University of The Future [V2]

Member Benefit Output 2023/2024

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ChatGPT 4.0 Generated content.

Contents

Main Body

As part of the work undertaken, we experimented with creating an entirely AI-generated report. Full details on this are provided in Appendix 2.

University of the Future V1	V1 has a main body generated by ChatGPT 4 and has only been edited to fit house style. The context is provided 'as is' for discussion and educational purposes and therefore: • It does not represent the position of Advance HE or the project leads. • It may contain errors, factual inaccuracies and present positions [hallucinations] that do not represent the roundtables. • It is highly repetitive in paragraphs and in overall sections. • None of the content contained within should be assumed to be factual.
University of the Future V2	V2 has a main body that is a hybrid of the content generated by ChatGPT edited by the project leads.

1. Format and purpose of the project

1.1 University of the Future Roundtables

As part of our Member Benefits activities for the 23/24 Academic year, three roundtables were held with stakeholders to consider a provocative scenario (see Appendix 1); this was used as a starting point to discuss how they felt Generative Artificial Intelligence would impact Higher Education Institutions (HEIs). We used “University of the Future” as a project title.

The series convened experts (see acknowledgements) from various backgrounds to explore the integration of artificial intelligence in educational settings. The aim was to build a view upwards, starting with students, lecturers, and professional services staff, moving on to a leadership perspective, and finally to senior leaders and administrators to capture the strategic perspective. Roundtables 2 and 3 received a summary of the discussion at previous roundtables. We did not give any specific guidance or limit topic discussion. However, it should be noted that the member benefit was in the context of looking at the use of GAI for matters beyond assessment, so its mention here is more limited than in other works on this topic.

2. Where are we?

In each roundtable, participants summarised where they believed their institution, staff, and students were responding to Generative AI. A common theme was that the current approach reflects a desire to adapt established systems to incorporate GAI rather than radically overhaul the status quo. Participants in roundtable 1 mentioned that entrenched ways of working would provide a barrier to change. However, the consensus was that HEIs have shifted from an initial defensive position towards one that explicitly develops students' understanding of GAI and how to use it responsibly. There was also a growing interest in GAI for administration and research purposes coupled with a healthy caution around hype from commercial edtech companies. This was expressed across all of the key theme areas.

2.1 Where we might be in five years

The leadership and strategic forecast from roundtables 2 and 3 was that institutions need to consider the skills and knowledge graduates will need in the future and embed this into curricula and teaching; this may require more significant partnerships with industry to provide insights.

The general concern was that the slower pace of change in regulatory bodies and PSRBs might limit the agility required to adapt practices to reflect how students, staff and industry were using GAI. Two factors were cited as critical in developing fair and sustainable practices that would benefit students and faculty: having advocates of AI and its potential to transform lives in the top tiers of university leadership, and cross-institutional collaboration. It was also noted that the degree to which AI is integrated into practice may be a point of competition and contrast in the future, especially in more vocational and professional areas.

3. Key themes and insights

3.1 The role of AI in personalising education

Participants highlighted the potential of AI in personalising education but expressed concerns about its mechanistic application and disregard for human agency.

Participants recognised the potential of AI to deliver personalised learning experiences, tailoring education to students' individual needs, abilities, and learning styles. Usage could lead to more engaging and practical education, possibly addressing learning gaps more efficiently than traditional one-size-fits-all teaching methods. However, despite the potential benefits, there were concerns about the mechanistic application of AI in education and the potential for bias.

Specifically, participants in roundtable 1 noted that an over-reliance on AI for personalisation could lead to a formulaic and rigid education system where algorithms determine learning paths. There was a fear that AI could limit students' opportunities for exploration and growth based on their past behaviour or performance. Moreover, there were serious concerns about the bias of such systems and how we could increase, not decrease, inequitable treatment of students.

All three discussions highlighted the need for human agency to be maintained in the face of AI integration. For students, this means having the ability to influence their learning journey, make choices, and explore beyond AI-recommended paths. For educators, it emphasises the role of the teacher not just as a facilitator but as an essential guide who brings empathy, creativity, and intuition to the educational process: qualities that AI cannot replicate.

The discussions underscored the necessity of balancing AI-driven personalisation with human interaction and intervention. While AI can provide valuable insights and support, it should not replace the critical thinking, social interactions, and emotional support that human educators and peers offer. The human element is crucial for developing soft skills, such as teamwork, communication, and ethical reasoning, which are increasingly important today.

3.2 Assessment and AI

Participants discussed the need to rethink traditional assessment patterns in light of AI's capabilities and the likely impact it will have on workplaces in the future.

The roundtable participants explored how AI could support assessments for students with diverse needs, including neurodiverse students[1]. AI has the potential to offer alternative assessment methods that cater to different learning styles and capabilities, thereby promoting a more inclusive educational environment. However, developing these AI-driven assessment tools requires a deep understanding of the specific needs of these student

[1] As noted elsewhere – This project was about other issues 'beyond assessment' but given the focus participants gave to this topic, it was felt that including this type of discussion (and on proctoring) gave the best reflection of conversations.

populations and careful design to avoid unintended biases or barriers. In roundtable 1, it was noted that learning support already often involves encouraging learners to work towards being more neurotypical to be successful as a student. There was a concern that if we entrust AI to address those systemic issues, we may entrench the ableism and neuronormativity within the assessment system.

Furthermore, it was suggested that we may see a shift towards practical demonstration of skills as the basis of assessing students more fairly, rather than relying on integrating AI into assessment. This is partly in response to concerns around the varied levels of digital literacy in student cohorts and potential academic misconduct when AI is used for evaluation.

3.2.1 AI proctoring and equity

The use of AI for exam proctoring was critically examined, with participants in all roundtables expressing concerns about equity and accessibility. It was noted that AI proctoring solutions can inadvertently disadvantage certain groups of students, including neurodiverse or those facing technological or environmental barriers. The discussions highlighted the importance of ensuring that AI proctoring methods are designed and implemented sensitively towards diverse student needs and circumstances.

3.2.2 Enhancing feedback processes

Roundtables 1 and 2 highlighted AI's ability to enhance feedback processes; providing students with timely, personalised, and actionable feedback, supporting their learning journey more effectively than traditional feedback mechanisms. This can help bridge gaps in understanding, motivate students, and foster a more engaging learning experience. However, participants agreed that ensuring that AI-generated feedback is accurate, relevant, and constructive remains challenging.

3.2.3 Moving beyond product-focused assessments

The discussions showed a clear desire to move beyond product-focused assessments (ie. the final outputs or grades) towards process-oriented evaluations. Participants felt that GAI, if carefully embedded, can play a role in highlighting the learning process, including student engagement, effort, and progress over time. This shift can help cultivate a learning environment that values growth and learning over outcomes, aligning more closely with the educational goal of fostering lifelong learners.

3.3 Staff support and capacity building

A recurring theme was ensuring academic staff are adequately supported and kept abreast of rapid AI developments. Participants highlighted the appetite among (most) staff for engaging with AI, and the need for comprehensive training, and policy guidance to navigate new scenarios introduced by AI tools.

A key concern expressed during the discussions was educators' need for comprehensive training and professional development opportunities. As AI technologies evolve rapidly, educators must keep up with the latest developments, understand the capabilities and limitations of AI tools, and integrate them effectively into their teaching practices. It was suggested that training programmes should cover the technical aspects of AI and pedagogical strategies for leveraging AI to enhance learning outcomes. Training should also include a grounding in the many externalities (e.g. environmental, copyright concerns, bias) generated by GAI usage.

The discussions highlighted the digital divide among staff, with varying comfort levels and expertise in using advanced technologies like AI. This divide poses a significant challenge to the equitable implementation of AI in education, as it may lead to disparities in the quality of teaching and learning experiences. Suggested strategies to address this issue include offering differentiated support levels, mentoring programs, and peer-to-peer learning opportunities to cater to educators' diverse skill sets and learning preferences.

It was clear that creating a supportive environment fostering innovation and collaboration among staff is essential for successfully integrating AI. This involves encouraging experimentation with AI tools, facilitating cross-disciplinary collaborations, and creating spaces for sharing best practices and challenges. A culture that values innovation and collaboration can help demystify AI technologies, reduce resistance to change, and promote a shared vision for enhancing education through AI.

3.3.1 Policy guidance and ethical considerations

Participants underscored the importance of providing clear policy guidance and ethical considerations surrounding the use of AI to ensure that its use supports inclusive and equitable educational practices. This includes developing guidelines on data privacy, academic integrity, and the equitable use of AI tools. Educators need a framework to make informed decisions about AI integration that aligns with institutional policies and ethical standards.

3.3.2 Recognising the workload implications

The workload implications of integrating AI into teaching practices were a significant concern. Learning new technologies, redesigning course materials, and adapting teaching strategies require substantial time and effort. Participants felt strongly that institutions must recognise and address these, providing adequate time, resources, and support to staff undergoing this transition. Rethinking workload models to accommodate the additional efforts required for effective AI integration seemed inescapable to many panellists.

3.4 Inclusive, sustainable and ethical AI use

The discussions highlighted the need to engage diverse groups of educators, students, and technical experts in designing and implementing AI tools to ensure that these technologies are inclusive, ethical, and pedagogically sound.

Participants discussed the importance of using diverse, representative datasets in AI development and continuously evaluating AI tools for biases in their outputs. This also includes educating users about the potential biases in AI recommendations and decisions fostering critical engagement with AI tools. Concern was noted around the possible use of AI to evaluate the ethical considerations of research proposals. It was suggested that this may negate the importance of lived experience, resulting in a backward shift in the type of research being approved.

The environmental impact of developing and running AI systems was raised as a concern, pointing to the broader ethical consideration of sustainability. AI systems require significant computational resources, leading to substantial energy consumption and carbon emissions. Participants noted the importance of considering the sustainability of AI tools in their procurement and use, aligning with broader institutional and societal goals for environmental responsibility.

Participants emphasised the importance of ethical guidelines and frameworks to govern the deployment of AI in education. This involves ensuring that AI applications are developed and used in ways that respect privacy, data protection, and intellectual property rights. Ethical AI use also means clearly communicating how AI tools are employed in educational contexts, including how data is collected, analysed, and utilised. Participants agreed that establishing clear ethical guidelines helps build trust among all stakeholders: students, educators, and administrators.

3.4.1 Equity and accessibility

A further significant concern raised was the need to ensure AI tools are accessible to all students, including those with disabilities or those from underrepresented or disadvantaged backgrounds. It was noted in roundtable 3 that there is potentially a significant cost to an institution in providing open access to tools like Microsoft Copilot. However, this may be the only way to ensure all students have fair and equal access. The alternative would mean that students (and staff) with access to more cutting-edge paid models have an advantage over their peers.

AI has the potential to either exacerbate existing inequalities or significantly mitigate them, depending on its implementation. Participants in roundtable 2 discussed the importance of designing AI applications with universal design principles, ensuring that these technologies enhance learning for everyone, regardless of their physical abilities, learning styles, or socio-economic status.

3.5 Partnerships and innovation

The discussions identified the need for strategic partnerships to leverage AI effectively and responsibly. Participants also considered AI's transformative potential in revolutionising traditional educational models, advocating for innovation beyond incremental changes.

Participants emphasised the value of partnerships in facilitating the effective integration of AI into educational practices. Collaborations with AI technology providers, other academic institutions, industry partners, and research organisations can provide access to cutting-edge technologies, expertise, and resources. Partnerships were seen as the best way to help institutions navigate AI's technical, pedagogical, and ethical complexities, ensuring that the latest developments and best practices inform implementations.

A recurring theme throughout the discussions was the challenge of keeping up with the rapid pace of AI development and its implications for education. Partnerships with research institutions and industry leaders can provide educational institutions with insights into emerging trends, potential disruptions, and opportunities for innovation. These collaborations can help institutions anticipate and adapt to changes, ensuring their AI strategies remain relevant and practical.

Participants agreed that creating a culture of innovation within educational institutions is crucial for successfully adopting and integrating AI. This involves embracing new technologies and encouraging experimentation, risk-taking, and creative problem-solving among educators and students. Institutional support for innovation can include funding pilot projects, recognising and rewarding innovative practices, and creating spaces for sharing experiences and learning from failures.

3.6 AI's role beyond teaching and learning

The impact of AI on administrative and support functions within educational institutions was considered. Examples included using AI for quality assurance, streamlining committee management, and enhancing student support services.

3.6.1 Enhancing administrative efficiency

Participants discussed AI's potential to enhance administrative processes' efficiency within educational institutions significantly. AI can automate routine tasks, such as data entry, scheduling, and student inquiries, freeing staff time for more complex and value-added activities. By streamlining operations, it was suggested AI can contribute to more effective resource allocation and potentially reduce operational costs.

3.6.2 Supporting quality assurance

The potential for AI to enhance quality assurance was discussed. It could significantly streamline the collation of data on student experience and outcomes, freeing up resources to focus on quality enhancement and potentially expedite action. The possibility of using AI to navigate student-facing documentation and identify outdated or inconsistent documentation was noted.

3.6.3 Improving student support services

The role of AI in augmenting student support services was a key point of discussion. AI-powered chatbots and virtual assistants can provide students with 24/7 access to information and support, answering queries related to enrolment, financial aid, course scheduling, and more. These tools can enhance the student experience by offering timely and personalised assistance, potentially increasing student satisfaction and retention. However, participants warned that this scenario has many possible problems given the current bias and possible hallucinations common in current tools.

3.6.4 Facilitating admissions and enrolment processes

Roundtable participants discussed AI's capabilities in processing and analysing large volumes of data, which can be leveraged to streamline admissions and enrolment processes. AI can assist in identifying patterns and insights from application data, supporting decision-making processes, and ensuring a more efficient and equitable selection process. Additionally, roundtable 3 reflected on the use of AI tools to help target and recruit prospective students by analysing market trends and applicant preferences.

3.6.5 Supporting decision-making with data analytics

Roundtable 3 discussed ways in which AI-driven data analytics can provide educational leaders with powerful tools for decision-making. By analysing data from various sources, AI can help identify trends, forecast future scenarios, and provide insights into student performance, engagement, and outcomes. This can inform strategic planning, policy development, and resource allocation, leading to more informed and effective leadership.

3.7 Recommendations

Some possible high-level recommendations emerged from the discussions, as detailed below.

Figure 1. Recommendations

Possible recommendations	Description
Develop comprehensive support frameworks and networks	In order for educators to navigate AI integration, there needs to be a focus on training, policy guidance, and ethical considerations.
Enhance collaborative learning opportunities	To ensure that AI-driven personalisation does not undermine the benefits of collaborative educational experiences.
Prioritise ethical and inclusive design	Use AI tools to support a diverse student population and address sustainability concerns.

Foster strategic partnerships	AI developers and educational technology firms should ensure that AI is used responsibly and effectively in academic settings.

The roundtable discussions underscore the complexity of integrating AI into education, highlighting the need for continued dialogue, research, and innovation to harness AI's potential responsibly and effectively.

Appendix Item 1: Scenario provided to participants

Dear Participant,

We are in an era where artificial intelligence (AI) is starting to reshape various facets of our lives, including higher education. As we look ahead, it becomes increasingly important to anticipate and understand the potential transformations AI may bring to university settings.

In preparation for our upcoming roundtable, we invite you to engage with a thought-provoking scenario that envisions a university shortly altered by the advent and integration of AI technologies. This scenario is crafted to serve as a conversation starter, providing a tangible context for us to explore the plausible impacts of AI on our academic institutions.

Your task before the Roundtable:

+ **Read the Scenario:** This document outlines a fictional yet plausible situation at a university that has adopted AI in various capacities.
+ **Reflect on the Content:** Consider the implications of the scenario. What does it mean for students, faculty, administration, and the broader academic community? How might it affect pedagogy, governance, research, and infrastructure?
+ **Note Your Thoughts**: There are no right or wrong answers. We encourage you to jot down your initial reactions, thoughts, and any questions. These notes will be your guide during the discussion.
+ **Prepare to Share:** Come ready to discuss your viewpoint and listen to others. The richness of this Roundtable will come from the diversity of perspectives shared.

The objective of the roundtable:

The roundtable is not a debate on the validity of the scenario but rather a platform to deliberate on how realistic the issues presented are and what they might mean for the future of universities. Through our collective insight, we aim to identify potential opportunities and challenges, strategise responses, and consider the implications for policy and practice in higher education. This will feed into two other roundtables and a short report.

Participants will be credited for creating the report and receive a copy before publication. No comments or quotes in the report will be attributable to individuals without prior approval.

The University of Fulchester

Welcome to the University of Fulchester, where tradition meets innovation and education is transformed through cutting-edge artificial intelligence (AI) technologies. At Fulchester, we have integrated AI into the academic ecosystem to foster a conducive learning environment, enhance teaching methodologies, optimise administrative functions, and promote impactful research activities.

Teaching and Learning

+ **Personalised Education:** AI-driven adaptive learning systems curate customised learning pathways for students, ensuring each learner gets the most out of their educational experience. Course materials, assessments, and learning activities are customised according to individual needs, preferences, and progress.
+ **Virtual and Augmented Reality:** Our classrooms are equipped with virtual and augmented reality technologies. These tools immerse students in a rich, interactive learning environment where complex concepts are brought to life.
+ **Real-world Readiness Assessments:** At the University of Fulchester, assessments ensure that students are work-ready and equipped with the necessary skills to thrive in their respective fields. We have moved away from traditional take-home assessments, as they no longer meet the trust and integrity standards of our rigorous academic evaluation process. Instead, we employ a combination of in-person and AI-proctored examinations, project-based evaluations, and real-world problem-solving scenarios that better reflect and test students' abilities and readiness for professional success.

Research

+ **AI-Assisted Research:** The university boasts advanced AI tools that aid researchers in data analysis, hypothesis testing, and simulation. This fosters an environment where groundbreaking discoveries are made across various disciplines.
+ **Collaborative Research Platforms:** AI-enabled platforms facilitate collaboration among researchers, promoting interdisciplinary research and innovation. These platforms help streamline communication, document sharing, and project management.
+ **Ethics Approval Process**: To expedite the research process, the University of Fulchester has implemented an AI-driven system to manage and evaluate ethics proposals. This innovative approach ensures that research projects comply with essential ethical standards swiftly and effectively. The AI evaluates the proposals against a comprehensive set of ethical criteria, ensuring that all projects uphold the highest integrity, responsibility, and respect for all participants involved. This streamlines the approval process and allows researchers to commence their impactful work with minimal delays.

Administrative Operations

+ **Smart Campus:** AI-driven innovative systems enhance campus life by optimising energy usage, improving security, and automating various facilities management tasks.
+ **Admission Process Optimisation**: The admissions process is streamlined through AI, making it more efficient and unbiased. It ensures that each application is evaluated thoroughly and fairly.
+ **Financial Predictive Analytics:** A revolutionary AI system that maintains the university's financial health and sustainability. This system analyses various data points to identify students who might face difficulty paying their tuition fees on time. By understanding students' payment histories and financial backgrounds, the AI can predict potential future problems, allowing the administration to engage with students proactively. Tailored payment plans, financial advice, and other support mechanisms can then be offered to assist students, ensuring that financial burdens don't hinder their educational journey.
+ **Automated Communication and Support:** AI also plays a pivotal role in enhancing communication between the administrative staff and the student body. Automated systems handle common queries, schedule appointments, and provide necessary information, allowing humans to focus on more complex and personalised student needs.

Student Services

+ **Career Guidance and Placement:** AI meticulously analyses students' academic performance, skills, and interests. This data-driven approach allows for the provision of tailored career advice and the alignment of students with opportunities that resonate with their aspirations and capabilities. AI-enhanced platforms facilitate networking, mentorship, and direct connections with potential employers, ensuring students have a robust support system as they transition from academics to the professional world.
+ **Mental Health Support:** Recognising the paramount importance of mental health, we have integrated AI-powered chatbots and platforms to offer our students immediate and 24/7 mental health support. These intelligent systems can provide empathetic responses, guidance, and resources, ensuring students always have a supportive outlet. They also assist in connecting students with professional mental health practitioners when necessary.
+ **Academic Support and Tutoring:** AI-driven tutoring systems are available to provide students with additional academic support outside the classroom. These platforms offer personalised learning experiences, adapting to each student's unique needs and learning pace. They ensure students can access the necessary resources and support to excel in their studies.

+ **Student Engagement and Activities:** AI enhances student life and engagement on campus. Intelligent systems curate and recommend extracurricular activities, clubs, and events based on students' interests and preferences, fostering a vibrant and inclusive campus community.
+ **Feedback and Continuous Improvement:** AI tools collect and analyse student feedback on various aspects of university life, from academic experiences to campus facilities. This valuable input drives continuous improvement and ensures the university environment evolves to meet students' needs and expectations.

Appendix item 2: GAI and generation of reports

V1 – ChatGPT only generated report

As there is much discussion around how AI might be used for productivity in higher education but few practical examples, it was felt that this provided an opportunity to put this to the test and create a 'worked example' to allow for discussion and analysis of the *process* of using GAI. V1 of this work has an unedited main body entirely generated by ChatGPT.

The human elements are:

+ Formatting for the Advance HE house style
+ The addition of a note at the front of the report noting what this document is.
+ The report authors generated the appendix items that were added.

None of the text has been edited otherwise.

The report was generated by following these steps:

1. Transcripts from three roundtables were stripped of the individuals' identifying details.
2. Transcriptions were provided to ChatGPT 4 in Word format.
3. The first prompt was: "Please write a short report summarising these transcripts.
4. This generated text is separated into sub-headings.
5. The Second prompt provided, "Can you explain key themes in personalised education and human agency?
6. Third prompt provided: "In the same way, can you expand on the Assessment and Academic integrity section?"
7. Four prompts provided: "Now do the same for Staff Support and Capacity Building".
8. Fifth prompt provided: "Now please do the same for ethical and inclusive AI use".
9. Sixth prompt provided: "Now the same for partnerships and innovation."
10. Seventh prompt provided: "Now provide all of this in a downloadable Word document."

It is important to note that we decided against trying to be a 'sophisticated user' and did not create any custom GPTs nor attempt to use more powerful elements of the ChatGPT model. Here, we wanted to see what happens when a user faces a typical output generated by a cycle of iterative prompts.

V2 – Hybrid report

This report represents V2 – a hybrid taking the content generated for V1 and introducing human editing and insight. The authors went in and using the V1 text as a basis, reviewed the transcripts and edited as they saw fit.

Video Discussion of V1 and V2

The project page for this work contains a video where the authors discuss the process of generating the report and their thoughts on what this means in the context of “AI for productivity in Higher Education”.

Contact us

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Advance HE helps HE and research be the best they can be, by unlocking the potential of their people.

We are a member-led, sector-owned charity that works with institutions and higher education across the world to improve higher education for staff, students and society. We are experts in higher education with a particular focus on enhancing teaching and learning, effective governance, leadership development and tackling inequalities through our equality, diversity and inclusion (EDI) work.

Our strategic goals to enhance confidence and trust in HE, address inequalities, promote inclusion and advance education to meet the evolving needs of students and society, support the work of our members and the HE sector.

We deliver our support through professional development programmes and events, Fellowships, awards, student surveys and research, providing strategic change and consultancy services and through membership (including accreditation of teaching and learning, equality charters, knowledge and resources).

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