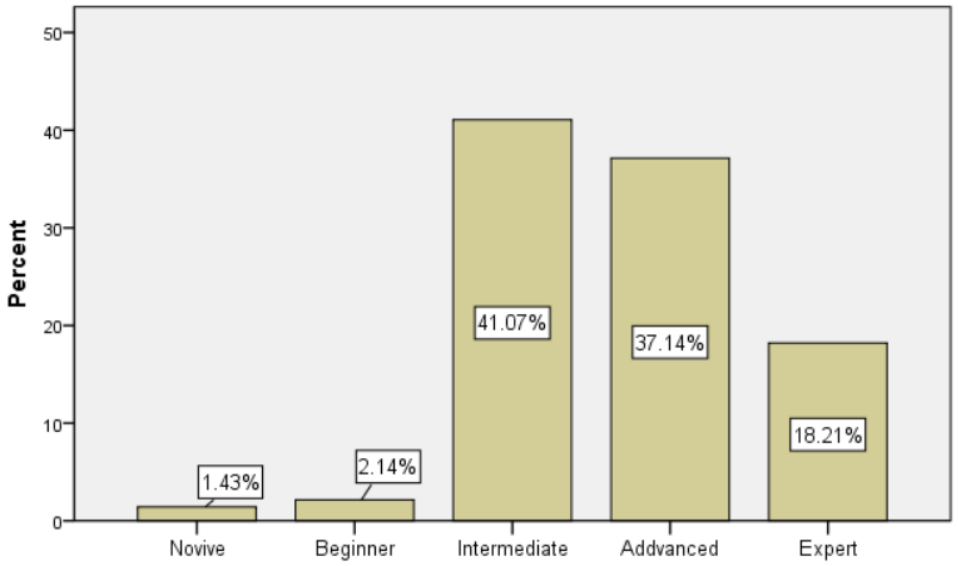

Figure 1. Digital skills leve

Figure 2 shows the frequency with which respondents report using AI-based tools (ChatGPT, Claude, Syntesia, Gamma, Jasper, Writer, Midjourney, Asana, ElevenLabs, etc.) in their professional activities (at university or at work). Most respondents (45.36%) report using such technologies several times a week, while 16% state that they use AI tools very rarely or not at all.

Tables 2 and 3 present the output of the chi-square test performed using SPSS 23 to examine whether there are differences among respondents in the frequency of AI use in their professional activity based on their level of digital skills. The results of the chi-square test ($\chi^2(12) = 18.319$, $p = 0.106$) indicate that there is no statistically significant association between the variables analyzed, as the p-value is higher than the conventional significance threshold of 0.05. This suggests that there are no significant differences in the use of AI in professional activities determined by differences in respondents' digital skills.

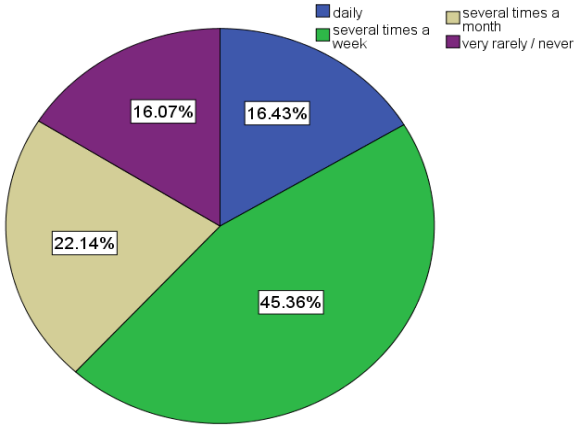

Figure 2. Frequency of AI technology use

Table 2. Digital skills level x Frequency of AI technology use Crosstabulation

			Frequency of AI technology use			
			Very rarely/ Never	Several times a month	Several times a week	Daily
Digital skills level	Expert	Count	6	9	24	12
		Expected Count	8.2	11.3	23.1	8.4
		Residual	-2.2	-2.3	.9	3.6
	Advanced	Count	15	19	53	17
		Expected Count	16.7	23.0	47.2	17.1
		Residual	-1.7	-4.0	5.8	-.1
	Intermediate	Count	21	33	47	14
		Expected Count	18.5	25.5	52.2	18.9
		Residual	2.5	7.5	-5.2	-4.9
	Beginner	Count	1	1	1	3
		Expected Count	1.0	1.3	2.7	1.0
		Residual	.0	-.3	-1.7	2.0
	Novice	Count	2	0	2	0
		Expected Count	.6	.9	1.8	.7
		Residual	1.4	-.9	.2	-.7

Table 3. Chi-Square Tests

	Value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	18.319[a]	12	.106
Likelihood Ratio	17.584	12	.129

a. 8 cells (40.0%) have expected count less than 5. The minimum expected count is .64.

Figure 3 provides a summary of students' responses concerning how they use AI tools in their professional activities (at work or at university).

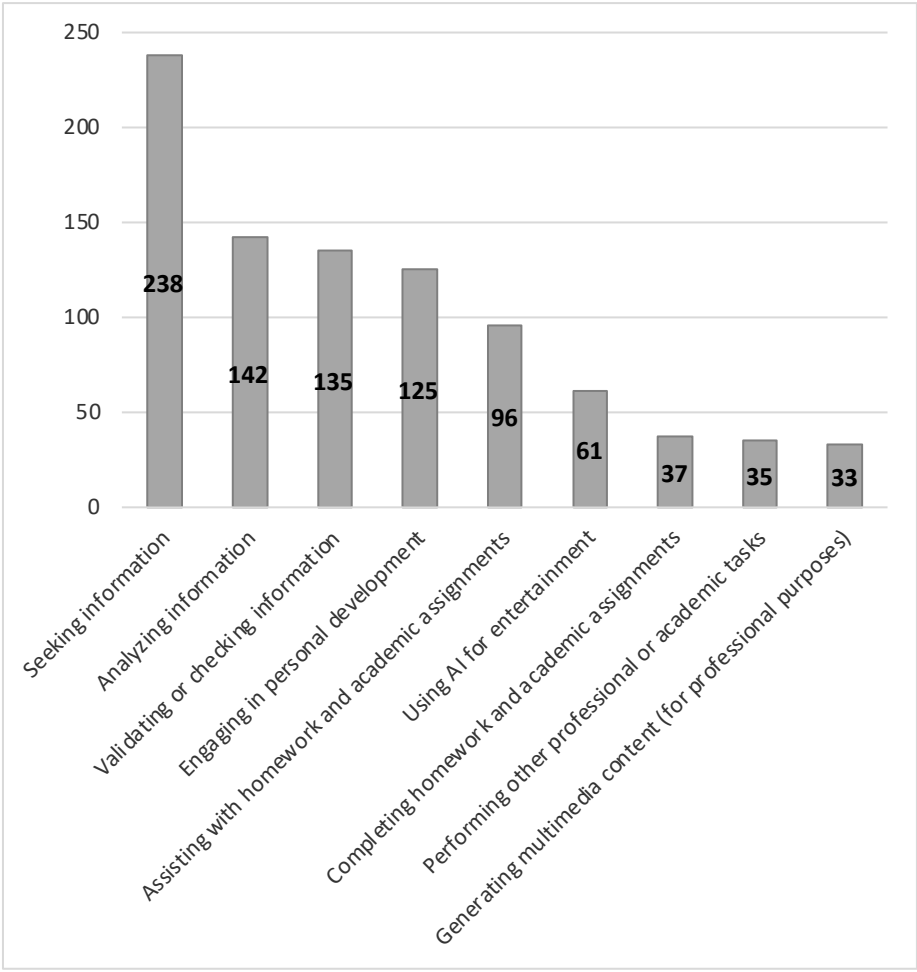

Figure 3. Ways Students Use AI Tools

The data shows that most students use artificial intelligence for seeking and analyzing information, while more creative or applied uses are minimal. I consider that we can speak of a predominantly passive orientation, and I appreciate that AI is perceived by the study sample students more as an informational support tool than as one for active learning or innovation, which may be concerning from the perspective of developing advanced digital skills and critical thinking. It may also be worrying, with the necessary nuances, that 85.6% of respondents use AI-based tools to search for information. A recent study (Sullivan, 2025), conducted by 22 public media organizations, found that four of the most widely used AI assistants (ChatGPT, Copilot, Gemini, Perplexity AI) distort news content in 45% of cases, regardless of language or territory. However, this is also encouraging, as it shows responsible and thoughtful use of AI technologies in academia, with 48.6% of students reporting that they use AI-based tools to verify the accuracy of information.

Table 4 presents a descriptive analysis of items 7–13, which relate to the potential beneficial effects of using AI-based tools. A five-point Likert scale was used for these questions, ranging from 1 (strongly disagree) to 5 (strongly agree).

Table 4. Benefits of Students' Use of AI Tools

	Mean	Std. Deviation
7. AI tools can improve students' digital skills.	3.821	1.0627
8. Through AI tools, students can obtain answers and explanations to questions they cannot ask their teachers (these tools ensure anonymity, are available 24/7, and eliminate the fear of making mistakes or being judged).	3.757	1.1936
9. The use of AI tools can encourage students to become more autonomous and independent in the learning process.	3.389	1.2538
10. The use of AI tools can help students become more productive in their learning and research activities.	3.589	1.1481
11. AI tools can stimulate students' creativity by offering innovative perspectives and ideas for academic projects and tasks that they might not think of on their own.	3.621	1.1730
12. Students need to learn how to use AI-based tools effectively in order to succeed in their careers (as AI is likely to be widely used in many fields in the future).	3.721	1.2215
13. The use of AI tools by students can drive the modernization of the Romanian higher education system.	3.739	1.1853

The analysis of the responses in the table reveals that students perceive the benefits of AI in education positively, with all items having mean scores above 3.7, and the highest level of agreement observed for the improvement of digital skills. Moderate standard deviations (1.06–1.25) suggest a reasonable level of consensus among respondents, with greater dispersion of responses for questions 9 and 12.

The lowest score was recorded for item 9. This result may reflect a concern that students could become dependent on AI instead of developing their autonomy, or a perception that these tools promote passivity rather than independence in learning. The higher standard deviation compared to the other items suggests differing opinions on this issue, with some students viewing AI as an empowering tool and others as a potential barrier to the development of academic autonomy. A lower score was also recorded for item 10, reflecting moderate skepticism about the effective use of AI in real educational contexts. This degree of skepticism may be attributed to limited experience in using AI-based tools.

Table 5. Students' Concerns About Using AI Tools

	Mean	Std. Deviation
14. The use of AI for completing academic tasks diminishes the quality of students' professional education	3.118	1.1657
15. Students' use of AI will limit opportunities for socializing with peers during their university studies.	2.746	1.3239
16. AI usage affects the development of students' soft skills, such as critical thinking, creative writing, problem-solving, teamwork, and leadership abilities.	3.379	1.2267
17. Students/future professionals may become dependent on AI in their work.	3.550	1.2462
18. It is unethical for students to rely on AI tools when completing academic tasks.	3.039	1.1952
19. Allowing the use of AI tools in universities may make it more difficult to assess students.	3.057	1.2687
20. Using AI tools (especially paid versions) can exacerbate inequalities among students.	3.111	1.3028

Items 14-20 (whose descriptive analysis is synthesized in Table 5) were designed to identify the problems/challenges caused by the use of AI in teaching/learning processes from the students' perspective. The analysis of the average values for the seven items reveals a moderate level of concern about the potential adverse effects of AI use by students. The highest average is for item 17, which highlights a greater concern about the risk of technological dependence. Also, the statement regarding the negative impact of AI on the development of soft skills is supported by a majority of respondents.

On the other hand, items related to limiting socialization among students and ethical issues raised by the use of AI have lower levels of agreement, which may suggest that students do not perceive the use of AI as a significant threat in these areas. Overall, the average responses to the seven items indicate that students are somewhat cautious about the effects of AI use, anticipating moderate risks, particularly related to addiction, loss of soft skills, and assessment fairness. The higher standard deviations, exceeding 1.2 for most items, underscore the fact that students have varying perspectives on the magnitude of these risks.

In Table 6, the descriptive analysis for items 21–26 is presented, which were used to outline proposals for integrating AI tools into teaching and learning activities at universities.

Table 6. Measures Aimed at Integrating AI Tools in Higher Education Institutions

	Mean	Std. Deviation
21. Universities should develop clear guidelines and codes of conduct regarding the ethical use of AI tools in an academic setting.	3.643	1.1613
22. The use of AI tools should be banned in universities.	1.879	1.1514
23. Teachers need to review academic assignments and assessment methods (to prevent academic integrity violations through AI tools).	3.075	1.1413
24. Universities should use AI applications to detect AI-generated content (in term papers, essays, and graduation projects).	3.071	1.3945
25. Universities should integrate AI tools into educational processes and should train students to use them effectively and ethically.	4.079	1.0814
26. With institutional support or on their own, teachers should improve their skills in using AI to support teaching and assessment.	3.735	1.1911

The analysis of the mean values for these questions indicates a predominantly favorable attitude toward the use of AI, with an emphasis on regulation, training, and professional development, rather than on restriction or prohibition.

The highest mean value was recorded for item 25. This result suggests a clear position in favor of the constructive integration of AI in education. A similarly high level of agreement was recorded for item 26, indicating that students believe teachers should also improve their skills in using AI as a support for teaching and assessment, ensuring both efficiency and ethical practice. Students also show a high level of agreement regarding the development of clear guidelines or codes for the ethical use of AI tools in academia. A majority disagreement was recorded for item 22, concerning the prospect of banning the use of AI tools in universities.

4. Discussion and conclusions

A key finding of our study is that the majority of student respondents (over 80%) regularly utilize AI tools. Our results are consistent with those of other studies with similar objectives. For example, a study by the Digital Education Council, conducted on a sample of 3,839 students from 16 countries, across bachelor's, master's, and doctoral programs in various fields of study, revealed that 86% of respondents are already using AI tools in their studies (DEC, 2024). Another study, conducted by Copyleaks (2025), on a sample of approximately 1,100 students in the USA, shows that 90% of students use AI in an academic setting. All of this suggests that most students have integrated artificial

intelligence into their academic lives faster than teachers or educational institutions can respond.

If students are already using AI on a large scale and educational institutions continue to treat it as a marginal issue, they risk becoming irrelevant, damaging their reputation, and failing to prepare students in line with labor market requirements (Legatt, 2025).

A second conclusion is that students currently use artificial intelligence more as a tool for information support than as a means for active, personalized, and creative learning; that is, their use shows a predominantly passive orientation.

The development of AI-based tools and their widespread use by students has also changed their behavior in searching for information related to study tasks. Using the library for information has become an increasingly outdated solution, used by fewer and fewer students. Increasingly, students are relying on AI tools for information retrieval (Friesen & Roy, 2025). These tools reduce the anxiety associated with information search and increase the confidence with which students seek information, as well as their curiosity (Karunaratne & Adesina, 2023). Their reliability as information search tools is contested (Friesen & Roy, 2025), which calls for their use with caution (Mannuru et al., 2024). Although studies, audits, and anecdotal observations have shown that the information generated by ChatGPT (and other Large Language Models) is not always accurate, many users tend to place unjustified trust in this new source (Jung et al., 2024). Fact-checking of content generated by AI-based applications should remain essential, given the identified risks (Mannuru et al., 2024).

A significant segment of survey respondents (48.6%) reported using AI-based tools to verify certain information. The question arises as to what extent AI-based applications can provide reliable results in this endeavor. Studies on this topic (Hoes et al., 2023) have shown that Large Language Models can be beneficial for fact-checking; however, caution should be exercised, and these tools should not replace the work of human experts or traditional solutions for verifying the accuracy of information.

Regarding the advantages and disadvantages of using AI in academic activities, it can be said that the students in the study sample have a balanced and rational perception, being aware of both the benefits and the potential risks of these technologies. More specifically, their perspective could be described as optimistic-moderate.

A somewhat concerning aspect is that students seem to minimize, or not consider significant (or not to the same extent as other risks), the impact of using AI tools on socializing with colleagues during their studies. The adverse effects of students using AI for an increasing portion of their academic tasks on social interactions, peer learning, and classroom dynamics remain unclear, even in the literature in the field (Cherfaoui, 2024; Hou et al., 2025; Saifuddin, 2025).

A last conclusion is that students' perspective is one of openness toward AI, demanding regulation, training, and integration, rather than prohibition. Under these conditions, universities must develop strategies for using AI tools responsibly, critically, and effectively in academic processes. Romanian universities should recognize these imperatives and take steps in this direction. In my view, the first step should be formal training on the use of AI tools for both students and teachers. The sources of information that students, as well as teachers, have used to learn about AI were mainly informal (Divekar et al., 2025). This situation highlights the need to develop institutional programs for systematic AI training for both categories of stakeholders, to mitigate or eliminate

skills gaps, as well as to raise awareness of the benefits, risks, and ethical challenges associated with AI.

This research highlights several important limitations that must be considered when interpreting the results. First, the exploratory nature of the study highlights the need to expand the research by including a more diverse sample, encompassing students from fields of study beyond economics, as well as from other universities in the country. It is also essential to examine the topic more deeply by developing and validating a complex, multidimensional model that is better designed to capture students' attitudes and perceptions toward AI-based tools.

Secondly, the students who responded to the questionnaire in our study included both those who had taken an Ethics and Academic Integrity course (in the master's program) and those who had not. Under these conditions, one can consider, on the one hand, the orientation of some students toward socially desirable answers, and on the other hand, respondents who may be unaware of, or not anticipate, the academic ethics issues arising from the use of AI-based tools by students.

Finally, the non-random sampling method used limits the generalizability of the conclusions to the entire student population in the Romanian university environment.

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