



ITALIAN JOURNAL OF SOCIOLOGY OF EDUCATION

Editor-in-Chief: Silvio Scanagatta | ISSN 2035-4983

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*Eszter Benke**, *Andrea Szóke***

Author information

- * Faculty of Commerce, Hospitality and Tourism, Budapest Business University, Hungary.
Email: benke.eszter@uni-bge.hu
- ** Faculty of Commerce, Hospitality and Tourism, Budapest Business University, Hungary.
Email: szoke.andrea@uni-bge.hu

Article first published online

July 2024

HOW TO CITE

Benke E., Szóke A. (2024) “Academic Integrity in the Time of Artificial Intelligence: Exploring Student Attitudes” *Italian Journal of Sociology of Education*, 16(2), 91-108.
DOI: 10.14658/PUPJ-IJSE-2024-2-5

Academic Integrity in the Time of Artificial Intelligence: Exploring Student Attitudes

Eszter Benke, Andrea Szóke

Abstract: This paper examines the influence of generative artificial intelligence (AI) on academic values in a constantly changing world characterized by volatility, uncertainty, complexity and ambiguity (VUCA). It highlights the necessity of adaptability in both personal and professional domains and stresses the significance of modifying values in response to ongoing changes. While core values such as ethics and academic integrity remain constant in this ever-evolving landscape, the emergence of generative AI necessitates the integration of new values and perspectives to address these complexities. This requires establishing clear guidelines and ethical standards for the incorporation of AI into education. The exploratory research indicates that students recognize the advantages of AI but are concerned about issues such as deception and reduced creativity. The study argues for a balanced approach to AI that recognizes its capabilities while addressing ethical dilemmas. The paper highlights the importance of maintaining fundamental educational values and encourages cooperation between educators and policymakers. The aim is to create a learning environment that benefits from AI while keeping ethical standards high.

Keywords: academic integrity, generative AI, VUCA world, student attitudes

Introduction

The evolving landscape of education in the modern world

Change is a fundamental element of daily activities and broader life progressions, characterizing an ever-evolving world. Continuous change, frequently leading to concerns and a sense of instability, necessitates adaptation across diverse areas. In this context of constant transformation, the environment becomes inherently unpredictable, fostering a need for consistent adjustment and flexibility. The VUCA paradigm, initially rooted in military strategies and later adapted for leadership competencies in human resources, illustrates this phenomenon. In this paper, the VUCA framework is applied to the context of higher education, illustrating its relevance in a field that necessitates quick and skilful adaptation to volatility, uncertainty, complexity and ambiguity over numerous decades.

VUCA and the relevance of core values

While some core values may seem unchanging, the uncertainties brought about by constant changes can prompt a re-evaluation of even the values once considered firm. It is essential that any re-evaluated values are universally acknowledged and accepted. The culture of an organization inherently fosters the development of shared values within its community. Some of these values are consistently upheld universally, while others may be open to individual interpretations. In universities, academic culture is crucial in influencing values related to academic integrity. The complexity of establishing a common understanding of these values is heightened in internationalized academic settings. Educators must be proactive in defining and upholding a consistent set of values related to academic integrity, supported by clear institutional policies.

This unified value system should increasingly incorporate elements relevant to the VUCA world, such as generative artificial intelligence (AI). Despite the widespread use of AI-enabled tools in both personal and educational settings, a significant number of individuals still lack awareness of how these tools operate. The growing prominence of AI demands a shift in this awareness. Within the educational sector, there is an increasing call to refresh teaching methods, rethinking both the targeted skills and the ways in which they are assessed. Today, educators face a crucial decision regarding the form and extent of AI integration in the classroom. It is evident that AI plays a significant role in educational frameworks: ignoring its potential would be shortsighted, and failing to introduce students to AI could result in missed opportunities. The authors of this article advocate for a well-informed, supportive and regulated approach to AI inclusion, emphasising the importance of establishing clear guidelines for its application. In doing so, it

is imperative to ensure that the inclusion of AI in educational settings aligns strictly with the highest ethical standards, safeguarding the integrity of the learning environment.

It is important to acknowledge that statements about AI made today may soon become outdated. Therefore, this paper should be viewed as a snapshot of the current moment, offering observations and conclusions that are applicable now but will require regular updates to remain relevant as AI continues to evolve.

The role of the university in imparting values

Higher education institutions exhibit a variety of responses to AI, ranging from full integration to complete avoidance. The complexity of the issue, combined with uncertain regulations, poses significant challenges. Ethical considerations are of utmost importance when implementing AI in academic settings. Regulations pertaining to AI extend across institutional, departmental and curricular levels, often leaving students confused about how to reconcile different values and rules. The absence of any regulatory framework is particularly harmful, as it deprives students of crucial guidance. Clear directives are necessary to manage these varied regulations while sustaining long-established values. University codes of conduct have traditionally upheld these values, but the swift changes in today's VUCA world necessitate more rapid adaptations. Understanding the student perspective on AI is essential for developing effective regulations and safeguarding academic integrity. Moving forward, it is crucial for universities to continue promoting values and upholding academic integrity amidst these changes.

Literature Review

The literature review is organised into three sections. To begin, there is a concise evaluation of the VUCA concept, with particular emphasis placed on its manifestation within the higher education sector. Following this, there is a brief exploration concerning the attitudes towards the impact of AI in higher education. In the final part, the review explores how academic integrity aligns with the use of AI in higher education, while also considering the complex nature of values and value systems.

An overview of higher education through the VUCA lens

The VUCA concept is a tool to understand tough challenges in many areas. In their discussion of VUCA, Baran and Woznyj (2021) highlighted the challenges of operating within environments marked by volatility, uncertainty, complexity and ambiguity. While VUCA originated in military contexts, it has become increasingly relevant in education, reflecting the unpredictability of the contemporary learning landscape. However, a notice-

able gap exists in terms of evidence-based resources to guide educators and administrators through the intricacies of VUCA. They suggest three main steps: recognize your own VUCA challenges, find out what might block adaptability and use methods that increase flexibility. These strategies, as Baran and Woznyj (2021) suggest, should be implemented simultaneously, allowing for continual adjustment and refinement.

In LeBlanc's study (2018), the focus is on major changes within the realm of higher education, emphasizing the necessity for institutions to both adapt and equip their students to manage these shifts. He suggests that universities need to innovate and exhibit more flexibility to succeed in a world characterized by VUCA. This adaptation requires setting up advanced learning systems, offering personalized education and equipping students for roles that incorporate cutting-edge technology. Emerging innovations include utilizing blockchain for record management and implementing streamlined degree programs. The adoption of learning methods personalized to individual needs, drawing parallels to individualized health treatments, becomes critical. The role of higher education in preparing students for a future driven by AI is significant and the cultivation of a proactive "change and thrive" (LeBlanc, 2018, p. 26) narrative is essential for resilience. The incorporation of AI into higher education is set to transform both the learning experiences and administrative methodologies.

Building on the understanding of the challenges encapsulated by the term VUCA, Hadar et al. (2020) illuminate their impact and implications within the education sector. Given the significant influence of VUCA on various domains, education becomes paramount as it prepares students for a constantly changing world, especially in an interconnected and digitised era. The paper examines various responses to these challenges in the educational context, identifying the most effective strategies for an information-centric environment. It further explores the intellectual development required for learners to successfully handle a VUCA-influenced landscape. The discussion concludes by suggesting a teaching approach tailored to the needs of digital-first learners, emphasising their genuine learning motivations. The study recommends an educational approach that fosters a flexible mindset, emphasizing agility and readiness to adapt to continuous changes, preparing students for future challenges.

In an OECD policy paper by Laukkonen et al. (2019), the authors discuss the dynamic changes observed globally, influenced by technological advancements, population growth and intensified global integration. As technology progresses, it starts to occupy spaces that were traditionally reserved for humans, compelling individuals to adjust continuously to maintain relevance. In this context, Laukkonen et al. (2019) investigate how both humans and automated systems respond to VUCA environments. Their findings

highlight the importance of the “learning-to-learn” approach and metalearning, suggesting that these skills differentiate humans from machines. They argue that for a smooth transition into this changing landscape, educational systems should prioritize broad, adaptable learning capabilities, possibly alongside specific skills. They recommend individuals with these advanced skills to take on teaching and mentoring roles, enhancing the readiness of society for forthcoming challenges. They also point out the contrasting ways individuals perceive rapid changes; with some viewing them as opportunities and others as potential hazards. The authors remain optimistic about the inherent adaptability, resilience and the potential of humanity to excel in periods of uncertainty. Their insights indicate that this natural human adaptability will be crucial in confronting and adapting to future complexities.

In the face of rapid global changes and unpredictability summarized by the term VUCA, there is a pressing need for agility and adaptability. Yoder-Wise (2021) provides a transformative approach by redefining VUCA to denote positive attributes: Vision for foreseeing changes, Understanding through active listening, Clarity in setting objectives and Agility in adapting swiftly. To effectively adapt to the dynamic landscape of education, educators should embrace this redefined VUCA, fostering an agile mindset that turns challenges into opportunities for innovation and growth.

The papers discussed above confirm that the complexities presented by the VUCA framework are altering the educational sector. As technology, including AI, increasingly intersects with traditionally human tasks, the emphasis on adaptability, a “learning-to-learn” attitude and deeper understanding becomes highly significant. For educators, it is vital to align with this adaptability and forward-thinking approach, using the VUCA framework not as an obstacle but as a guide towards sustained growth and progression in education.

AI driven evolution in higher education

Drawing parallels with the current study in terms of focus, Chan and Hu (2023), although less concentrated on ethical questions, place greater emphasis on how AI aids in studies. Adopting a more structured and less elicitive approach, the researchers embarked on an exploration of students’ attitudes towards AI. They identified a blend of optimism and caution surrounding AI technologies in higher education. Students demonstrate an understanding of AI, influenced by their knowledge and frequency of use. They recognise its potential to revolutionise education, particularly in terms of personalised learning, but also express reservations about over-dependence, accuracy and privacy. Surprisingly, a comprehensive knowledge of AI does not mitigate these concerns. The study emphasises the significance of understanding

these perceptions for the thoughtful incorporation of AI into higher education.

While addressing unethical applications of AI and emphasising the imperative for continual monitoring of its evolution, Peres et al. (2023), in their paper on the implications of AI on research and teaching, advocate for the forward-thinking integration of AI into the pedagogical framework of higher education. Drawing parallels with the adaptation to statistical software in education, they argue for a shift from traditional methodological teaching to ensuring students' proficiency in the application and interpretation of AI tools. They emphasise the need for students to be equipped with skills such as prompt engineering, critical evaluation of AI outputs and an understanding of its limitations.

The studies reviewed offer critical insights into the transformative potential of AI in the field of higher education. It is evident that, while AI promises substantial advancements in education, it is not without its challenges and ethical concerns. To harness the benefits of AI, there is a pressing need for the development and implementation of comprehensive guidelines that ensure its ethical use. In addition, given the rapid pace of technological advancements, it is crucial for educators and students alike to keep informed about these changes, ensuring they are not left behind. While the appeal of AI is undeniable, the human touch in education, characterised by qualities such as creativity, empathy and cultural transmission, remains irreplaceable. Therefore, a balanced, informed and ethical approach to integrating AI into higher education is the way forward.

Academic integrity in the age of AI

The growing body of research on academic integrity in the age of artificial intelligence highlights the complexity of the issue. While views may differ on the form and extent of desirable AI integration into studies, there is a consensus on the need for clear, well-understood and transparent regulations. Major policy documents, such as the one presented by the European Parliament in 2021, spotlight the paramount importance of ethically deploying AI within the educational sector, grounded in key ethical principles. Complementing this, the European Commission, in 2022, issued a communication which outlines a European strategy for the advancement of AI, both with excellence and trust at its core, endeavouring to harness the full potential of AI. This communication emphatically stresses the necessity for an AI approach that is steadfast in its commitment to prioritising human welfare and upholding fundamental rights.

In a recent UNESCO document (Sabzalieva & Valentini, 2023) addressing the utilization of AI, there is a distinct section dedicated solely to academic integrity. Within this section, the narrative highlights the escalating need

for Higher Education Institutions (HEIs) to revisit and refine their guidelines concerning AI's role in teaching, learning and assessment. The urgency of this message has been amplified due to the widespread adoption of Generative Pre-trained Transformer (GPT) tools and the accompanying technologies designed to detect their use. With the GPT's rising integration into platforms such as search engines and the ubiquity of predictive text and grammar support in word processing software, it becomes indispensable for HEIs to engage in an in-depth dialogue regarding the ethical ramifications of these AI tools becoming an integral part of daily academic and operational activities.

Even before the advent of AI, the necessity to regulate the use of AI was evident, as indicated by Holmes et al. (2021). In *AI in Education (AIED)*, it is not solely about preventing potentially harmful actions, but also about establishing comprehensive guidance. Such guidance should balance the potential benefits of AI for learners, educators and society against any inherent risks. Offering clear and proactive guidelines for AI research and development in educational contexts can promote positive outcomes for all stakeholders.

Chan (2023) offers an insightful history of AI policies in education since the 1970s. While AI has brought innovations like personalised learning tools and administrative systems, concerns about curriculum changes, equal access and the evolving role of teachers have arisen. Current educational AI policies highlight digital literacy, traditional teaching values and professional development. There is an observed trend to prioritise AI for workforce training over its educational potential, highlighting the need for balanced policies that address both educational and ethical dimensions in higher education.

In addressing the question of whether AI poses a threat to academic integrity, Eke (2023) concludes that the appearance of tools like OpenAI's ChatGPT highlights the necessity to integrate these advancements with academic ethics. While these technologies offer transformative possibilities, their unregulated use could potentially compromise the fundamental principles of academic integrity. Therefore, institutions must align their ethical and integrity frameworks with this evolving technological paradigm, ensuring robust collaboration between academia and AI developers.

Farrokhnia et al. (2023) conducted a SWOT analysis of AI. Within the "threats" component of their analysis, they also highlighted a commonly referenced concern that these applications pose risks to academic integrity. The paper further references specific authors who have delved into breaches of academic integrity, such as examination malpractice. This concern becomes even more pronounced with the rising prevalence of online examinations, where AI frequently produces accurate responses to examination queries with considerable confidence.

In the content analysis of media discourse, Sullivan et al. (2023) suggest that the conversation surrounding ChatGPT in higher education is primarily focused on concerns about academic integrity and the innovation of assessment methodologies within higher education. There appears to be, however, a significant gap in research concerning the student's voice, despite students being paramount stakeholders in this dialogue. The current study endeavours to bridge this void, seeking to offer a comprehensive perspective on the implications of AI tools, particularly with respect to academic integrity.

The studies seem to indicate that integrating AI into academic integrity is a considerable challenge. Major European policy documents emphasize the ethical implementation of AI in education, highlighting the need for clear and transparent rules. The increasing influence of Generative Pre-trained Transformer tools in academia necessitates a deep discussion about their ethical implications. Researchers agree that although AI offers transformative educational opportunities, its unregulated use could threaten academic integrity. Therefore, it is crucial for educational institutions to set strong guidelines, weighing AI's potential advantages against its inherent risks and always prioritizing academic integrity.

The research aims to gain insight into the perceptions and applications of AI by business students, while also considering the emotional dimensions of their encounters with the technology. By framing the research within the context of the overarching role of universities in imparting core values, such as fairness and honesty, the study hopes to shed light on the intersection of these values with the evolving AI landscape. Furthermore, the findings from this investigation aspire to guide the formulation of regulations and promote best practices, ensuring that AI integration within academia aligns with the fundamental values of higher education.

The following research questions will guide the investigations:

1. In what ways do students apply generative AI in their personal, academic and professional lives?
2. How do the perceived advantages of AI compare to its potential disadvantages from the students' perspective?

Methods

Research instrument

Qualitative methods predominantly influenced the study to explore student attitudes. Although questionnaires are not traditionally associated with qualitative methods, one was employed because of its practical advantages. The initial use of qualitative methods was for concept elicitation during the development of the questionnaire. However, the items within the question-

naire themselves became the primary tools for elicitation. Thus, it received the name “qualitative questionnaire with elicitation items”, given that the majority of its questions were open-ended. By referring to the data collection tool as a qualitative questionnaire with elicitation items, the aim was to highlight the depth and exploratory nature of the questions, extending beyond standard open-ended queries. Past observations have shown that questionnaires with only closed-ended questions often lack genuine engagement from respondents, potentially skewing results. Therefore, this questionnaire served as a hybrid tool. It included associative items reminiscent of projective techniques and attempted to frame a key component through the lens of artificial intelligence. In developing the questionnaire, the researchers designed items to capture the diverse dimensions of AI use among business students. Initial questions were intended to measure students’ spontaneous emotional reactions and general perceptions of AI. Further, detailed queries about the frequency and context of AI usage were included to directly explore how students integrate AI into their lives, addressing the first research question. To align with the aims of the study, additional items examined students’ views on its advantages and disadvantages as well as AI’s alignment with core university values.

It is essential to note that while the questionnaire prompted respondents to use similes for one of the questions, for practical purposes, these were treated like metaphors within the context of the research. While similes typically employ “like” or “as” for comparison, in this study, they were regarded as quasi-metaphors. This acknowledges that both similes and metaphors draw connections between disparate entities or ideas. Consequently, similes were analysed with the depth typically given to metaphors, a technique often seen in psychological research.

Data collection

Data were collected from participants through an online questionnaire. Participation was voluntary and informed consent was obtained at the beginning of the questionnaire to adhere to ethical research standards. Anonymity and rigorous data handling practices further reinforced this assurance. Access to the data was restricted to the two authors of the study. The collection process occurred during the autumn semester of the academic year 2022-23. Given the qualitative and explorative nature of this study, the modest sample size was not viewed as a significant limitation.

Participants

During the design phase of the measurement tool, discussions arose regarding the necessity of demographic data. Given the exploratory and qualitative nature of this study, limited demographic data were collected, allowing more room for in-depth, open-ended, elicitation questions. The participants

comprised both Hungarian and international students, totalling 95, enrolled in higher education business courses at a business institution in Hungary. These students possessed varying levels of practical experience in business, ranging from internships to part-time employment in various industries. Their academic interests spanned a range of disciplines within business studies, including tourism, hospitality, marketing and business management. They represented a diverse mix of cultural backgrounds, bringing a variety of perspectives to the research. The typical age range of the students at the institution is between 18 and 25 years, although this detail was not explicitly addressed in the questionnaire.

Data analysis

In line with the principles of qualitative data analysis, the analytical process was iterative and built upon each stage of understanding. It started with a thorough examination of the raw data, with insights from this stage informing the creation and development of analytical categories. To ensure a comprehensive and subtle categorization, a systematic approach was taken. The primary analyst conducted the initial analysis, which was then followed by a phase of reflection and category refinement. After this, the secondary analyst reviewed and confirmed these refined categories, ensuring their coherence and relevance. Given the qualitative nature of the study, the focus was on achieving a deep understanding and interpretation, thus making quantitative metrics irrelevant to this research.

Results and discussion

Students' familiarity and engagement with AI-enhanced tools

Data from the open-ended questions revealed that students' responses can be grouped into five distinct categories: academic and study purposes, work and professional tasks, curiosity and entertainment, task assistance and creativity and a miscellaneous category. The latter includes answers that do not fit the other categories or indicate non-use of these tools.

The *academic and study purposes* category involves AI being used to support various educational activities, helping students with coursework and complex academic projects. The *work and professional tasks* category highlights the application of AI in enhancing job-related efficiency and productivity. In the *curiosity and entertainment category*, AI is engaged for personal enjoyment and exploration. The *task assistance and creativity* category demonstrates how AI is used in personal projects by offering creative solutions and simplifying complex tasks. Finally, the *miscellaneous category* includes miscellaneous or unclear uses of AI, capturing instances where students have not yet used AI or are uncertain about its applications. This

category reflects respondents' diverse and sometimes tentative approach to AI technology.

Under the *academic and study purposes* category, the application of AI is seen primarily within the educational sphere. This encompasses everything from utilising AI for regular classroom assignments to using it as a tool for more complex academic projects. Responses indicated that students relied on AI for tasks such as essay writing, translating texts and even image generation related to their courses.

"I used it in my computer science class because it was the assignment."

"Essay writing has been made much simpler with AI's assistance."

"Using it for foreign language translation has been immensely helpful."

The *work and professional tasks* category focuses on the professional and work-related application of AI tools. This indicates that students are not limited to using AI for their academic pursuits but also employ it for job-related tasks. From drafting professional content, editing videos and photos to performing complex data analysis, AI has been a cornerstone for many work-related activities.

"My work during email generation has improved with AI."

"Editing pictures for my project was a breeze thanks to AI tools."

"AI helped in revising documents and simplifying lengthy texts for my job."

An interesting takeaway from the survey was the *curiosity and entertainment* category, which suggested that not all interactions with AI are strictly practical. A significant number of students indicated that they engage with AI out of pure curiosity or for entertainment. This can range from casual chats with AI to exploring its capabilities just for fun.

"I tried to talk to him, but he was intimidating to me, so I stopped right away."

"I've used it just for fun and learning."

"Out of curiosity, I tried image generation and was amazed."

Beyond formal study or work, responses in the *task assistance and creativity* category confirm that AI tools function as personal assistants, enhancing everyday creativity and productivity. Students turn to AI for brainstorming ideas, seeking quick answers to questions and simplifying complex tasks. This highlights the role of AI in making daily tasks more efficient.

"When I can't find something on the Internet, I ask the AI for a detailed answer."

"Brainstorming for presentation ideas became more efficient with AI."

"I asked GPT what key combination to use on my MacBook when I was stuck."

Responses in the *not yet used or unclear use* category suggest that not every student has explored the world of AI. Some statements indicated either a lack of use or uncertainty about the exact purpose of their interaction with

AI. This could be due to unfamiliarity, intimidation or mere curiosity without any direct application.

"I haven't used it yet."

"Still only used it for image generation but not much beyond that."

"I had not used it before but have heard a lot about it."

From the identified categories, several key insights emerge. The use of AI in student life is expanding, assisting not just in academic pursuits but also in leisure interests. AI is seen not only as a practical tool but also as a platform for exploration and creativity. It was observed that many students might only be beginning to grasp the vast array of AI tools available. The majority of responses indicated familiarity with only a few applications, suggesting limited exposure to the full breadth of tools. Notably, AI tools for purposes other than graphic design were seldom mentioned, hinting at either a lack of knowledge or reluctance to explore them. Additionally, a degree of caution or unease about the use of AI was apparent. At this initial interaction stage, some respondents displayed a cautious attitude towards these technologies. This hesitancy might stem from misunderstandings, inadequate information or genuine concerns about the implications of AI. The data revealed that a portion of the student population remains unfamiliar or unsure about the full capabilities of AI, highlighting the need for structured education on the subject. To bridge this gap, educational drives and beginner programs are recommended to foster a comprehensive understanding of AI among students.

Perceived advantages and disadvantages of AI use

The next open-ended question in the qualitative questionnaire was aimed at understanding the perceived advantages and disadvantages of a given subject as seen by the respondents. Participants were allowed to provide insight into their experiences, beliefs and perspectives without the constraints of predetermined answer choices. This data was analysed using an iterative process, where the responses were reviewed multiple times to identify recurring themes or patterns. Within the two major categories advantages and disadvantages expressing opposing sentiments, several distinct subcategories were identified from the raw data.

The first advantage category identified was *speed and efficiency*. AI technologies are known for quickly processing large amounts of data. This allows users to secure results promptly, positioning AI as more efficient than conventional methods. As one respondent stated, the "*Advantage: faster search, short time*", while another emphasized, "*The advantages are that it is faster*".

The subsequent category, *assistance in learning and work*, highlights the role of AI tools in both educational and professional environments. AI assists in research, responds to queries and provides tutoring, thereby enriching the learning process and enhancing work efficiency. This was reflected in com-

ments such as “*it can be useful at school or at work*”, and “*It can help a lot in learning. But it can help answer important questions.*”

Easy access to information emerged as another key advantage. Through AI, users can effortlessly investigate extensive databases, ensuring fast and streamlined retrieval of the desired information. Comments highlighted include, “*The advantage is that we can get information much more easily by using it*” and “*We get the information we need much more quickly.*”

The ability of AI systems to foster *creativity and idea generation* was also noted. Beyond mere data processing, AI can stimulate users by presenting novel viewpoints, igniting creative ideas and even becoming an active participant in the creative journey. As conveyed in the feedback, “*Advantages are that it can be a help and perhaps an expression of our creativity if you use it well*”, and “*The advantage is that it can give you ideas*”.

In addressing *problem solving*, AI’s potential to tackle and resolve complex issues stand out. The technology can offer solutions, even eliciting new, previously unconsidered insights from data. Responses included “*Its advantages are that it can help you with a lot of things, solving problems quickly*” and “*Advantages include the ability to produce new information from existing information*”.

Simplification of tasks denotes another crucial advantage. Whether simple or complex tasks, AI aids in their precise and efficient completion. Feedback reflected this with remarks like “*Make our daily tasks easier, eliminate the possibility of making mistakes*”, and “*It can simplify various tasks, even in everyday life.*”

Lastly, the *broad knowledge and perspective* category highlights AI’s ability to offer in-depth insights across various domains due to its extensive data collection. This makes AI indispensable for those in pursuit of knowledge or a broader understanding. As summed up in comments like “*It helps you acquire knowledge, makes tasks easier*” and “*The advantage is that you can ask him anything, he knows the answer to everything and can be very useful for getting information*”.

In addition to the evident advantages, the research also adeptly highlighted the perceived disadvantages. These drawbacks, while contrasted with the benefits, provide a holistic understanding of the subject. The first disadvantage category discerned was *dependence and laziness*. There is a concern that an intense reliance on AI technologies can diminish human initiative and effort, resulting in a climate where traditional cognitive endeavours are neglected. As one respondent aptly expressed, the “*We don’t use our brains as much*”, and another observed, “*People get lazy. They can’t do things on their own because they rely on it*”.

The next category, *job displacement*, brings to light the apprehensions about AI’s role in the workforce. As these systems become more advanced

and versatile, fears grow about them replacing human jobs, which has potential societal and economic ramifications. Feedback from participants included sentiments like “*It can eliminate a lot of jobs*” and “*many people’s jobs could be at risk*”.

Accuracy and reliability issues emerged as another significant concern. Despite their impressive capabilities, AI systems are not flawless. They can sometimes hallucinate, i.e., produce inaccurate information or take actions that necessitate human validation. This is captured in comments such as “*We often get inaccurate information. Sentences are often incorrect*” and “*not completely reliable, needs to be checked.*”

Another category, *reduced creativity*, addresses the potential negative impacts on human innovation. An excessive dependence on AI for solutions can hinder the genuine, human touch of creativity, leading to more uniform and less inspired results. Feedback reflected this concern with statements like “*you can get very lazy and if you don’t care what information CHATGTP has given you, you can use it and you might have got the wrong information*”, and “*No creativity required, not original and unique.*”

The category of *potential misuse and cheating* emphasises the possible malicious uses of AI. Its capabilities can be employed for dishonest purposes, like academic cheating or circumventing established standards. This is evidenced by remarks such as “*But it can be used to cheat*” and “*many people use it to do jobs that they shouldn’t.*”

Over-reliance and reduced critical thinking highlights the inherent shortcoming of placing undue trust in AI. Handing over an excess of responsibilities to AI might deter humans from engaging in critical reasoning and autonomous decision-making, fostering a blind acceptance of AI-provided solutions. Comments included “*Its helpful and reduces time needed for a job, yet sometimes shatters the integrity and can be used for cheating*” and “*We forget to think for ourselves.*”

Lastly, the *unpredictable outcomes and ethical concerns* category emphasises the potential unpredictability of AI system behaviours and decisions. Additionally, there are concerns about AI’s ethics, initiating discussions on its safe and responsible use. Responses in this category included “*Its disadvantages have to do with the fact that it is not written by a human but by a robot*” and “*The disadvantage is that it may not necessarily write the truth, or it may get too clever after a while, which can be dangerous.*”

The results present a diverse range of opinions, covering both the beneficial and negative aspects of AI. While many respondents recognize the potential of AI as a tool, there is a consistent emphasis on the dangers of over-reliance. Additionally, many statements seem to span multiple categories, highlighting the complex nature of the discussion. A prominent theme throughout the responses is the balance between the convenience offered by

AI and the potential drawbacks of dependency. Furthermore, the emergence of ethical concerns from the students is noteworthy. It suggests a heightened level of awareness and critical thinking among them. The fact that students are actively engaging with the moral dimensions of AI, even at this stage, is a positive indication of their engagement with the broader implications of technological advancements. This analysis depicts a student community that both appreciates the immense potential of AI and remains cautious about its wider implications.

Metaphorical insights into benefits, risks and ethical concerns of AI

The advantages and disadvantages identified in earlier sections found resonance in the metaphors and similes offered by the respondents.

On the positive side, AI was often portrayed as a helpful entity, providing assistance and information. Descriptions such as *“having a partner who makes you breakfast in bed,”* *“a library, both have the answers, only the AI is more modern,”* and *“an adviser because he has lots of ideas”* convey the sentiment of AI being an indispensable tool. The imagery of a personal companion or adviser was recurrent. Metaphors such as *“Talking to friends”* and *“Talking to a human, because he gives so many intelligent answers”* further highlighted the perception of AI as a companionable and advisory resource. Additionally, metaphors like *“a robot because it knows everything”* and *“an all-knowing site because I get answers to everything I ask”* highlight the vast knowledge base of AI.

Conversely, the metaphors also brought to light certain apprehensions and ethical implications surrounding AI's integration. Descriptions like *“Teasing a barking dog with almost opening the fence”* and *“fire... it can help, but if you're not careful with it, it can burn”* spotlighted concerns about the uncontrollable and potentially harmful nature of AI. There was an apparent anxiety about AI leading to a diminished human capacity for critical thought, with metaphors such as *“if we became zombies, because it ‘teaches’ us not to think.”* However, a more pointed ethical dimension emerged in similes like *“copying because others probably prepared a lot of their own and I just cheated.”* This paints a picture of AI not just as a tool but also as a potential enabler of dishonest practices. Further exploring the ethical concerns, similes such as *“give a child a pair of sharp scissors, because if he doesn't know how to use them, he'll cut himself”* and *“like the flu, because you don't know whether it will kill you or help you to get better”* underline the unpredictability of AI. These metaphors highlight the fear that, in the wrong hands or used carelessly, AI could have unforeseen and potentially catastrophic consequences.

In conclusion, the various metaphors and similes used by the respondents paint a vivid picture of how they view AI. On one hand, the positive descriptions emphasize its usefulness and the potential to act as an indispensable

tool or companion. On the other hand, the more cautious or negative imagery brings attention to the potential risks and ethical dilemmas posed by AI. Collectively, these insights highlight the dual nature of the impact of AI's, blending both its promise and the concerns it raises.

Conclusion

This research sought to understand the transformative impact of generative artificial intelligence on academia, with a particular focus on student experiences. The study addressed the intersection of evolving academic values amidst the rise of AI. By focusing on the student perspective, the research illuminated the changes in educational practices and values introduced by AI.

Analysing the findings through the VUCA framework brings forth several points. The volatility of the present landscape was evident as the rapid introduction of AI into academia has led to significant shifts in educational practices and values, raising ethical concerns over the potential misuse or misunderstanding of the technology. The uncertainty was captured by students expressing mixed feelings about AI, recognizing its benefits but also voicing concerns about ethical issues, such as potential misinformation, reduced creativity and possible biases inherent in AI systems. The complexity of integrating AI was evident in the complex challenges it presented, from simplifying tasks to introducing unpredictable outcomes in the academic setting, all highlighted by the ethical challenges of ensuring fairness and transparency. Lastly, the ambiguity in the study stemmed from the varied perceptions of AI's role in academia, indicating a need for clearer understanding, guidelines and ethical standards to manage its integration. A key insight from the study is AI's dualistic nature: while it offers efficiencies, it also presents ethical dilemmas.

The findings emphasize the need for a balanced approach, recognizing both the advantages of AI and its potential risks. In the academic context, there has been a noticeable shift in student values and perceptions since the integration of AI. Students acknowledge the benefits but are also cautious of issues like misinformation and ethical concerns. These insights emphasize the need for refined AI guidelines and solid ethical standards. This is consistent with the recommendations of other similar studies (e.g., Firat, 2023; Rudolph et al., 2023a) and guidelines (e.g., Atlas, 2023; Gimpel et al., 2023; Sabzalieva & Valentini, 2023) that have been published on implementing generative artificial intelligence in higher education. These sources not only provide useful instructions but also examine the ethical and responsible use of this technology. In light of the interplay between the VUCA world, AI and academic integrity, it is imperative to harmonize both challenges and opportunities to foster a holistic educational landscape. In accordance with

previous research (e.g., Bearman et al. 2023; Farrokhnia et al., 2023; Perra & Lankathilaka, 2023; Rudolph et al., 2023b), the authors also emphasise stakeholder collaboration in the formulation of policies and guidelines, as well as in the updating of ethical frameworks, to foster responsibility and transparency.

Educators play a key role in balancing the use of advanced technology, notably the integration of generative AI into the classroom in higher education, while maintaining ethical learning standards. The responsibility lies with all stakeholders to provide clear guidelines on how to find this balance. Effective integration requires cooperation among educators, technologists and policymakers to establish an innovative and value-driven educational future. In the AI era, both students and educators must work together to protect educational values during this fast-paced technological change.

A limitation of the study is its small sample size and exclusive focus on the business discipline, indicating that the findings may not be applicable in other contexts. This highlights the potential limitations of AI tools in interpretative fields like business, as opposed to their more pronounced use in hard sciences and possibly even some soft sciences. To expand upon these findings, future research could involve larger and more diverse samples across multiple disciplines, examining students' attitudes towards and usage of AI tools in various academic and professional settings. These insights should inform curriculum development, outlining areas where students require further assistance and suggesting ways to harmonize traditional teaching methods with AI-based instruction.

References

- Atlas, S. (2023). *ChatGPT for Higher Education and Professional Development: A Guide to Conversational AI*. University of Rhode Island, College of Business Faculty Publications.
- Baran, B. E., & Woznyj, H. M. (2021). Managing VUCA. *Organizational Dynamics*, 50(2), 100787.
- Bearman, M., Ryan, J., & Ajjawi, R. (2023). Discourses of artificial intelligence in higher education: a critical literature review. *Higher Education* 86, 369–385.
- Chan, C. K. (2023). A comprehensive AI policy education framework for university teaching and learning. *International Journal of Educational Technology in Higher Education*, 20(1).
- Chan, C. K., & Hu, W. (2023). Students' voices on Generative AI: Perceptions, benefits, and challenges in Higher Education. *International Journal of Educational Technology in Higher Education*, 20(1).
- Eke, D. O. (2023). ChatGPT and the rise of Generative AI: Threat to academic integrity? *Journal of Responsible Technology*, 13, 100060.
- European Commission, Directorate-General for Education, Youth, & Culture, S. A. (2022). *Ethical guidelines on the use of artificial intelligence (AI) and data in teaching and learning for educators*.

- European Parliament. (2021). Report on artificial intelligence in education, culture and the audiovisual sector (2020/2017(INI))
- Farrokhnia, M., Banihashem, S. K., Noroozi, O., & Wals, A. (2023). A SWOT analysis of CHATGPT: Implications for educational practice and Research. *Innovations in Education and Teaching International*, 1–15.
- Firat, M. (2023). What ChatGPT means for universities: Perceptions of scholars and students. *Journal of Applied Learning & Teaching* 6(1), 57-63.
- Gimpel, H., Hall, K., Decker, S., Eymann, T., Lämmermann, L., Mädche, A., Röglinger, M., Ruiner, C., Schoch, M., Schoop, M., Urbach, N., & Vandirk, S. (2023). *Unlocking the Power of Generative AI Models and Systems such as GPT-4 and ChatGPT for Higher Education*. University of Hohenheim, Hohenheim Discussion Papers in Business, Economics and Social Sciences. https://wiso.uni-hohenheim.de/fileadmin/einrichtungen/wiso/Forschungsdekan/Papers_BESS/dp_2023-02_online.pdf
- Hadar, L.L., Ergas, O., Alpert, B.R., & Ariav, T. (2020). Rethinking teacher education in a VUCA world: student teachers' social-emotional competencies during the Covid-19 crisis. *European Journal of Teacher Education*, 43, 573 - 586.
- Holmes, W., Porayska-Pomsta, K., Holstein, K., Sutherland, E., Baker, T., Shum, S. B., Santos, O. C., Rodrigo, M. T., Cukurova, M., Bittencourt, I. I., & Koedinger, K. R. (2021). Ethics of AI in education: Towards a community-wide framework. *International Journal of Artificial Intelligence in Education*, 32(3), 504–526.
- Laukkonen, R. E., H. Biddel, and R. Gallagher. (2019). *Preparing Humanity for Change and Artificial Intelligence: Learning to Learn as a Safeguard against Volatility, Uncertainty, Complexity, and Ambiguity*. Paris: OECD Publishing.
- LeBlanc, P. J. (2018). Higher education in a VUCA World. *Change: The Magazine of Higher Learning*, 50(3–4), 23–26.
- Perera, P., & Lankathilaka, M. (2023). AI in Higher Education: A Literature Review of ChatGPT and Guidelines for Responsible Implementation. *International Journal of Research and Innovation in Social Science*, 7(6), 306-314. <https://dx.doi.org/10.47772/IJRISS.2023.7623>
- Peres, R., Schreier, M., Schweidel, D., & Sorescu, A. (2023). On chatgpt and beyond: How generative artificial intelligence may affect research, teaching, and practice. *International Journal of Research in Marketing*, 40(2), 269–275.
- Rudolph, J., Tan, S., & Tan, S. (2023a). ChatGPT: Bullshit spewer or the end of traditional assessments in higher education? *Journal of Applied Learning & Teaching* 6(1), 342-363.
- Rudolph, J., Tan, S., & Tan, S. (2023b). War of the chatbots: Bard, Bing Chat, ChatGPT, Ernie and beyond. The new AI gold rush and its impact on higher education. *Journal of Applied Learning & Teaching*. 6(1), 364-389.
- Sabzalieva, E., & Valentini, A. (2023). *ChatGPT and Artificial Intelligence in higher education. Quick start guide*. UNESCO. https://www.iesalc.unesco.org/wp-content/uploads/2023/04/ChatGPT-and-Artificial-Intelligence-in-higher-education-Quick-Start-guide_EN_FINAL.pdf
- Sullivan, M., Kelly, A. & McLaughlan, P. (2023). ChatGPT in higher education: Considerations for academic integrity and learning. *Journal of Applied Learning and Teaching*, 6(1), 31-40.
- Yoder-Wise, P. S. (2021). From Vuca to VUCA 2.0: Surviving today to prosper Tomorrow. *Nursing Education Perspectives*, 42(1), 1–2.