

Essays in Economics in ICU

Suleymenova, Kamilya; Dawood, Mary; Psyllou, Maria

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Essays in economics in ICU: Resuscitate or pull the plug?

Kamilya Suleymenova, Mary Dawood*, Maria Psyllou

Department of Economics, Birmingham Business School, University of Birmingham, UK

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ABSTRACT

This study investigates the perspectives of Economics academics regarding the impact of using text-generative AI (GAI) on teaching and assessment in the UK higher education (UKHE) sector, with a specific focus on essays. The survey of academics' perceptions encompasses considerations of academic integrity, transferrable skills, and ethical GAI use. The responses unveiled a range of significant findings regarding the present condition of essay-based assessment in Economics education. The most prominent of which is that, while GAI development has introduced a new conflict between integrity concerns and essay-writing, Economics academics confirm that the latter continues to be important to their graduates. However, there is an emphasis on reshaping the format of conventional essays and refining traditional marking criteria. Elevating assessment questions along Bloom's taxonomy is deemed vital for critical thinking and producing future-ready graduates. Respondents also recognise the need to impart ethical awareness among students when using GAI while exploring innovative pedagogies to develop and assess the new GAI skill set. Thus, our study challenges the dichotomy of pulling the plug on conventional essays and, instead, prompts a critical re-evaluation—resuscitation through reimagination. Finally, most express interest in learning more about GAI and its educational applications, either through self-experimentation or structured events and GAI training. Overall, the study reveals a complex topography of perspectives, highlighting the need for subtle, collaborative approaches as academics carefully evaluate strategies to leverage GAI's potential while evolving assessments and pedagogies.

1. Introduction: Setting the scene

The role of essays as a foundational mode of assessment and pedagogical tool in the higher education (HE) context, and specifically in UK HE, has faced a series of significant challenges. The issue of academic dishonesty, including practices such as ghost-writing and contract cheating, existed well before the occurrence of text-generative AI (GAI). These challenges have persisted, overshadowing the sanctity of academic integrity and the work ethic (Hill et al., 2021; Sweeney, 2023). Undoubtedly, even before the debates surrounding GAI, the education system faced these threats to the traditional method of assessment.

Essays, firmly established in the pedagogical practice, have long been appreciated for their capacity to develop essential academic proficiencies, fostering critical thinking, communication, and the advanced synthesis of complex concepts into persuasive arguments (Ennis, 1993; Brennan, 1995). Essays stand as a testament to a student's ability to engage with a subject, construct arguments and communicate efficiently. They offer a platform for intellectual growth, where students refine their abilities to structure thoughts, engage in research and articulate their ideas. Thus, essays have been very important for the student's education and form a significant

* Corresponding author.

E-mail address: m.h.dawood@bham.ac.uk (M. Dawood).<https://doi.org/10.1016/j.iree.2024.100284>

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graduate attribute for the students.

However, the vulnerability of essays to plagiarism and contract cheating has been exacerbated by the arrival and rapid widespread access and social networks (Torbert, 2021). The ease with which students can copy information without proper citation, or engage the services of essay mills, has raised concerns about the integrity of assessment methods and the commodification of education (Medway et al., 2018). The digital divide, which surrounds disparities in access to technology and digital literacy, has been a persistent issue in education. The COVID-19 pandemic and the subsequent shift to online learning further increase the challenges of academic dishonesty. Collusion among students, facilitated by the blurred lines between individuals and collaborative work, because a pressing issue in online assessments (Reedy et al., 2021). The rise in reliance on remote assessments also enhances the digital divide. Among these challenges, GAI emerged as a transformative force in HE. The ability to generate written text coherently raises fundamental questions about the continued role of human essays. GAI's potential to intensify the digital divide and its implications for academic integrity further complicate the narrative (Burststein et al., 2004; Hussein et al., 2019).

The current debates in UK HE make essays appear to be in a critical condition, like a patient in the intensive care unit (ICU). Like many traditional methods of assessment, essay-based ones are facing existential challenges arising from the importance of preserving academic integrity while adapting to the transformative potential of GAI is of greater importance. In this context, our study explores the perceptions and responses of Economics academics in UK universities regarding the impact of GAI on teaching and assessment in higher education. It examines various factors, including academic integrity, employability skills, and the ethical use of digital technologies. The study aims to analyse the multifaceted perspectives of Economics academics, considering their familiarity with GAI, their preferences for assessment methods and their strategies for educating students about the responsible use of this technology.

The main findings of this paper suggest that most academics support that written skills are still essential for future economics graduates, highlighting the significance of essays. However, to preserve academic integrity, respondents suggest departing from conventional essay formats and exploring alternative assessment methods. Additionally, there is a strong emphasis on refining marking criteria and elevating assessment questions to advance critical thinking and problem-solving. Academics also recognise the importance of educating students on the ethical use of GAI and contributing to innovative pedagogical approaches to develop and assess GAI-related skills. Finally, most academics express interest in further learning about GAI and its educational applications through either self-experimentation, organised events or AI training. The paper initially provides the background, including an overview of the use of essays in HE and the implication of GAI for this type of assessment. Then, it presents the methodology used in the form of a survey on Economics academics, followed by an analysis of the responses. Finally, it presents the key insights and lessons learned.

2. Background: The scholarly context

2.1. Essays in higher education: Background

The issue of plagiarism and cheating is as old as the education system itself; we will focus the discussion on the UK HE context, where the last 30 years saw a significant increases in student numbers and more recently, fees, for both home and overseas students. For some subjects, such as economics, cohorts easily exceed several hundreds of students coming from diverse backgrounds, making a personalised teaching approach and subsequent follow-up more challenging.

Hill et al. (2021), as well as Sweeney (2023), provide an excellent overview of how ghost-writing and contract-cheating (a term referring to students engaging someone else's services to do their academic work for them, as in Lancaster and Clarke, 2008) presented a significant challenge for the preservation of academic integrity and subsequent work ethic even before the discussion on GAI commenced. While cheating can take place in any form of assessment (on different forms and factors of cheating see a literature review by Adzima, 2020), from invigilated exams (bribery, impersonation) to lab work (data manipulation), take-home assessments (for example in the form of essays) are often considered to be one of the most vulnerable forms of assessment.

In the context of UKHE, the invigilated exams are thus one of the logistically easier, anonymised, and commonly accepted forms for high-stakes assessment to prevent academic misconduct (Raaheim et al., 2019), even if there are concerns as to whether this method is pedagogically justified (as discussed in Biggs, 2001). As reminded in Ennis (1993) and Brennan (1995), essays and the process of essay-writing, when applied well, can be effectively used for the assessment of critical thinking and communication skills, particularly the ability to structure an argument. The key argument for essays is that written text enables students to structure and formulate their thoughts so as to show the depth of their understanding. We may add, that written communication was, for several centuries, the main way to communicate information and knowledge in general and thus, being able to write is, or at least was, a useful transferable skills. Additionally, Scouller (1998) asserts that students employ deeper learning strategies when faced with essays, rather than MCQ tests. The consensus seems to be not that, essays, which emerged at the beginning of the 19th century as part of the pedagogical seminar writing tradition of Humboldtian Research University (as claimed by a fascinating work by Kruse, 2006), are not a useful educational tool, but rather that the practicalities and concerns of integrity may outweigh the pedagogical benefits.

This issue has been exacerbated first by the advent of wide-spread Internet access and social networks (Torbert, 2021), which allow students to quickly find and copy information without proper citation or acknowledgement, and to be put in touch quickly and easily with so-called essay mill services (Nagi and Varughese, 2021). As Medway et al. (2018) underline, the commercialisation and marketisation of HE increased the demand for essay mills, by changing students' motivation and feelings towards the education they are obtaining. Many authors (e.g., Lancaster and Clarke, 2016; Tauginienė and Jurkevicius, 2017) argue that the negative outcomes of contract cheating are egregious. Guides on how to improve assessment design and prove the existence of contact-cheating on balance of probabilities (such as Dawson, 2020) underline the extent and the worldwide spread of the issue. To summarise, the digital environment, once viewed exclusively as a conduit for expanded educational access and innovation, revealed its vulnerability to

larger-scale unethical behaviour.

Additionally, we can note that, as with most new technologies, the question of the digital divide becomes crucial, especially at the early stages of adoption. We can understand the digital divide as the gap between individuals and groups who have easy access to and relevant skills in using technology and those who do not; in the educational setting, this gap can be observed both within and between student and staff bodies. The importance of the digital divide in education and its impact on inequality has been investigated and confirmed in substantial literature (Resta and Laferrière, 2015; Radovanović et al., 2015; Rogers, 2016; Buzzetto-Hollywood et al., 2018). While this is true for Internet access and information processing skills, the point is more general and needs to be considered for any teaching and assessment design.

More recently, as discussed in Reedy et al. (2021), during the COVID-19 pandemic and related lockdowns, the move towards online assessment has further increased the possibilities and temptations for students to engage in academic dishonesty. A more intensively used online environment, while bringing new opportunities for flexibility and accessibility, increased opportunities for collusion, which existed even before (Rowe, 2004, as well as Bedford et al. 2011), as students can easily communicate and share answers without being physically present in an invigilated environment or even share fraudulently obtained databases. In the digital environment, the blurred lines between individual and collaborative work, the ease of accessing external resources during online assessments and the temptation of outsourcing academic work to third-party services posed significant threats to academic integrity.

Post-lockdowns, a significant volume of the assessments continue to remain online, however, there is an increased sense of unease and concern among the academic community (Susnjak, 2022; Cotton et al., 2023). It follows, that educators and institutions want to tackle the escalating apprehensions associated with academic dishonesty in the new digital environment and, recognising the importance of upholding academic integrity, are actively seeking innovative approaches and strategies to maintain the credibility of their assessments (Sharples, 2022). Similarly, to the point made above, the move to more intensive use of the online environment in education aggravated the digital divide, specifically in the UK COVID-19 educational context (see Coleman, 2021).

From the literature review above a picture of the essay journey in higher education emerges and could be represented as in Fig. 1 (we recognise the extreme level of simplification, as different countries and disciplines employed essays in a different manner, adopted technologies at a different pace, etc.).

The figure illustrates two intertwined lines of development: (i) the evolution of assessment method(s) as a result of external technological shocks (mass-use of the Internet, popularisation of GAI, etc.) and the adaptation of students' cheating strategies to these shocks and the conventional essays. The subsequent adaptation is built on the previous one and provides new solutions, seeking both time and cost-efficiency. We must note that this representation gives very approximative timing and is predominantly focused on the Anglo-Saxon education environment, as our case study is focused on the perception of and adaptation to the GAI in the UK.

2.2. Implications of GAI for essay assessment – Essays in ICU!

One of the first instances of debate around the use of AI in education, particularly in essay-type assessment, was centred not on the use of AI by the students, but by markers: specifically, the use of automated essay scoring systems. As early as 2004, Burstein et al. (2004) presented the benefits of natural language processing for providing students with feedback on their writing; but even fifteen years later, in a literature review, Hussein et al., (2019) underlined the drawbacks of the Automatic Essay Scoring systems, particularly in assessing creativity.

Although the use of GAI produced a relatively new skill – “prompt-engineering”, its popularisation, as the tools become more easily accessible and do not require specialist knowledge, adds a significantly new layer of complexity to the concerns of academic integrity and data protection, without resolving the previous issues. Only recently, there was an attempt to regulate or even ban essay mills (e.g. “Skills and Post-16 Education Act, 2022). Now, the AI-enhanced essay mills and generally GAI providers are under both legal and academic scrutiny (Gaumann and Veale, 2023); as we write, the matter of copyrights, intellectual property, etc. is not yet settled in

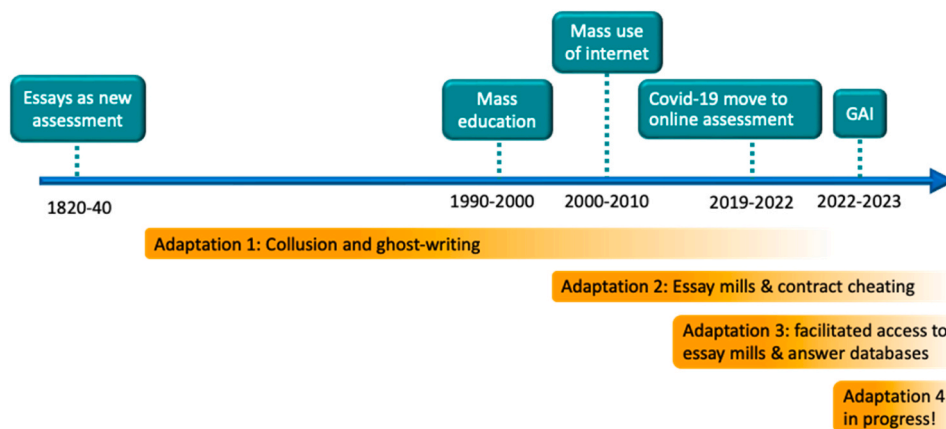


Fig. 1. A schematic representation of students' adaptation mechanisms to the evolution of assessments and technology.

courts within national or international contexts. However, even if the matter is not settled from a regulator's perspective, there is a pressing need to safeguard the authenticity of student work and ensure ethical practices.

It is also important to note that GAI has the potential to intensify the gap in digital skills. It is clear from preliminary discussions of professional bodies that, academics, even within one institution, are not homogenous (as illustrated in Gonsalves, 2023; Kolade, 2023; Suleymenova et al., 2023). Given the digital divide in the student body with regard to previous technologies, we have reason to believe that the same will stand true for GAI-related access and skills. If, as it is claimed by its proponents, GAI has the potential to boost productivity/efficiency levels (for a real-world study, rather than impact predictions, see Brynjolfsson et al., 2023), its unsupervised use in an educational environment is likely to further increase the inequality between different types of learners.

At the same time, there is no denying that GAI is both an interesting and potentially powerful tool. It can enhance learning and it is likely to be required in the job market; thus, needs to be integrated into pedagogical practice. As underlined by Lim et al. (2023), GAI presents a paradox of being both "good" and "bad" for education: it can enhance learning or be used to circumvent effort and ethical work. The recognition of the benefits of GAI was formally confirmed by the Russel Group principles (RG, 2023). The literature (e.g. Neumann et al., 2023 and Halaweh, 2023) on how best to proceed with the integration, the limitations and concerns, including the limits of ethical use of GAI, is rapidly growing. Moreover, the remarkably rapid development of GAI over mere months presses academics to stay abreast of its evolving capabilities and thoughtfully evaluate strategies for meaningful assessment of core writing proficiencies in prospective graduates.

This intersection of critical implications and urgent momentum has brought educators to a pivotal juncture, necessitating careful re-examination of pedagogical approaches. Should we retain traditional essay-based assessments or explore alternative methods given GAI's transformative potential? We aim to contribute to this discussion by proposing to take a step back from the implementation of such tools to *capture and understand academics' perceptions of the use of GAI in teaching and learning* as this will become the platform for subsequent innovations. The literature on the use of GAI in teaching and assessment has been emerging over the last year and the boom will no doubt continue: however, examining this literature in detail is beyond the scope of our study, as we focus on GAI perceptions of academics before the majority had any significant opportunity to engage with this scholarship as the study was conducted in the first half of 2023.

3. Methodology: Survey of academics

3.1. Rationale and limitations

GAI has fundamentally challenged the efficacy of essays for assessing students' abilities to produce quality written work. From the scene-setting of the challenges to academic integrity, the tone of the debate is thus not new. Arguably, the challenge of this scale and depth is new, but the division of opinion as to whether to fully embrace it or attempt to control or ban it is not. Our contention is that to understand how to facilitate the integration of GAI tools into educational settings (i.e., in line with the Russel Group principles), we need to understand the starting position or perspective of academics. It will be these academics, with heterogeneous views and backgrounds, who will not only be in charge of implementing new ways of teaching and assessing, but also required to innovate in this new landscape. Some have already pronounced essays dead (for physics: Yeadon et al., 2023); however, whether this is a universal perspective and whether there are alternatives already imagined merits further research. Thus, we frame *essays as being in a critical condition in the ICU* for the purposes of our study.

Undoubtedly, the digital divide is exacerbated by polarised beliefs as to whether it is worth investing in such skills and, more broadly, the validity of GAI. Both staff and student body are likely to be subject to such divisions and the beliefs, updated by the media discourse and the evolution of the job market, are likely to shape stakeholders' behaviour. If we accept this premise, then it is very important to understand the beliefs of academics concerning the use of GAI in HE, both by themselves and the learners. While it would be very interesting to investigate the students' perception of GAI, *this study focuses exclusively on academic staff, specifically for essays*, which are considered the most vulnerable to cheating forms of assessment.

As our aim is to analyse the subjective perception and we ourselves are part of this social situation, our philosophy must be interpretivism (Saunders et al., 2009). We follow the well-established tradition of studies interpreting the results of questionnaires distributed to academics directly, acknowledging the limitations of the self-selection sampling approach. Given our hypothesis that academic's perceptions of and their feedback on the use of GAI in teaching, its impact on the marking, as well as the use of particular types of assessments, will influence institutional policies and practices, as well as their evolution, we position ourselves in a social constructionism tradition (Saunders et al., 2009). A similar approach is followed by Soomro et al. (2020) focusing on the digital divide among academic staff. More closely to our methodology, Harper et al. (2019) focused on analysing academics' perceptions of cheating, as well as other four survey studies cited in Adzima (2020).

This method has obvious limitations: notably, the more engaged staff members respond, while those who are not interested in the topic are less likely to share their views. Consequently, the results should be interpreted as an upper limit on interest or as representing the views of colleagues with the highest levels of concern on the subject. Both the questions and the answers are interpreted subjectively and specifically to the local and individual context; thus, our analysis focuses on broad trends, rather than quantitative aspects of the data.

More specifically in our case study, the knowledge of and the attitude to GAI is likely to evolve rapidly and the results need to be taken in the context of their timing: any relatively significant event (including a training workshop, providing either solutions or highlighting problems) may alter the previous perceptions. Our questionnaire was conducted with an online (Qualtrics) survey and was distributed via our academic networks and LinkedIn and Twitter social media, targeting Economics academics in the UKHE, over

the summer of 2023. The data was collected anonymously in accordance with the ethical approval of the University of Birmingham (ERN_1020 -Mar 2023); any spurious answers were deleted from the data set. We received responses from a total of 63 participants, out of which we calculated the response rate to each question and sub-group. However, as some of the participants did not respond to each question, the sum of responses rates may be less than 100% for some of the instances.

3.2. Data and demographic background

Our survey encompassed a diverse group of Economics academics from 20 universities distributed across the UK. As illustrated in Table 1, of the 63 respondents, gender distribution revealed that 56% were male, while 38% were female, reflecting a reasonably balanced representation within the sample. When considering linguistic backgrounds, our respondents were also relatively balanced between those who identified as native English speakers and those who reported English as their second or subsequent language.

Furthermore, we examined the varied levels of experience within the higher education sector among our participants. About half of the respondents classified themselves as possessing substantial experience in academia, while 40% regarded their tenure as of moderate duration. The remaining few indicated that they were relatively new to the academic profession. This shows a range of perspectives spanning from seasoned educators to emerging scholars. Our investigation also inquired about the assessment weight of written coursework within the modules taught by our respondents. The data unveiled a spectrum of assessment practices, with the majority indicating that written coursework played a relatively minor role, comprising less than 30% of their assessment criteria. Only 18% of participants reported that written coursework constituted the predominant share, exceeding 70% of assessments, while one-third stated it fell within the intermediate range.

Finally, our study probed the familiarity of Economics academics with GAI tools. Impressively, over two-thirds of respondents demonstrated not only awareness but also practical utilisation of GAI in their practice. About one-third indicated they had heard of GAI but had not yet encountered it in their own activities, suggesting a growing awareness within the academic community. Conversely, a mere 3% of participants reported being entirely unfamiliar with this transformative tool at the time.

These demographics provide a good foundation upon which to interpret and break down the findings of our study, reflecting a broad spectrum of perspectives and experiences among the Economics academic community in the United Kingdom.

4. Results: Analysis of findings

4.1. Resuscitate or pull the plug?

In gauging the perspectives of Economics academics on the relative importance of generating written content for future graduates compared to other employability skills, our findings reveal a resounding consensus. In Fig. 2, a notable 70% of our surveyed participants fervently affirmed that written skills remain vital for prospective economic graduates, and this perspective was shared across all demographic subgroups, with all expressing unanimous support for the enduring significance of written skills for future Economists. More experienced academics expressed stronger convictions about the necessity of writing mastery, while less seasoned faculty had more moderate views. Strikingly though, the level of support was not contingent on the weight assigned to written coursework in the modules taught by our respondents, as even academics who allocated a smaller portion to writing assignments converged in their belief in the continued relevance of written skills.

This finding implies that rather than relegating essays to obsolescence, we are compelled to rethink their role in shaping the skills and competencies of future graduates. The unanimous endorsement of written skills as essential for employability in the field of

Table 1
The demographics of the survey respondents of Economics academics.

		Count	Percentage
GENDER DISTRIBUTION	Male	35	56%
	Female	24	38%
	Prefer not to disclose	4	6%
	Total	63	100%
Proficiency IN English	Native English Speaker	28	44%
	English as Second+ Language	35	56%
	Total	63	100%
Experience in HE	Very experienced	29	46%
	Moderate experience	25	40%
	Relatively new	9	14%
	Total	63	100%
Use of Written Coursework	Less than 30%	26	51%
	From 30% to 70%	16	31%
	More than 70%	9	18%
	Total	51	100%
Familiarity with GAI	Familiar, I use it myself	43	68%
	Heard of it, but never encountered it	18	29%
	I am not familiar with this tool	2	3%
	Total	63	100%

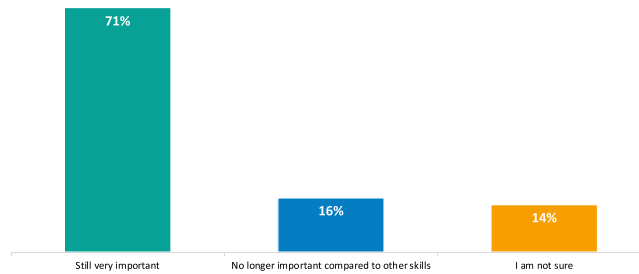


Fig. 2. Economics academics on the continued importance of written skills for graduates.

Economics suggests that the traditional essay format may still hold relevance in fostering these crucial abilities. However, this does not negate the need for adaptation and evolution. Instead, it perhaps prompts us to consider how essays can be reimagined and integrated within a contemporary educational landscape enriched by GAI.

4.2. What are academics planning to do now?

Now that we have established the continued vitality of writing skills in the Economics discipline, we sought insights from our respondents on the most effective courses of action that can be taken in the pursuit of three important pedagogical goals: preserving academic integrity, producing future-ready (including digitally literate) graduates, and educating students on the responsible/ethical use of digital technologies. In the first instance, Fig. 3 shows that, in order to preserve academic integrity, the prevailing sentiment among the majority of participants pointed to the imperative need to depart from the conventional formats of essays and short-answer questions. This collective perspective suggests that re-evaluating this assessment method is pivotal in upholding the sanctity of academic integrity in the era of GAI and the evolving educational landscape.

In the quest to produce holistic, future-ready graduates, the majority emphasises the need to refine the established marking criteria and reorient the nature of assessment questions towards the higher-order cognitive processes by ascending Bloom’s taxonomy. This strategic adjustment seeks to equip students with the critical thinking and problem-solving skills essential for their readiness in a dynamic, digitally driven world. The belief in the necessity of such modifications underscores the collective vision of academia in nurturing well-rounded and adaptable graduates, who are not only proficient in their subject matter but also possess the capacity to analyse, synthesise, and evaluate information critically, becoming producers (rather than consumers) of knowledge.

Furthermore, respondents recognised the pivotal role of academia in preparing students to navigate the ethical dimensions of using GAI. To achieve this objective, academics highlighted the importance of exploring innovative pedagogical approaches that facilitate the acquisition and assessment of GAI-related skill sets while concurrently imparting ethical awareness. Perhaps this can be achieved by organising debates and group discussions where students can actively engage in conversations about the ethical implications of GAI, incorporating ethical considerations into Economics curricula, or by utilising real-world case studies and scenarios that highlight ethical dilemmas involving GAI. By adapting these strategies, academia can play a pivotal role in equipping students with the knowledge, skills, and ethical awareness needed to responsibly navigate the world of GAI.

Remarkably, amidst these progressive perspectives, Fig. 4 demonstrates that a significant contingent of respondents expressed a preference for maintaining the use of essays, particularly in the short run as an immediate course of action. This group advocated for

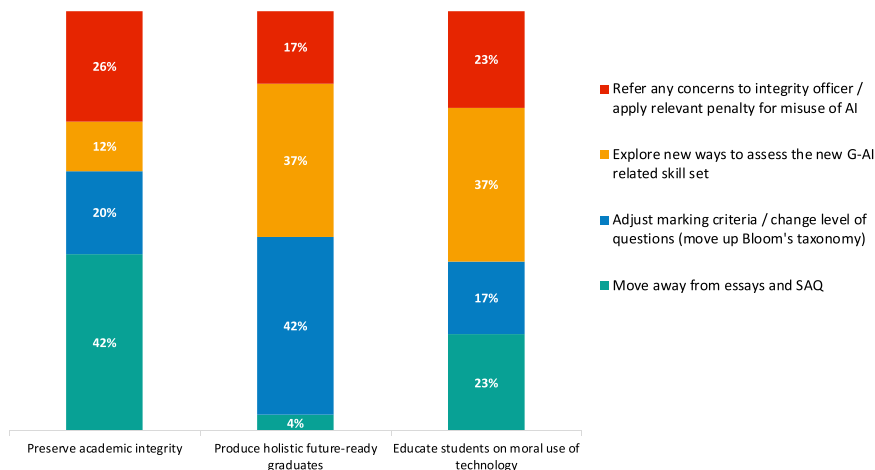


Fig. 3. Economics academics on the best courses of action to achieve intended pedagogical goals.

adhering to traditional assessment methods and addressing concerns related to academic integrity through established channels, such as integrity and plagiarism officers or the application of appropriate penalties for the suspicious use of GAI, i.e. passing its fresh output as the student’s own work. The preference for continuity in traditional approaches was noteworthy, as it suggested that while change is desired, there is a concurrent acknowledgement of the time and efforts required for appropriate upskilling and preparation before fully incorporating GAI into teaching practices and assessment frameworks. In effect, this result underscores the axiom that, within the current rapidly evolving landscape, one cannot effectively teach or assess what one does not fully comprehend. Thus, there is a prevailing inclination to involve more experienced colleagues in the immediate future to effectively navigate the implications and complications during this technological transition.

Furthermore, it is evident from Fig. 4 that this finding is predominantly consistent across various subgroups within the academic community. Nonetheless, academics who are least familiar with GAI and those in the early stages of their academic careers, along with module leaders with substantial coursework weight, exhibited a further shared preference for adjusting their marking criteria and revising the question complexity and types in their assessments. This inclination highlights the recognition that adapting assessment methods, or at least quick adjustments, to align with the evolving skill set demanded by the integration of GAI is rather imperative.

4.3. How are academics going to incorporate GAI into their teaching practice?

The investigation into how Economics academics aim to integrate GAI into their teaching, segregated by quantitative and qualitative modules, yielded intriguing findings. Notably, these findings challenged the conventional wisdom that mathematical and essay-based modules would generate differing attitudes among educators, as both groups exhibited remarkably similar survey results. Among the available options, Table 2 shows that there was a distinguishable preference for educating students on the ethical use of GAI as a primary focus. Approximately half of the 55 respondents who answered this question expressed a strong inclination toward integrating ethical GAI use into their teaching practices. This highlights a commitment to ensuring that students not only acquire technical skills but also understand the ethical implications and responsibilities associated with GAI technology.

Conversely, a substantial group of educators, ranging from 20% to 30%, either did not have a clear approach for integrating GAI into their teaching or perceived it as non-imperative at the current juncture. This group’s hesitation might stem from uncertainty regarding the practical implementation of GAI in the classroom or the perceived adequacy of existing pedagogical methods. On the other hand, a relatively small proportion advocated changing the module learning outcomes (MLOs) to reflect the new skill set imposed by GAI. This suggests a willingness to adapt the curriculum to accommodate the evolving educational landscape shaped by GAI technology.

In contrast, there was limited enthusiasm for including prompt engineering in the syllabi or showing students how to use GAI to enhance their writing, presentation, and communication skills. Perhaps this reluctance may be attributed to the lack of awareness of the specificities of this new skill, or the lack of resources invested in self-upskilling, particularly at the time (first half of 2023) of conducting the survey. This may also indicate a preference for retaining human-centric skills in these domains while using GAI to augment, rather than replace, traditional teaching methods.

On the other hand, Fig. 5 highlights that general consensus emerged in favour of integrating the teaching of GAI into discipline-specific modules. This consensus reflects a collective inclination among Economics educators to introduce an economics-focused GAI skill set, aligning GAI education with the specific needs and applications within their field. However, a notable divide in preferences becomes apparent when examining subgroups within the academic community. Academics who are newer to the profession or possess less familiarity with GAI tend to exhibit a stronger preference for having GAI taught in a separate, specialised module. This

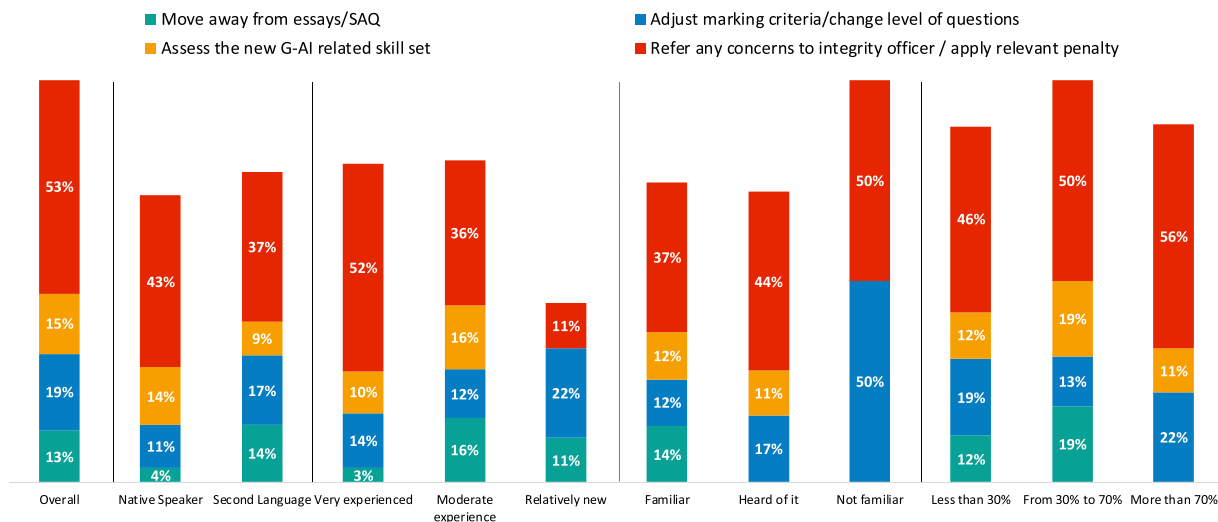


Fig. 4. Economics academics on the preferred course of action in the short run.

Table 2
Economics academics on the preferred action to integrate GAI in teaching.

	Quantitative		Qualitative	
	Count	Percentage	Count	Percentage
Educate students on how to use GAI in an ethical manner	26	47.3%	29	52.7%
Change MLOs to reflect the change in skills	9	16.4%	7	12.7%
Show students how to use GAI to improve their skills	2	3.6%	6	10.9%
Include prompt engineering into module material	2	3.6%	2	3.6%
I do not know / no immediate action is required	16	29.1%	11	20.0%

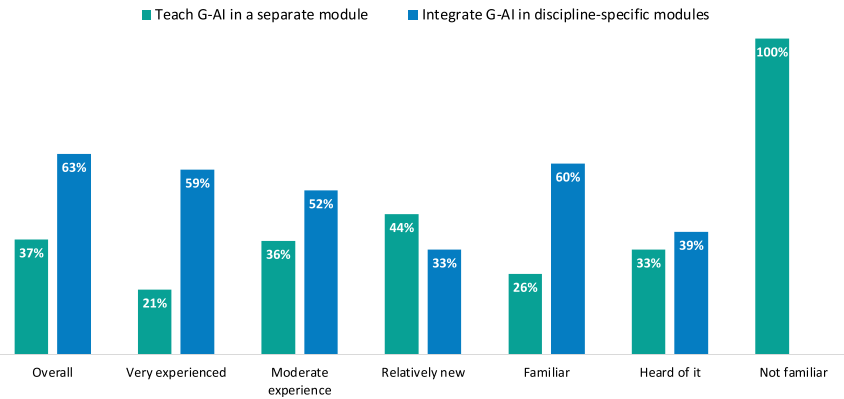


Fig. 5. Economics academics on the preferred method to teach GAI skills.

inclination might stem from a perceived lack of confidence or knowledge in seamlessly integrating GAI into own discipline-specific courses. It underscores the importance of addressing the educational needs of educators themselves to facilitate effective GAI integration, a vital aspect which we will turn to next.

4.4. How will educators educate themselves?

Finally, the exploration of how Economics educators prefer to upskill and educate themselves in the realm of GAI revealed a diverse

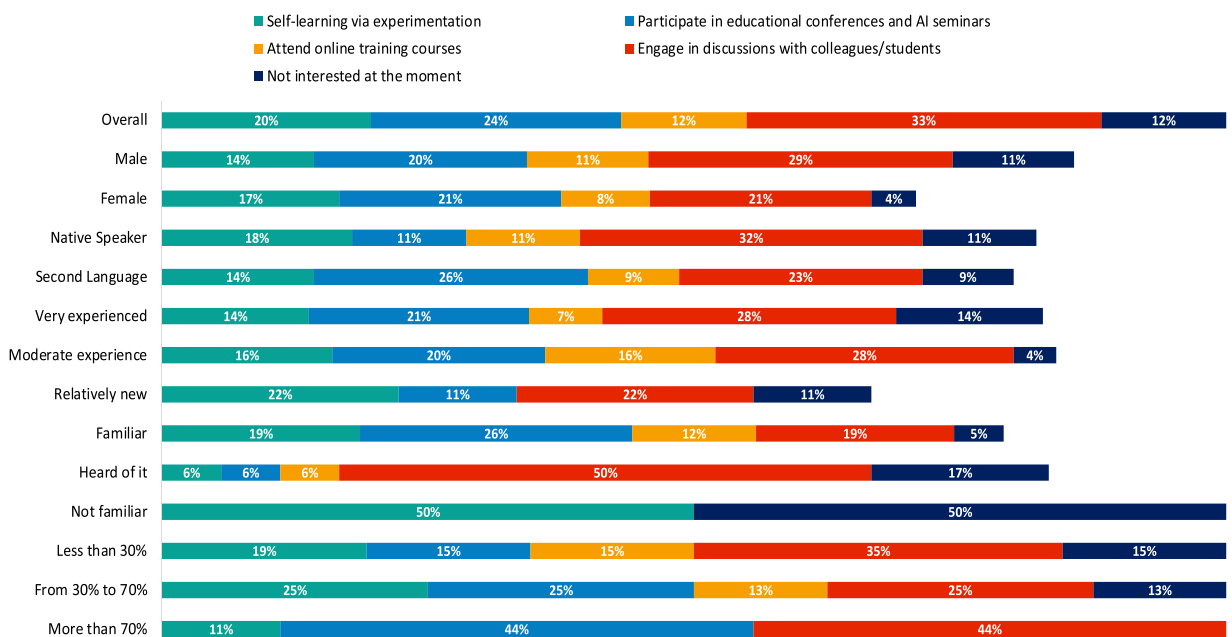


Fig. 6. Economics academics on the preferred method to upskill their GAI literacy.

range of preferences and considerations within the academic community, as illustrated in Fig. 6. The vast majority of respondents (almost 90%) expressed a keen interest in learning more about GAI and its applications in education. However, how they wish to do so varied significantly.

One striking observation is the variation in preferences based on educators' familiarity levels with GAI. In particular, educators who are already familiar with GAI and are actively using it expressed interest in continuing their own self-experimentation with the technology. This group recognises the value of hands-on experience and seeks to deepen their expertise in GAI through practical engagement. Simultaneously, they expressed a keen interest in participating in organised events such as educational conferences and AI seminars. For these educators, these events serve as opportunities not only to enhance their own knowledge but also to share their expertise and best practices with peers. Conversely, educators who have only heard of GAI exhibited a different set of preferences. They were more inclined towards relying on discussions and interactions to gain insights into GAI's educational implications, while their enthusiasm for exploring the technology on their own was rather limited. In contrast, a subset of educators who identify as not being familiar with GAI expressed a clear disinterest in exploring the technology, possibly due to a lack of perceived relevance or immediate need, while the other subset showed some level of interest and curiosity in exploring GAI independently.

Another important distinction can be made when focusing on educators who are likely to feel the most pressure, including those who handle a significant volume of coursework in module assessment or who are relatively new to the profession. These groups exhibited a strong inclination toward self-experimentation and self-learning, perhaps recognising the urgency and necessity of acquiring GAI-related skills to meet the demands of their roles effectively. More experienced educators, on the other hand, who are more likely to have established networks of support, gravitate towards organised events and broader opportunities. They expressed enthusiasm for participating in educational conferences, engaging in AI training courses, and engaging in informal discussions with colleagues and students. These educators leverage their existing knowledge and connections to explore GAI comprehensively and keep up to date with the latest developments.

Notably, gender differences and academic experience also influence educators' enthusiasm for exploring GAI. Males and relatively new academics tend to exhibit somewhat less enthusiasm for upskilling in this domain. Furthermore, native English speakers tend to exhibit a preference for engaging in discussions and dialogues about GAI, drawing value in open conversations with colleagues and students to explore the nuances of GAI and its implications in education. Their inclination towards discussions reflects a collaborative approach to learning and a desire to collectively decipher the intricacies of this technology. However, educators with a more diverse language background leaned towards participating in conferences and organised events, which offer a structured learning environment and a formal platform, as their preferred mode of interaction with GAI.

5. Conclusion: Drawing insights

In reflecting upon the results obtained from our survey of Economics academics on the integration of GAI into HE assessment, it is imperative to take into account the context (time and scope) of our analysis when considering the contributions made to the existing knowledge base. Our review of existing literature emphasises the historical significance of essays in HE, recognising their positive role in developing critical thinking. However, it also sheds light on the challenges traditional assessments, including essays, face in maintaining academic integrity, especially in the digital age. This leads us to investigate the impact of GAI on essay-type assessments.

Our study investigates the perceptions of Economics academics in the UKHE regarding the implications of GAI on essay assessments. The main findings reinforce what came in previous scholarship, highlighting a common agreement among academics on the continued importance of essays and written skills for Economics graduates. The consensus found among Economics academics on the enduring significance of written skills, even in the face of the transformative influence of GAI, challenges existing notions that essays might become obsolete due to technological advancements.

However, the results also reflect a strong call for reshaping the format and marking criteria of essays to assess higher-order skills effectively. Therefore, our study challenges the dichotomy of pulling the plug on traditional essays and, instead, prompts a critical re-evaluation. This finding is a departure from existing literature that often highlights concerns and challenges without offering a clear consensus on the way forward. It is in this departure that our study introduces a new dimension to the discourse, highlighting the need for adaptation and evolution rather than abandonment of essays as a form of assessment. Furthermore, the results emphasise that integrating ethical implications is the priority for GAI adoption, rather than changing learning outcomes or teaching prompt engineering. This is a novel contribution, as it goes beyond acknowledging the challenges presented by GAI and provides a constructive path forward—resuscitation through reimagination.

The preference for continuity in using conventional essays (at least in the short run) is noteworthy, suggesting an acknowledgement of the time and efforts required for appropriate upskilling and preparation before fully incorporating GAI into teaching practices and assessment frameworks. During this transformative era, providing support and training to both academics and students becomes paramount in facilitating an effective and ethical adoption of GAI in educational practices. As the sector adapts to changes in how assessments are done and deals with challenges from transformative technologies like GAI, it is crucial to understand why institutions might be hesitant to embrace these changes.

The literature, with its emphasis on the challenges of traditional assessments and the resistance to change, provides a backdrop for interpreting the responses of academics in our study. There exists a pronounced tension between tradition and innovation. Front-line academics, often practitioners in the field, exhibit a reluctance to part ways with traditional examination formats, even when the literature emphasises the non-authentic nature of exams. This institutional inertia, a resistance to rapid, transformative change within established educational structures, becomes particularly evident when it comes to re-evaluating assessment methods. The contrast between traditional exams and emerging technologies like GAI epitomises the broader struggle within higher education to embrace

change.

The significance of our study lies in contributing to the ongoing discourse on the intersection of tradition and innovation in academic assessments. Nonetheless, further research could explore additional areas to enhance our understanding of the impact of GAI on assessments. Investigating potential examples of robust assessments that effectively integrate GAI could provide valuable insights into best practices. This could involve developing and testing various assessment formats that leverage GAI tools to enhance the evaluation process. Examples might include innovative assignments, projects, viva, or examinations that utilise GAI to assess students' critical thinking, problem-solving skills, and subject-specific knowledge. Additionally, examining responses and perceptions from international or other educational systems may offer a broader perspective on how GAI is perceived and implemented in diverse contexts. This comparative analysis could contribute to developing more comprehensive strategies for incorporating GAI into assessment practices across different settings.

In conclusion, our study serves as a nuanced exploration of the dynamic relationship between tradition and innovation in academic assessments. The findings highlight the need for a careful re-examination of pedagogical approaches, balancing the preservation of essential skills with the integration of transformative technologies.

CRedit authorship contribution statement

Kamilya Suleymenova: Conceptualisation, Data curation, Formal analysis, Writing, **Mary Dawood:** Data curation, Formal analysis, Methodology, Visualisation, Writing, **Maria Psyllou:** Data curation, formal analysis, Resources, Writing.

Declaration of Generative AI and AI-assisted technologies in the writing process

During the preparation of this work the authors used perplexity.ai, claude.ai, and open.ai/ChatGPT in order to improve readability, refine writing style, brainstorm and summarise ideas. After using these tools, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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References

- Adzima, K., 2020. Examining online cheating in higher education using traditional classroom cheating as a guide. *Electron. J. E-Learn.* 18 (6), 476–493.
- Bedford, D.W., Gregg, J.R., Clinton, M.S., 2011. Preventing online cheating with technology: a pilot study of remote proctor and an update of its use. *J. High. Educ. Theory Pract.* 11 (2), 41–59.
- Biggs, J., 2001. The reflective institution: assuring and enhancing the quality of teaching and learning. *High. Educ.* 41, 221–238.
- Brennan, M.J., 1995. Essay writing in nursing: alerting students and teachers to the educational benefits. *Nurse Educ. Today* 15 (5), 351–356.
- Brynjolfsson, E., Li, D., Raymond, L.R., 2023. Generative AI at Work. National Bureau of Economic Research.
- Burstein, J., Chodorow, M., Leacock, C., 2004. Automated essay evaluation: the Criterion online writing service. *AI Mag.* 25 (3).
- Buzzetto-Hollywood, N.A., Elobeid, M., Elobaid, M.E., 2018. Addressing information literacy and the digital divide in higher education. *Interdiscip. J. e-Skills Lifelong Learn.* 14, 77–93.
- Coleman, V., 2021. Digital Divide in UK Education during COVID-19 Pandemic: Literature Review. Research Report. Cambridge Assessment.
- Cotton, D.R., Cotton, P.A., Shipway, J.R., 2023. Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. *Innov. Educ. Teach. Int.* 1–12.
- Dawson, P., 2020. The prevention of contract cheating in an online environment. Tertiary Education Quality and Standards Agency. Australian Government, (Available at). (<https://www.teqsa.gov.au/sites/default/files/2022-10/prevention-contract-cheating-in-online-environment-web.pdf>).
- Ennis, R.H., 1993. Critical thinking assessment. *Theory into Pract.* 32 (3), 179–186.
- Gaumann, N. and Veale, M., 2023. AI providers as criminal essay mills? Large language models meet contract cheating law. Available at: <https://discovery.ucl.ac.uk/id/eprint/10176404>.
- [13] Gonsalves, C., 2023. Generative AI in business schools: embrace or avoid? *CABS Blog* 15 (Available at). (<https://chartereddabs.org/generative-ai-in-business-schools-embrace-or-avoid/>).
- Halaweh, M., 2023. ChatGPT in education: strategies for responsible implementation. *Contemp. Educ. Technol.* 15 (2), ep421.
- Harper, R., Bretag, T., Ellis, C., Newton, P., Rozenberg, P., Saddiqui, S., van Haeringen, K., 2019. Contract cheating: a survey of Australian university staff. *Stud. High. Educ.* 44 (11), 1857–1873.
- Hill, G., Mason, J., Dunn, A., 2021. Contract cheating: an increasing challenge for global academic community arising from COVID-19. *Res. Pract. Technol. Enhanc. Learn.* 16, 1–20.
- Hussein, M.A., Hassan, H., Nassef, M., 2019. Automated language essay scoring systems: a literature review. *PeerJ Comput. Sci.* 5, e208.
- [19] Kolade, S. 2023. Has ChatGPT signalled the end of assessment as we know it? *CABS Blog*. 27 March 2023 Available at: (<https://chartereddabs.org/has-chatgpt-signalled-the-end-of-assessment-as-we-know-it/>).
- Kruse, O., 2006. The origins of writing in the disciplines: Traditions of seminar writing and the Humboldtian ideal of the research university. *Writ. Commun.* 23 (3), 331–352.
- Lancaster, T., Clarke, R., 2008. The phenomena of contract cheating. *Student Plagiarism in an Online World: Problems and Solutions*. Idea Group Inc., USA, pp. 144–159.

- Lancaster, T., Clarke, R., 2016. Contract cheating: The outsourcing of assessed student work. *Handb. Acad. Integr.* 639–654.
- Lim, W.M., Gunasekara, A., Pallant, J.L., Pallant, J.I., Pechenkina, E., 2023. Generative AI and the future of education: Ragnarök or reformation? A paradoxical perspective from management educators. *Int. J. Manag. Educ.* 21 (2), 100790.
- Medway, D., Roper, S., Gillooly, L., 2018. Contract cheating in UK higher education: a covert investigation of essay mills. *Br. Educ. Res. J.* 44 (3), 393–418.
- Nagi, K., Varughese, J., 2021. A study of attitude towards plagiarism among Thai university students. *Eur. J. Foreign Lang. Teach.* 5 (4), 21–35.
- Neumann, M., Rauschenberger, M. and Schön, E.M., 2023. We need to talk about ChatGPT: the future of ai and higher education, In: *Proceedings of the IEEE/ACM 5th International Workshop on Software Engineering Education for the Next Generation*, Melbourne, Australia, pp.29–32.
- Raaheim, A., Mathiassen, K., Moen, V., Lona, I., Gynnild, V., Bunæs, B.R., Hasle, E.T., 2019. Digital assessment—how does it challenge local practices and national law? A Norwegian case study. *Eur. J. High. Educ.* 9 (2), 219–231.
- Radovanović, D., Hogan, B., Lalić, D., 2015. Overcoming digital divides in higher education: digital literacy beyond Facebook. *N. Media Soc.* 17 (10), 1733–1749.
- Reedy, A., Pfitzner, D., Rook, L., Ellis, L., 2021. Responding to the COVID-19 emergency: student and academic staff perceptions of academic integrity in the transition to online exams at three Australian universities. *Int. J. Educ. Integr.* 17 (1), 1–32.
- Resta, P., Laferrière, T., 2015. Digital equity and intercultural education. *Educ. Inf. Technol.* 20, 743–756.
- RG 2023, Russel Group principles on the use of generative AI tools in education, Accessed 24th September 2024 at (https://russelgroup.ac.uk/media/6137/rg_ai_principles-final.pdf).
- Rogers, S.E., 2016. Bridging the 21st century digital divide. *TechTrends* 60 (3), 197–199.
- Rowe, N.C., 2004. Cheating in online student assessment: beyond plagiarism. *Online J. Distance Learn. Adm.* 7 (2), 1–10.
- Saunders, M., Lewis, P., Thornhill, A., 2009. *Research Methods for Business Students*. Pearson education.
- Scouler, K., 1998. The influence of assessment method on students' learning approaches: multiple choice question examination versus assignment essay. *High. Educ.* 35 (4), 453–472.
- Sharples, M., 2022. Automated essay writing: an AIED opinion. *Int. J. Artif. Intell. Educ.* 32 (4), 1119–1126.
- Skills and Post-16 Education Act, 2022. UK Parliament. Available at: (<https://bills.parliament.uk/bills/2868/publications>).
- Soomro, K.A., Kale, U., Curtis, R., Akcaoglu, M., Bernstein, M., 2020. Digital divide among higher education faculty. *Int. J. Educ. Technol. High. Educ.* 17 (1), 16.
- [39] Suleymenova, K., Dawood, M., Psyllou, M. 2023. Are academics GAI-ready? CABS Blog. 22 August 2023. Available at: (<https://charteredabs.org/are-academics-gai-ready/>).
- Susnjak, T., 2022. ChatGPT: The end of online exam integrity?. arXiv preprint, 2212.09292v1.
- Sweeney, S., 2023. Who wrote this? Essay mills and assessment—Considerations regarding contract cheating and AI in higher education. *Int. J. Manag. Educ.* 21 (2), 100818.
- Tauginienė, L., Jurkevičius, V., 2017. Ethical and legal observations on contract cheating services as an agreement. *Int. J. Educ. Integr.* 13 (1), 1–10.
- Torbert, P.M., 2021. Because it is wrong: an essay on the immorality and illegality of the online service contracts of Google and Facebook. *Journal of Law. J. Law Technol. Internet* 12 (1), 48–173.
- Yeadon, W., Inyang, O.O., Mizouri, A., Peach, A., Testrow, C.P., 2023. The death of the short-form physics essay in the coming AI revolution. *Phys. Educ.* 58 (3), 035027.