Quality Compass

Navigating the complexities of the artificial intelligence era in higher education

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Welcome to the seventh edition of Quality Compass - QAA's publication exploring current topics to help you navigate future challenges and potential opportunities.

This issue, edited by Professor Karen Heard-Lauréote, Higher Education Consultant, considers implications of Generative Artificial Intelligence (here after Gen AI) for the UK higher education (HE) sector, where the challenges lie and how they might be addressed. Reflections from a range of colleagues highlight the opportunities presented by Gen AI and how it could be harnessed to help address some of HE's stubborn issues. A list of the contributors to this issue can be found at the end of this document.

Quality Compass is a conversation starter, linked to our wider Membership offer.

We are keen to engage with you and provide the opportunity to share your thoughts and practices. If you would like to contribute to future editions or respond to anything we have covered in this issue, please do get in touch at membership@qaa.ac.uk

The inevitable AI transformation of HE

We are no strangers to change in the UK HE sector but the ever-increasing omnipresence of Generative Artificial Intelligence (hereon Gen AI) is a change like no other, bringing with it both huge transformative potential and significant degrees of complexity. Here, underpinned by insights from a diverse group of educators and thought leaders, we examine just a few of the manifold implications of Gen AI and its potential for democratising, personalising and otherwise enhancing the HE experience.

With contributions spanning the spectrum of academic expertise, each voice adds depth to our exploration of how Gen AI is reshaping learning, teaching, assessment and the very fabric of academic practice and integrity. Gen AI could, for example, be a powerful ally in bridging educational divides, offering unprecedented support for students from marginalised backgrounds or with specific learning needs. As such, Gen AI could become not just a tool for assistance but as a possible catalyst for autonomy, enabling a more inclusive and accessible learning environment. Yet, the integration of Gen AI is not without its challenges. It compels us as a sector to confront various long-standing educational positions and practices and to ponder some quite thorny issues.

> **To this end, the insights shared by our contributors reveal a delicate balance between embracing Gen AI's capacity for innovation and maintaining the rigour and humanity, which is essential to education and academic communities.**

From enhancing curriculum design to redefining assessment and feedback mechanisms, Gen AI's potential to transform HE is vast. Yet, questions abound regarding the continuing place of HE in higher learning and skills acquisition and the sector's role and adequate capacity in preparing students for a Gen AI-integrated workforce. This prompts a re-examination of traditional practices and exploration of a future where education is a co-creative process between humans and Gen AI.

To harness Gen AI's potential, our sector needs clear vision and intent so that we leverage the best of Gen AI's power to contribute to developing an educational experience that is equitable, dynamic and attuned to the complexities of the 21st century and beyond.

Gen AI and the potential for educational democratisation

As an initial example of its prospective enabling capacity, Gen AI could be heralded as a transformative ally in educational democratisation, particularly for students on the margins. Maha Bali, Professor of Practice, Centre for Learning and Teaching at The American University in Cairo, articulates some specific examples of its potential: 'For students who are visually impaired, AI might be helpful if it can be used to create alternative text on images... Similarly, the AI for describing images and reading text are currently not very accurate, but hopefully in future will become better.'

The implication here is that Gen AI not only assists but fosters student autonomy for some groups whereby it can help bridge gaps that human resources alone cannot fill, especially in a financially constrained sector.

Maha Bali extends possible key beneficiaries to 'learners with ADHD, and learners in remote areas' where Gen AI's capability to support and initiate learning processes can be a game-changer. 'I don't have extensive experience with people with ADHD, but I have heard people say that sometimes text generator AI helps them get going', Maha Bali reflects. In these examples, Gen AI could offer some students independence and a near constant support - certainly surpassing the availability of human tutors to provide this in most HE providers.

Martin Compton, Programme, Module and Assessment Design Lead at Kings College London, sees Gen AI making significant strides in improving the accessibility of video content. Martin says: 'It is undeniable that automated captioning or even synchronous subtitling...is a possibility now that's realistic.' The undercurrent here is that we maximise the use of Gen AI to fulfil our legal and moral obligations to the students that we recruit. It is an example of Gen AI stepping in where human efforts have been less than perfect, unlocking new accessible pathways to learning - for the hearing impaired and students with a variety of additional learning needs.

In a similar vein, Mary Davis, Academic Integrity Lead and Principal Lecturer at Oxford Brookes University, highlights the pragmatic use of Gen AI in educational productivity as a 'tool to make instant different formats of a resource'. Although Mary adds a caveat about the digital divide, those who cannot afford the premium tools and for whom even basic access is a challenge. This is a view shared by Clare Peddie, Vice Principal Education (Proctor) at the University of St Andrews, who says: 'I am concerned about the potential for students in digital poverty to be left even further behind due to the cost associated with the more sophisticated applications.'

The conversation around Gen AI is as much about its limitations as its strengths. Maha Bali invites us to exercise caution, suggesting that: 'the dangers of inaccuracy are real...' and, more importantly, that given the absence of any emotional intelligence 'the AI will never "care" about individuals' - an undeniable pitfall of Gen AI tools when compared to human mentors. More pragmatically and where infrastructure is concerned: 'For learners in remote areas... they sometimes don't have access to reliable internet or even to consistent electricity' - a sobering reminder that while Gen AI offers many solutions, its efficacy is contingent on basic utilities, which currently remain beyond the reach of some students across the globe.

On a systemic level, Michael Grove, Professor of Mathematics and Deputy PVC Education Policy and Academic Standards at the University of Birmingham, is keen to ensure HE providers address the issue of equity of access associated with the financial cost of students accessing the best Gen AI tools as part of their learning. To gain access to Open AI's GPT-4 large language model currently requires a $20 a month subscription to ChatGPT Plus. Instead, Michael suggests encouraging students to use Copilot, which is integrated within the Microsoft Bing search engine, and allows free access to GPT-4, with expanded features if students sign up for a free Microsoft account. Michael's comments invite the sector to focus on integrating Gen AI tools such that they are woven into the fabric of existing platforms and made universally accessible to all students whatever their budget. This can mediate against the proliferation of tools tucked away behind paywalls.

Michael Draper, Professor of Legal Education and Institutional Lead for Academic Integrity at Swansea University, articulates a concern that probably mirrors the historical apprehension towards new technologies. Michael says: 'Gen AI does have the potential... However, careful and informed management will be needed to achieve this goal.' There is a need for informed stewardship in leveraging Gen AI to work towards educational equity.

The dialogue around Gen AI in democratising education is therefore complex. As Martin Compton succinctly puts it: 'This technology is neither good nor evil, it's [a] real Janus technology with its unknown qualities driving a lot of anxieties.' The HE sector will have to confront this duality to resolve tensions between Gen AI as both a liberator and a potential replicator of systemic biases. Pondering a Gen AI-enabled future in HE, Stella Jones-Devitt, Professor of Critical Pedagogy and Director of Staffordshire Centre of Learning and Pedagogic Practice at Staffordshire University, invites us to consider the delicate balance of technology and human skill, pointing out that: 'It can also deskill students, especially in areas of assessment and evidence-searching...'

> **Thus, while we appear to be advancing at lightning speed towards a Gen AI-integrated educational landscape, we must navigate with caution, ensuring we do not trade the rigour of academic inquiry for ease of automated assistance.**

Key points: Potential for educational democratisation

Opportunities for the sector

- **Enhanced accessibility**: Gen AI offers transformative support for students with disabilities, such as visual or hearing impairments, by improving text and image descriptions and video content accessibility.
- **Support for diverse learning needs**: It can provide personalised assistance to students with ADHD and those in remote areas, offering autonomy and continuous support beyond human tutor capabilities.
- **Educational productivity**: Gen AI can create instant different formats of educational resources, making learning more flexible.

Potential challenges and key considerations

- **Digital divide**: The cost associated with advanced Gen AI tools could exacerbate inequalities, leaving students in digital poverty further behind.
- **Infrastructure limitations**: The effectiveness of Gen AI is contingent on basic utilities like reliable internet which may not be accessible to all students, especially in remote areas.
- **Emotional intelligence gap**: Gen AI lacks emotional intelligence, which is crucial for a caring educational environment, highlighting the importance of human mentors.
- **Equity of access**: Addressing the financial barriers to accessing premium Gen AI tools is critical for ensuring all students can benefit from these technologies.
- **Managing Gen AI integration**: Informed management and stewardship are necessary to leverage Gen AI towards educational equity without exacerbating systemic biases or deskilling students in critical thinking and research.

Gen AI and the illumination of the 'hidden' curriculum

Gen AI has been hailed as a way to shine a light on, and potentially help resolve the so-called hidden curriculum. This is a term that reflects what is often seen as a sector rife with unwritten norms and expectations that can be particularly challenging for students from underserved backgrounds or those new to the academic environment. Concerning this, Maha Bali says: 'I think teachers and learners can use AI to help them expose the hidden curriculum and make it explicit - in order to challenge or resist it.' This assertion opens up the possibility of using Gen AI, not just as a tool for learning but as an instrument for institutional critique and reform.

Looking ahead, Martin Compton speculates on the integration of Gen AI specifically and AI more broadly into the fabric of academic support for students: 'I can envisage a future where we have the ability to ask chatbots...featuring customised bots that have a corpus of data related not only to the training material but also to the administrative organisation of our courses.' These AI systems, Martin says, could become personalised assistants, guiding students through the often-cryptic academic landscape. However, Martin Compton also tempers expectations saying: 'I don't think there's necessarily a clear and evident path provided by generative AI, as it currently stands, that will navigate the complexities of academic life.' This is a candid acknowledgement that, while Gen AI has potential, it is not a panacea for all our many and varied educational challenges.

Nonetheless, Mary Davis highlights that there are current beneficial applications in this regard whereby: 'Some students are actively using Gen AI tools as a personal tutor... This could be an advantage to some students who want more support outside of the classroom.' Here, Gen AI could be a clear enabler and supplementary educator, particularly for those who may be more reticent about seeking help from academic staff. In a similar vein, Michael Draper forecasts that: 'Gen AI…will enable students from underserved or underrepresented communities to navigate the often-unspoken complexities of academic life' - highlighting its potential to level the academic playing field and graduate career pathways.

Related to this, Stella Jones-Devitt introduces a pioneering perspective from her provider, where Gen AI is used to help identify academic skills gained through extracurricular experiences: 'Such experiences are then reframed by Gen AI, when possible, as meaningful skills.' This innovative approach to the use of Gen AI models could help us democratise the recognition of a broad range of life experiences as valid learning.

Michael Webb, Director of Technology and Analytics at Jisc, draws attention to the potential benefits for neurodivergent students, citing recent insights by Liss Chard-Hill on using Gen AI to demystify academic jargon. Yet, this raises an important question for us all - shouldn't this clarification already be a fundamental aspect of our human academic teaching?

In terms of a more critical examination of Gen AI concerning hidden curricula, Maha Bali warns of the technology's inherent biases. Maha argues that: 'AI will tend to reproduce biases from the humans who created them...' and advocates, therefore, for a diverse retraining of Gen AI, to include and prioritise minority perspectives, making a strong call for multiplicity in Gen AI's knowledge base. Echoing this concern, Martin Compton says: 'There are huge problems with bias, stereotypes, generalisations...and we absolutely must not lose sight of that.' It is a candid admission shared by many that while AI can advance educational equity, it also risks perpetuating any number of existing disparities. Mary Davis also points to the specificity of the hidden curriculum, warning that Gen AI may inadvertently offer biased or incorrect advice due to its predictive nature and lack of true understanding, while Clare Peddie expresses concern that Gen AI could exacerbate the digital divide, separating those who can adeptly navigate the system with Gen AI's help from those who cannot.

Jan McArthur, Senior Lecturer in Education and Social Justice at Lancaster University, reminds us that providers have a core educational mission: 'It is the responsibility of academics to teach the academic craft... HE has to stop looking for quick fixes and invest more time in front-line academic staff.' As such, the role of educators must be reaffirmed, in her view, as central to the academic journey with technology serving as an adjunct rather than a replacement. Finally, Stella Jones-Devitt warns against equating technology with choice, cautioning that it might in the end lead to a tiered education system even more strongly based on financial means, ultimately offering a diminished learning experience to those less able to pay.

This complexity of perspectives suggests that while Gen AI offers exciting new pathways for uncovering and understanding the implicit rules of academic culture, it also presents significant challenges that require us to arrive at carefully considered responses.

> **Perhaps the ultimate goal should be to seek out ways to use Gen AI to empower all students, but without overshadowing the vital role of human mentorship and the need for a diverse, equitable and bias-aware educational environment.**

Key points: Support student inclusion

Opportunities for the sector

- **Illuminating the hidden curriculum:** Gen AI could help surface and make explicit the unwritten norms and expectations of HE, potentially facilitating institutional critique and reform.
- **Personalised academic support:** Envisioned as personalised assistants, Gen AI could guide students through academic complexities, acting as supplementary educators for those seeking additional support.
- **Levelling the academic playing field:** Gen AI has the potential to assist students from underserved or underrepresented communities in navigating academic life, promoting equity in academic and career pathways.
- **Recognition of diverse learning experiences:** Innovative use of Gen AI could democratise the recognition of skills gained through extracurricular experiences, valuing a broader range of life experiences as valid learning.
- **Support for neurodivergent students:** Gen AI could demystify academic jargon and processes, offering specific benefits for neurodivergent students.

Potential challenges and key considerations

- **Limitations and expectations:** We need to acknowledge that Gen AI, as it currently stands, cannot fully navigate the complexities of academic life, tempering expectations of its potential.
- **Inherent biases in Gen AI:** The technology's potential to reproduce biases, necessitating a diverse retraining of Gen AI to include minority perspectives and address stereotypes and generalisations.
- **Exacerbating the digital divide:** Gen AI could widen the gap between those who can afford and effectively use it, and those who cannot.
- **Risk of deskilling and dependency:** Potential for Gen AI to deskill students in critical academic practices, such as evidence-searching, and create dependency on technology for learning.
- **Financial implications:** The possibility that reliance on Gen AI could lead to a tiered education system, disadvantaging those less able to afford advanced technologies.

Gen AI and the personalisation of learning

Gen AI's potential role in personalising education is multifaceted, with various perspectives being voiced in the sector on its potential to provide tailored learning experiences and its implications for the future of HE.

Martin Compton, for example, foresees Gen AI revolutionising the analysis of student engagement data and emphasising the importance of handling such powerful tools with great care. Martin says: 'I really think we have to manage this ever so carefully.' Despite these reservations, he envisions a future rich with nuanced data, where 'data-driven analytics could not only provide educators with opportunities to personalise a little bit more' but also enhance students' self-awareness and understanding of their own engagement, learning patterns and development.

Echoing this sentiment, Michael Draper highlights the round-the-clock availability of Gen AI as a significant asset. This potentially offers bespoke support and real-time performance analysis to students who want it so that 'personalised Gen AI tutors...will enable on-demand access to bespoke support to fit with student need'. Michael Draper also touches on the shifting role of personal tutors in the era of Gen AI, suggesting that the traditional social model of education might evolve or even diminish over time in favour of AI-driven personalised support. This, of course, raises important questions about the balance in education between technology and the need for human guidance. In this vein, Mary Davis notes the integration of AI with assistive technologies, making tools like smart assistants more widely available and potentially increasingly accepted in educational contexts. Clare Peddie concurs, envisioning AI's automation extending to learning analytics, providing 'instantaneous feedback and provide[ing] students with more personalised adaptive learning experiences'. This view aligns with a proactive, student-centric approach to future education, where learners could be encouraged to engage deeply with their academic progress using this technology.

Jan McArthur provides a more cautionary perspective on the sector rushing too fast towards technological solutions, asserting the need for educators in HE to instead deepen their understanding of students and their pedagogical skills acquisition. The problem, Jan asserts, is that '...we keep looking for technocratic solutions to what are human problems'. Stella Jones-Devitt equally warns of the ethical considerations and the inherent risks of misunderstanding learner populations through uncritical uses of AI analytics. As Stella says: 'The potential for acting unethically (albeit unknowingly) is quite high if providers do not really understand their own learner populations.' Meanwhile, Michael Webb indicates the potential for the empowerment of students through Gen AI, allowing them to customise a variety of learning resources to fit their needs, including language translation and content simplification where required.

> **So, while Gen AI offers us promising avenues for customising and enhancing student learner journeys, it also presents a complex array of challenges that necessitate thoughtful integration and a deep understanding of both the technology and the learners it supposedly serves.**

The future of HE with Gen AI arguably hinges, at least in part, on striking a balance between personalised technology and the irreplaceable human element in HE teaching and mentorship.

The potential for curriculum enhancement through AI

Gen AI's potential to support curriculum development and enhancement is sparking some interest in the sector. Its capacity to analyse extensive data and offer bespoke learning resources, for example, certainly looks like it has at least the potential to herald significant shifts towards more dynamic but also more inclusive educational models.

Weighing up this possibility, Maha Bali suggests: 'teachers may converse with AI chatbots to imagine different ways of designing their courses and lesson plans', harnessing AI as a 'potential timesaver'. This could, indeed, revolutionise the traditional curriculum modification process for example. Furthermore, Maha Bali sees AI as a potential catalyst for students' critical engagement, asserting its usefulness in building learners' 'critical thinking and encourage them to question the outputs of AI and do further research to verify it'. Maha goes on to envision a third role for AI in curriculum design whereby 'the existence of GenAI [could] help us question what learning truly is and how to redesign our assessments in ways that motivate students to do the work and not rely on AI for it'. With similar reflections on this aspect, Martin Compton recognises the necessity for adaptability in our HE systems and suggests that Gen AI '...might be built into the processes of speeding up curriculum enhancement', indicating a possible symbiosis between Gen AI and educational design. Similarly, Mary Davis talks of the responsive nature of Gen AI which has 'forced people to update and review what they are covering in their curriculum to ensure it is fit for purpose'. This push for agility in curriculum design, Mary argues, should not be the exception but a standard expectation - a position we can probably all get behind. Echoing a similar sentiment, Michael Webb talks about emerging technologies, saying: 'We are seeing tools such as Course Builder come into Blackboard', and pointing to the ways Gen AI is beginning to permeate educational platforms, offering a suite of tools 'to help create parts of curriculum, alongside tools which help create resources in a variety of formats'.

However, this wave of perceived innovation is not without its sceptics. Jan McArthur says: 'I am not sure we actually have a lack of content to support learning in the world. We have a lack of willingness and motivation to engage meaningfully with the content we have.' This stance challenges the sector to look beyond the allure of new technologies and focus on the fundamental human aspects of education. In addition, Stella Jones-Devitt cautions against an uncritical adoption of AI, warning that 'the interpretation of AI analytical information...can lead to isolation and problematisation'. The efficacy of AI in curriculum development rests on providers having a thorough understanding of their student population and the societal implications of Gen AI use.

Amid these perspectives, Gen AI undoubtedly has the potential and promise to reshape how curricula are conceived and delivered.

> **The task at hand for educators and providers is to navigate this potential with foresight and a commitment to exploring, critiquing and debating the ethical use of technology, ensuring that Gen AI serves as a bridge to a more personalised and effective educational experience without undermining academia's core values.**

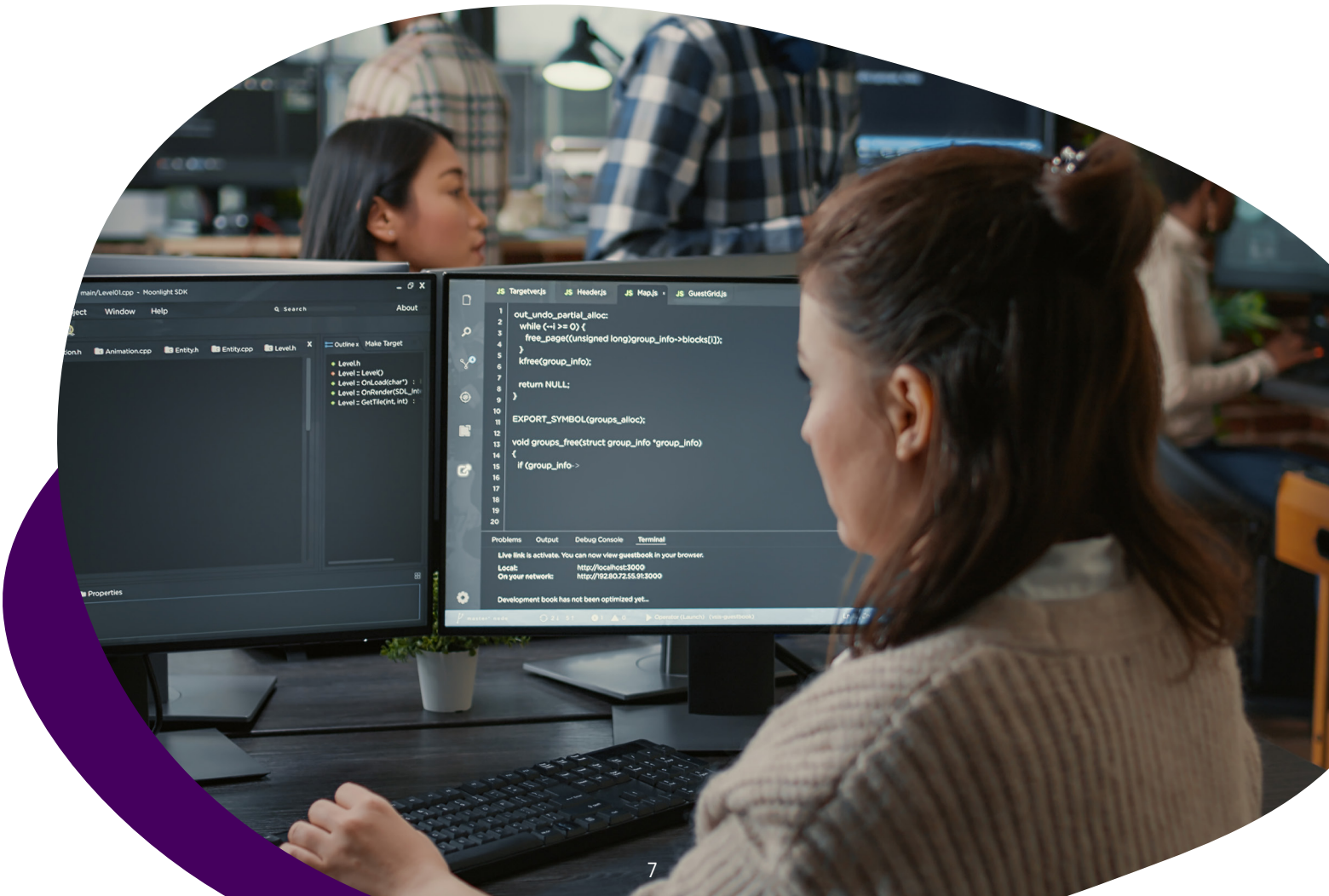
Key points: Enhancing student learning experience

Opportunities for the sector

- **Personalised learning experiences:** Gen AI has the potential to revolutionise education through data-driven analytics, offering tailored learning experiences, enhancing student engagement, and supporting self-awareness in learning patterns.
- **24/7 bespoke support:** The round-the-clock availability of Gen AI can provide on-demand, personalised tutoring and performance analysis, meeting student needs at any time.
- **Integration with assistive technologies:** AI can make educational tools more accessible and accepted, potentially improving learning experiences for a wider range of students through adaptive learning experiences and instant feedback.

Potential challenges and key considerations

- **Balancing technology with human guidance:** The shift towards AI-driven personalisation raises questions about the future role of personal tutors and the balance between technological solutions and human interaction in education.
- **Ethical and pedagogical concerns:** There are ethical considerations and risks of misinterpreting learner needs with AI analytics, emphasising the importance of understanding student populations and maintaining ethical integrity.
- **Technocratic solutions versus human problems:** The rush towards AI solutions may overlook the value of human interaction and the pedagogical skills essential for effective teaching and learning, highlighting a need for cautious integration of technology.



Gen AI's time-saving potential for the HE sector

Gen AI's rapid integration into HE processes and practice is sparking some lively conversation about its potential power to unburden academics from the weight of administrative tasks. As Gen AI begins to shoulder some of this perceived load, can the academic community start to glimpse a future where their time is reclaimed for more impactful work?

'I can imagine GenAI being used for tasks that are not "core" to anyone's work and does not require critical or creative thinking', says Maha Bali. This could allow for 'more important tasks' to take centre stage, as both learners and professionals might use Gen AI 'to summarise articles for them before they read them in depth', or 'create starter themes from data', for example. Echoing these sentiments, Martin Compton marvels at the breadth of Gen AI's capabilities, saying: 'There's a tonne of things it can do...you're not offloading essential cognitive engagement but offloading something that really does save time or gives a different way into the information.' Martin Compton appreciates how Gen AI can 'extract data and tabulate it', aiding in the digestion of complex material, which he uses 'to write summaries of videos', for example. Further illustrating the practicality of Gen AI, Mary Davis points out that it 'could enable academics to focus on the more meaningful and rewarding education and research areas of their work'. This transition could therefore herald a shift in how educators spend their time. Yet, Maha Bali cautions against viewing Gen AI as a cure-all, suggesting that from an ethical and moral perspective, any time saved should be channelled into 'employing and coaching more humans to become mentors for historically at-risk students'.

Michael Grove sees potential for Gen AI to augment the educator-student relationship saying that: 'if we can use those tools to free up staff time from more routine tasks to enable better, and increased student-focused interactions within the learning space, then I think staff and students would absolutely support that.' This sentiment is shared by Michael Draper, who insists on the necessity for 'real-time data that is simple to use and interpret' to truly realise any benefits of Gen AI in reducing administrative strain in our providers.

Any discussion of the time-saving potential of Gen AI in academia is therefore multi-layered, nuanced and includes a number of challenges. Michael Draper highlights the need for 'training for both staff and students... to take advantage of the potential benefits of Gen AI' - a sentiment that underscores the necessity of AI literacy as we navigate this new technological landscape. So, while there is great excitement about the opportunities Gen AI presents, such as the 'real opportunity' that Michael Grove suggests in being able to use AI to more quickly and efficiently identify students who might be most at risk of drop-out or non-progression, there is also a recognition of the careful planning required to deploy Gen AI in student learner analytics.

Stella Jones-Devitt hopes that any reduction in 'routinised administrative burdens' would be universally welcomed, freeing up academics to develop more 'effective learning opportunities'. Nevertheless, Mary Davis reminds us of the deeper implications, including 'data privacy' and the potential impact on academic job definitions. Michael Grove also expresses a concern that students may feel disconnected from the learning process if it becomes too automated, while Jan McArthur and Michael Webb advocate for a measured approach to AI integration, warning against a headlong rush into automation without due consideration of the human factors at play.

In weaving these voices together, it becomes evident that Gen AI certainly offers a compelling vision for the future of HE where time is a resource redirected towards innovation, mentorship and deeper engagement with our student populations.

> **Yet, the path forward is most certainly one of balance - embracing the efficiency of Gen AI while nurturing the human aspects at the heart of the student learning experience and academic communities.**

Key points: Making time savings

Opportunities for the sector

- **Administrative efficiency:** Gen AI can alleviate the administrative burden on academics, allowing them to dedicate more time to impactful work, such as mentorship, research, and enhanced teaching.
- **Enhanced information processing:** It can assist in summarising articles, extracting data and creating thematic overviews, and improving the efficiency of academic research and study preparation.
- **Focus on meaningful engagement:** Freed-up time can lead to increased, quality interactions between educators and students, potentially enriching the educational experience.

Potential challenges and key considerations

- **Need for AI literacy:** Implementing Gen AI requires training for both staff and students to maximise its benefits, highlighting the importance of AI literacy in the academic community.
- **Ethical and moral considerations:** Concerns about data privacy and the ethical use of time savings, such as the imperative to invest in human mentorship for at-risk students.
- **Risk of disconnection:** There's a risk that increased automation could lead to students feeling detached from the learning process, underscoring the need to maintain a balance between technology and personal interaction.

Gen AI and preparing students for the future of work

Gen AI's integration into HE represents more than a technological leap; it signifies a paradigm shift in how educators will need to work to equip students for their future careers in an AI-integrated professional world.

Reflecting on the existing AI applications we encounter daily, like AI sports commentators and chatbots, Martin Compton extends his perspective to education, saying: 'We don't have much opportunity or choice... we have to prepare [students] for the world they're actually going to be living in.' This adaptation, as Martin notes, involves embracing the 'hybridisation of work' - a blend of traditional human roles and AI collaboration. Turning to some specific implications for his field, Michael Draper highlights the evolving landscape of legal work. Michael sees Gen AI, not as a substitute for something that already exists, but as an enhancement to professional practice, saying that it will 'help lawyers improve legal service delivery'. However, he also cautions against potential misuses of AI in, for example, legal proceedings, and emphasises the need for providers to prepare students to face these complexities. Mary Davis observes a growing trend in certain disciplines where AI tools are becoming central to employability skills. This trend is not just about using AI but understanding its role in future workplaces. Mary notes: 'Students are...encouraged to research the use of AI in the workplace' - signifying a shift towards an educational focus that is as much about AI literacy as it is about traditional academic knowledge. Clare Peddie acknowledges the transformation Gen AI will bring in making routine tasks more efficient, thereby allowing the human workforce to focus much more on the strategic and creative aspects of their professions.

Michael Grove's perspective offers a practical view of how education might evolve in response to these changes. He suggests a rethinking of some of our current educational methods: 'Why do we continue to ask our students to create answers or solutions entirely from scratch?' This rhetorical question invites educators to consider new teaching methodologies that align more closely with the realities of a professional world where AI plays a significant role.

Jan McArthur emphasises the importance of fostering unique human qualities that AI cannot replicate and argues for the further development of curricula that value and enhance these human aspects, in contrast to any continuing focus on tasks that Gen AI can perform more efficiently. Stella Jones-Devitt speaks to the use of Gen AI in enhancing efficiency and creativity in both academic and professional settings. Stella sees Gen AI as a tool that can 'evaluate efficiency and collating effectiveness of all kinds of projects and interventions', thereby transforming how future workforces operate. Finally, Michael Webb speaks to the need for a dual skill set in future professionals: practical, discipline-specific skills to use Gen AI tools, and critical skills to evaluate and understand these tools. This dual approach, Michael says, will be crucial for navigating the complexities of a Gen AI-integrated work environment.

These varied perspectives paint a picture of an educational landscape which is very much at a crossroads. As providers integrate Gen AI into their curricula, the challenge lies in balancing the development of students' technological proficiency with the nurturing of what are, in effect, irreplaceable human qualities.

> **Educators are tasked with preparing students, not just for the jobs of today, but for a future where Gen AI is a ubiquitous partner in most professional settings.**

This preparation will involve a deep understanding of Gen AI's capabilities and ethical considerations, ensuring that graduates are ready to enter a workforce where human ingenuity and Gen AI innovation must cohabit and coalesce.

Key points: Skills for work

Opportunities for the sector

- **Equipping for future careers:** Acknowledging the need to prepare students for AI-integrated professional worlds, emphasising AI literacy alongside traditional academic knowledge.
- **Enhancement of professional practices:** Viewing Gen AI as a tool to augment rather than replace human roles, thereby improving efficiency and service delivery in various fields, including legal services.
- **Educational methodology evolution:** Suggesting a shift in teaching methodologies to reflect the hybridisation of work and AI's role in the professional environment, moving towards practical, AI-informed problem-solving in education.

Potential challenges and key considerations

- **Balancing technological proficiency with human qualities:** The need to develop curricula that foster human qualities AI cannot replicate, ensuring students retain unique human insights and creativity.
- **Ethical considerations:** Preparing students to navigate the ethical complexities of using Gen AI in professional practices, including potential misuses.
- **Dual skill set requirement:** The emerging necessity for graduates to possess both discipline-specific skills to use Gen AI tools and critical skills to evaluate and understand these tools, ensuring a balanced approach to technology integration.

Academic integrity in the AI era

Gen AI's incorporation into HE brings the complexity surrounding academic integrity issues to the fore, at once challenging traditional notions while also offering new avenues for ethical engagement and innovation.

Maha Bali vividly captures the emerging landscape, noting that: 'We will have to completely change our understanding of academic integrity' - referencing Sarah Eaton's concept of a 'post plagiarism era where we can't know where the human ends and AI begins'. Maha Bali advocates, therefore, for transparent Gen AI usage, urging learners 'to cite where they've used AI', acknowledging the blurred lines between Gen AI-generated content and human creativity. About this integration, Martin Compton reflects that: 'Hybrid writing with AI is an inevitability, and we need to be prepared for significant challenges.' He urges a re-evaluation of educational assumptions and practices, as a result highlighting the need for a frank discussion about how societal and work changes affect academic integrity in a Gen AI era.

The risks to academic integrity associated with the integration of Gen AI in HE are already fairly well-rehearsed by commentators. Michael Draper emphasises risks like undeveloped critical reasoning skills and ethical ambiguity, for example, and underscores the need for responsible Gen AI usage. Michael Webb cautions against any default to Gen AI detection software use in the sector, advocating for awareness of its limitations and transparent communication with students about its use and evaluation.

Michael Grove highlights data security concerns, saying: 'We need to be very clear with our staff and students regarding the frameworks for generative AI use and their implications for data protection.' He extends this note of caution to the use of AI in analysing sensitive data like student work and National Student Survey data, reflecting the need for a thorough ethical review of such future uses by staff members and full transparency with students over its potential role in the learning process.

Yet, alongside these challenges, there are also opportunities for the sector to deploy Gen AI for positive change concerning academic integrity and ethics. Mary Davis illustrates this by citing her experience where 'teaching students to use AI ethically and transparently has been the main focus'. Mary explains that the introduction of a declaration form and a traffic light teaching model are examples of practical steps taken by her provider to guide students in ethical Gen AI usage. These examples highlight the importance of establishing clear guidelines and educational programmes on Gen AI ethics. Stella Jones-Devitt also points to the potential of Gen AI in helping HE providers to identify patterns of student groups in academic integrity cases, so that it could be used to highlight discrepancies in institutional guidance and support for students, and prompt deeper investigation of our wider practice rather than simply to judge student performance outright.

Assuring ourselves of academic integrity in a Gen AI era will undoubtedly require a multi-pronged approach. Maha Bali articulates the significant critical shift in perspective being experienced by the sector, suggesting that: 'We will have to completely change our understanding of academic integrity.' It involves redefining our understanding of plagiarism and authorship, educating both students and staff on ethical Gen AI usage, and developing robust institutional policies that balance the advantages of AI with the principles of honesty and integrity. By fostering an informed and ethically aware academic community comprised of staff and students, providers can hold on to an important space - advocating for harnessing the potential of Gen AI to enhance academic practices while also upholding core academic values of academic integrity.

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Key points: Promoting academic integrity

Opportunities for the sector

- **Ethical engagement and innovation:** Encouraging transparent Gen AI usage and teaching ethical practices to navigate the blurred lines between AI-generated content and human creativity.
- **Positive change in academic integrity:** Utilising Gen AI to identify patterns in academic integrity cases, offering insights to improve institutional guidance and support, and fostering a deeper understanding of ethics among students.

Potential challenges and key considerations

- **Redefining academic integrity:** Necessity to overhaul traditional concepts of plagiarism and authorship in light of Gen AI's capabilities, entering a 'post-plagiarism era'.
- **Ethical ambiguity and critical reasoning:** Risks associated with Gen AI include undermining critical reasoning skills and introducing ethical dilemmas in academic work.
- **Data security and transparency:** Concerns over data protection and the need for clear guidelines regarding the use of Gen AI for analysing sensitive information.

Spotlight on assessment and feedback: The AI contribution

The advent of Gen AI in HE is on the cusp of dramatically reshaping the landscape of assessment and feedback in particular, introducing both opportunities and challenges in maintaining academic integrity and fairness in this particular aspect of our practice.

Maha Bali recognises, for example, the potential of Gen AI to streamline some assessment-related tasks, like annotated bibliographies, yet emphasises the importance of human oversight of these efforts. Nonetheless, Maha says: 'If it frees teachers up to focus on more substantive [feedback] responses... then it's good.' This cautious optimism is echoed by Martin Compton, who, in appreciating the nuances of integrating Gen AI into academic writing and assessment, notes the inevitability of hybrid writing and the risk that 'we're going to have to break some eggs here, I think'. Martin Compton suggests this highlights a dynamic shift to educational paradigms, forcing us to question some fairly long-standing practices and urging us towards openness in reimagining what HE entails in this shifting context. Mary Davis brings a practical perspective, discussing Gen AI's current impact on assessment practices. Mary talks about the probable shift towards more authentic forms of assessment, with us likely witnessing 'an increase in oral or performance-based assessment'. Michael Grove signals a risk of potential regression in some subject disciplines like the mathematical sciences whereby any advances made in developing innovative and alternative assessments in the last few years (especially during Covid) will be undone by a return to the closed-book, unseen, timed examination as a response to deter students from engaging in academic misconduct using Gen AI. But he says, in pursuit of diversifying assessment through the development of assessments that are more Gen AI resilient, which will take academics more time to develop, it may lead to a more concerted effort to reduce assessment loads in a way that has not been achieved previously.

Juxtaposing these views, Jan McArthur offers a compelling critique, questioning the current trajectory of assessment in the age of Gen AI: 'The whole problem is that we have become obsessed with trying to make marking more and more precise in the name of fairness.' Instead, Jan advocates for a complete re-evaluation of the HE grading system, focusing on fostering academic integrity and judgement over precision. Stella Jones-Devitt also emphasises the importance of formative feedback: 'Students primarily want quality feedback which enables them to develop further as effective learners.'

In a nod to pragmatism, Michael Webb delineates three main approaches to Gen AI's progression in HE assessment, highlighting the need for balance and the importance of academic integrity in this new era.

Potential assessment strategy in relation to Gen AI	Approach to assessment design	Challenges to adopting this approach
Avoid	Revert to in-person exams where the use of AI is not possible.	This moves away from authentic assessment and creates many logistical challenges.
Outrun	Devise an assessment that AI cannot do.	AI is advancing rapidly and given the time between the assessment being set and it being taken, AI might well be able to do the assignment when it is taken.
Embrace and adapt	Embrace the use of AI, discuss the appropriate use of AI with students, and actively encourage its use to create authentic assessments.	Balancing authentic assessment and the use of generative AI with academic integrity is a challenge.

The journey towards integrating Gen AI in HE assessment and feedback is certainly not set to be linear.

> **It will involve a complex balancing act between leveraging its efficiencies and preserving the ethical, personal and human elements that define a high-quality educational experience.**

As the HE sector navigates this constantly shifting landscape, the focus will inescapably need to remain on preparing students for a future where AI is an integral part of their professional and academic lives, ensuring that the tools developed resonate with and enhance the student experience.

Key points: AI and assessment

Opportunities for the sector

- **Streamlining assessment tasks:** Gen AI can assist with certain assessment-related tasks, potentially freeing educators to focus on providing more substantive feedback.
- **Shift towards authentic assessment:** Encouraging a move toward more oral or performance-based assessments, reflecting real-world applications and reducing reliance on traditional testing methods.
- **Development of AI-resilient assessments:** The challenge of integrating Gen AI may lead to the creation of more innovative assessments that are resistant to academic misconduct, possibly contributing to a reduction in overall assessment loads.

Potential challenges and key considerations

- **Redefining assessment practices:** The necessity to re-evaluate long-standing practices and paradigms in education, questioning the precision of marking in favour of fostering deeper learning and integrity.
- **Risk of regression in assessment methods:** Concerns that advancements in assessment innovation could be undone, particularly in disciplines where traditional testing methods predominate.
- **Maintaining academic integrity and fairness:** Balancing the use of Gen AI in assessments while ensuring academic integrity is preserved and assessments remain fair and reflective of student learning.

A re-examination of HE providers' ongoing purpose?

As we assess Gen AI's transformation of HE so far, we are compelled to re-examine more closely the very essence of HE. After all, this collective reflection, enriched by the insights of the diverse voices that have come together here, paints a future where Gen AI is perhaps not merely a tool to be deployed but will become an increasingly fundamental component of the academic fabric of HE. Where will human educators stand in this new reality? This will require some significant rethinking of both the role of educators and students in a Gen AI-integrated academic environment. Michael Grove highlights: 'Another risk if we're not careful... is what does the role of the academic staff member become within higher education, and more broadly what is the future role of education in a Gen AI-enabled world?' Michael continues: 'Does it become that the role of education is to award qualifications and certify knowledge, with staff members facilitating that, but where the learning and knowledge exchange takes place through the interactions between students and these Gen AI tools which will only become more sophisticated with time? Clearly you would hope not, but it does mean we need to think carefully about the future student-educator-education relationship with Gen AI tools now being a part of that.'

Maha Bali's vision is of HE educators nurturing students' unique writing voices, encapsulating the personalised journey that human educators can facilitate 'to help students grow into their own writing voice, which a human will value'. This sentiment underscores the need for Gen AI to enrich rather than diminish the provider-situated, human-centred and social learning-based educational experience that HE can offer.

Simultaneously, providers, says Michael Draper, must ensure equitable access to Gen AI resources, reinforcing their commitment to the highest level of student achievement. Yet, as Michael also cautions, the onus is on us as a sector to cultivate critical analysis and fact-checking skills within our curricula, acknowledging the growing importance of such capabilities in a progressively Gen AI-saturated landscape. Mary Davis equally emphasises the imperative of digital skills development and Gen AI literacy in providers, advocating for a comprehensive approach that includes 'providing access for all students to AI tools' - thus democratising the educational technology landscape. This inclusive approach is echoed by Michael Grove, who sees Gen AI as an integral part of the teaching and learning experience, enriching the student journey through active use and understanding so that 'every student should have experience of using it throughout their studies'.

Yet, amid this push for integration, Michael Grove also calls for a reflection on pedagogy before widespread adoption, ensuring that investments in Gen AI translate into genuine educational value. He shares the innovative steps taken to empower students that have been initiated within his institution where 'we have our students with experience of using Gen AI tools developing a course for other students on how to successfully use Gen AI as part of their studies'. The partnership aspect between staff and students in this aspect is vital, as Michael Grove stresses, fostering a collaborative environment where 'students work with us as staff members to help us understand [Gen AI] and its uses in the learning process ... this is an opportunity for learning, teaching and assessment, not a threat'.

This collaborative spirit extends to the critical perspectives offered by Jan McArthur, who cautions against hasty endorsements of Gen AI readiness, and Stella Jones-Devitt, who advocates for continuous, stakeholder-driven evaluation of its costs and benefits.

Considering Michael Webb's 'avoid', 'outrun' or 'embrace and adapt' assessment options more broadly, we will probably have to face forward together as a sector and our best option may even be to lean into Gen AI.

> **Its thoughtful integration across UK HE certainly presents an opportunity, not only for advancement but for a renaissance of what it means to learn.**

In any case, it is a future where the collaboration of students, educators and Gen AI will need to work hard to foster an educational experience that is as enriching and diverse as the world we are preparing our students to enter.

Key points: Purpose and role of higher education providers

Opportunities for the sector

- **Fundamental integration of Gen AI**: Recognising Gen AI as a core component of the academic framework, potentially leading to a renaissance in learning and teaching methodologies.
- **Enriching the educational experience:** Using Gen AI to complement human educators, facilitating personalised learning journeys, and nurturing unique student capabilities.
- **Equitable access to Gen AI resources:** Ensuring all students have access to AI tools, democratising the educational technology landscape and enhancing digital literacy.
- **Collaborative learning environments:** Fostering partnerships between staff and students to explore and understand Gen AI's role in education, enriching the student learning journey through practical use and understanding of AI tools.

Potential challenges and key considerations

- **Redefining educational roles:** Addressing uncertainties about the future role of educators and the nature of education in a Gen AI-enabled world and ensuring that Gen AI enhances rather than replaces human interactions in learning.
- **Cultivating critical skills:** The need to integrate critical analysis, fact-checking, and Gen AI literacy into curricula to prepare students for a world saturated with AI technologies.
- **Pedagogical reflection:** Prioritising pedagogical value over technological advancement, ensuring that Gen AI integration translates into genuine educational benefits.

Conclusion

Our contributors have signalled several factors that need to be considered to understand the nuanced impact of Gen AI on the sector. The only certainty in this complex picture of opportunity and constraint is the importance of recognising that Gen AI is perhaps inevitable yet arguably not the antithesis of traditional education that we may fear. It has the potential to be a dynamic partner in our sector's evolution. We must therefore embrace the human-AI partnership that is quickly gathering pace, nurturing the creativity and critical thinking of this integrated approach. Alongside this, we need a healthy dose of mistrust, questioning and an acute awareness of its risks as well as ensuring we develop a sound understanding of the technology and its manifold implications.

Additional resources

QAA has launched a curated resource bringing together a wide range of materials relating to Generative Artificial Intelligence (AI) highlighting its uses and impact across the higher education sector.

Visit our new Generative AI landing page for easy access to QAA and external content. It provides quick links to:

- some commonly used generative AI tools: www.qaa.ac.uk/membership/membership-areas-of-work/generative-artificial-intelligence/examples-of-generative-ai-tools-and-resources
- QAA advice and resources: www.qaa.ac.uk//en/membership/membership-areas-of-work/generative-artificial-intelligence/qaa-advice-and-resources
- ethical considerations for using Gen AI in HE: www.qaa.ac.uk//en/membership/membership-areas-of-work/generative-artificial-intelligence/ethical-considerations-for-using-generative-ai-in-higher-education

QAA is also supporting six new Collaborative Enhancement Projects that will explore different aspects of Gen AI in addition to the completed collaborative project focusing on academic integrity and inclusion.

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The views and opinions expressed are those of the individuals and do not necessarily reflect the official policy or position of their respective institutions.

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