



# AI, Accessibility, and Higher Education: Unlocking the Potential

Workshop Report

28 February 2024



Glenlead Centre



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Workshop Report  
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## Key Findings

- Accessibility must be part of the overall discussion on artificial intelligence (AI) in higher education.
- Accessibility should be included from the early stages of devising policies, standards, best practice guidelines, and procurement plans for all AI tools and products.
- Fears about AI must be met by upskilling the workforce, ensuring the safeguarding of individual students using specific AI tools, and structurally ensuring equality of access across the higher education sector.

## Summary

The Glenlead Centre and Jisc delivered the workshop, AI Accessibility, and Higher Education: Unlocking the Potential on 28 February 2024. The workshop was attended by thirty-nine key stakeholders from policy, law, higher education, and civil service. Representatives from twenty-two universities were present.

The workshop was the first event in the two-year project **Accessible Digital Futures**, which will explore how digital technologies, including AI, can transform accessibility in higher education.

The workshop participants were asked to discuss four questions:

1. What does AI mean in terms of safe, responsible, and ethical?
2. How can higher education institutions appraise and acquire accessible AI solutions?
3. What AI products should be made? What are the intellectual property implications?
4. What barrier are there to accessible AI in the UK's higher education sector?

The participants identified several opportunities ranging from using AI to radical reimagining accessibility in higher education to ensure existing AI tools were required to demonstrate accessibility.

The participants also observed several barriers spanning technical, institutional, regulatory, and market factors. Pressing issues were the need to adopt a definition of accessibility in relation to AI and to ensure that the adoption of AI in higher education did not leave any groups worse off than before.

The workshop's six areas for further work to ensure AI adoption facilitates accessibility in higher education:

1. AI skills
2. Sectoral procurement framework
3. Student input
4. Human-centred policies
5. Sectoral collaboration
6. Institutional capacity

## Introduction

The Glenlead Centre and Jisc delivered the workshop **AI, Accessibility, and Higher Education: Unlocking the Potential** at Jisc's London offices on 28 February 2024. The workshop was attended by thirty-nine key stakeholders from policy, law, higher education, and the civil service. Twenty-two universities were present.

Together, we spent the afternoon exploring opportunities and barriers to the UK becoming world-leading in unlocking the potential for artificial intelligence (AI) to make higher education accessible for all.

This workshop was the first event of the two-year flagship project **Accessible Digital Futures (ADF)**, which will explore how digital technologies can transform accessibility in higher education. The aim of the project is to stimulate conversations that will inform policy, procurement, adoption, and development of digital technologies to facilitate accessibility in higher education.

## Workshop Summary

The workshop began with a provocation lecture by Dr Steven Watson, Head of Education Research at the Glenlead Centre and Associate Professor at the Faculty of Education at the University of Cambridge. Dr Watson shared his experiences and reflections on the adoption of AI in higher education and what the implications may be for accessibility. He opened the floor for a group conversation that set the scene for the breakout discussions which formed most of the workshop.

The participants were organised in smaller groups and given four questions to discuss:

1. What does AI in higher education mean in terms of safe, responsible, and ethical?
2. How can higher education institutions appraise and acquire accessible AI solutions?
3. What AI accessibility products should be made? What are the implications for intellectual property?
4. What barriers are there to accessible AI in the UK's higher education sector?

The following captures the main themes that were discussed:

### *Unlocking the Potential*

Workshop participants began by exploring what AI tools can do for accessibility. They questioned how AI can be used pedagogically and as collaborative tools.

Workshop participants made concrete suggestions for AI products that could enable accessibility in higher education. They suggested ways to convert PowerPoint presentations into braille, improve captioning with scanning of content and outputs into HTML, and tools to describe complex diagrams. One idea was an 'AI buddy' tool to be used in individualisation that could work as a one-stop-shop for students.

Looking to procurement protocols, these should incentivise developers and suppliers to ensure that their AI tools, products, and software programmes are accessible. Institutions should ensure that all new procurements are accessible. They should also demand that already

procured AI tools are accessible as a matter of priority. It is not enough to wait for the new upgrade or a new product to give current students with accessibility needs the benefit of these tools. To ensure that products conform, some participants suggested a quality mark for accessible AI tools.

Workshop participants identified how important it is that technology vendors provide customer support and have specific people to deal with queries. Participants asked what would happen when the technology breaks for a student? How will defects and harms be remedied? What are the outcomes for students? They queried how issues would be resolved when challenges and problems arose from attempts to integrate new technology into existing technology.

At the same time, participants recognised that these demands would create a burden for technology vendors. Given the expense of testing, there was a concern that tools would not be developed. There was a consensus that **there must be incentives for technology vendors to develop these tools.**

### *Idealism or Pragmatism?*

Workshop participants called for a **radical reimagination** of what AI can do for accessibility in higher education. From this flowed the insight that the conversation on AI and accessibility cannot be isolated from issues on AI in general. These include concerns regarding inherent biases in data and algorithms, lack of diversity and access, and transparency. Accessibility should be an integral part of this broader conversation, which means that accessibility must be included at the nascent design and procurement stages. Thus, accessibility cannot be “bolted on” as a compliance measure after AI tools have been adopted by the institutions.

While some participants wanted to explore how the transformative power of AI can aid a radical reimagination of accessibility in higher education, others were more cautious and advocated for an incremental step-by-step approach. This view was rooted in several factors: (1) the exigency to recognise the different capacities and needs of different higher education institutions; (2) an incremental approach allows us to assess impact of accessibility standards as we go; and (3)



the fear that a bold vision would serve as an encouragement and excuse for the development of new AI rather than upgrading existing AI tools. Some participants were sceptical about calls for new AI products and wanted instead for existing tools to be improved. Their view was that accessibility of AI should not be relegated to the future but benefit students and staff today.

This led to a discussion on how to make existing tools, such as Microsoft Co-Pilot and Google's Gemini, accessible. This would necessitate (1) a definition of 'accessible' in this context; (2) a technical standard by which these tools can be assessed, (3) upskilling digital and AI skills in higher education institutions, especially the skills of people in academic roles and in procurement departments. While workshop participants expressed divergent views on whether the sector should take an idealistic or a more pragmatic and incremental approach, they agreed that there was **a pressing need for a holistic conceptualisation for AI and accessibility** in higher education.

### *A Universal or a Personalised Approach?*

Workshop participants addressed the tension between calls for a universal design approach and the use of AI for personalisation (also called 'individualisation').

Advocates of personalised AI tools noted that these had the potential to strengthen accessibility because they can be tailored to a person's specific needs. Personalisation of AI tools could create opportunities for access to learning that is currently not accessible, thereby contributing to a levelling of the playing field of access to education. The advent of smart tutoring systems was mentioned to illustrate how the entire educational environment is becoming bespoke. Accessible personalisation can be built around a co-design process whereby students will be able to design their own access.

Some workshop participants cautioned against the adoption of personalisation because it could lead to exclusion. They were concerned that it would be hard to assess, place a burden on students, and likely leave less resourced students and institutions behind. Thus, participants expressed strong concerns that personalisation would widen the equality gap in the sector even further. As 'all' students are

taking advantage of AI tools to personalise their learning, this could create barriers if students with accessibility needs are unable to do the same.

Going forward, devising a framework for accessible AI that accommodates both personalisation and universal design will be a major challenge.

### *Barriers*

Workshop participants identified several barriers to the adoption of accessible AI in higher education. These barriers, however, were not specific to issues of accessibility but applied to the adoption of AI tools in general.

Barriers covered a wide spectrum including technical, institutional, cultural, skills-related, psychological, and resource-driven issues. Specifically, these included concerns regarding potential biases in the data and algorithms, lack of transparency, data security, privacy, skills gap, weak institutional leadership, fear, lack of confidence, and a dearth of resources.

Some workshop participants found that there was often too much information and not enough guidance, which produced cognitive overload and placed excessive demands on their time. Some participants lamented the lack of financial resources available for institutions to adopt and invest in AI tools.

Workshop participants noted that a risk of poor institutional or sector leadership or 'out-of-touch' decision-making could produce challenges. There was a general view that universities struggle to develop regulation because they do not know how AI will be used or integrated into their educational setting. Participants identified some sector paralysis in devising and implementing policies due to the lack of knowledge of future risks. As institutions are compliance-focused and risk averse, workshop participants acknowledge that they were not incentivised pro-actively to adopt new accessible AI tools. This is a real barrier to unlocking the potential of accessible AI in higher education.

Another issue was how to ensure that students and staff have equal access to AI tools across the sector. Workshop participants expressed

concern that the adoption of AI tools would further exacerbate inequality, where better resourced institutions would be more able to adopt, integrate, and personalise AI tools. They worried that students would not have access to accessible AI tools if these were only available behind paywalls, or that inexpensive and low-quality AI tools would be used as a substitute by institutions to deliver accessibility. Repeatedly, workshop participants emphasised that when adopting AI tools, it was important to ensure that **no one was worse off than they were before** the adoption. It was important to ensure that no student was left behind.

### *Fears*

Repeatedly, workshop participants circled back to the issue of fear. They observed that AI created fear of job insecurity, both for academic staff today and the students entering the workforce of tomorrow. Some participants expressed fear that assessments would be overtaken by AI.

They were also fearful that AI tools will expose students to harm, including bullying or harassment, or that they would allow and incentivise academic misconduct. There was concern that educators do not understand the technology or know how to appraise risks, and that some may be afraid to admit they need more skills. Workshop participants also feared that the lack of transparency, and the absence of guidance and standards for procurement, created too much uncertainty about the scope, risks, and consequences of adopting AI tools in higher education.

Some workshop participants were concerned about the potential for lock-in if accessible AI tools were sourced from only one or just a few commercial technology vendors. Specifically, they feared that companies such as Microsoft (CoPilot) and Google (Gemini) would benefit disproportionately from lock-in, thus creating monopolies in the market. The result could be higher education institutions and students being stuck with faulty technologies that it would be near impossible to fix. Workshop participants were also concerned about the environmental impact of these products and the consequences for sustainability.

Another set of fears relates to the challenges of ensuring that the adoption of AI does not promote a worldview of monotone, narrow depictions, but reflects the voices, expectations, and aspirations of all students (and staff). Workshop participants emphasised the need to ensure that any adoption of AI tools did not supplant the human element at the core of higher education. Accessibility cannot be outsourced to technology but must be there to aid and facilitate human interaction and relationships. Human agency is key, and thus it is important that some activities are preserved for humans.

### *Sectoral Collaboration*

Workshop participants identified a need for sectoral collaboration and sharing of intelligence, policies, and practices. It is crucial to strengthen the dialogue between higher education institutions.

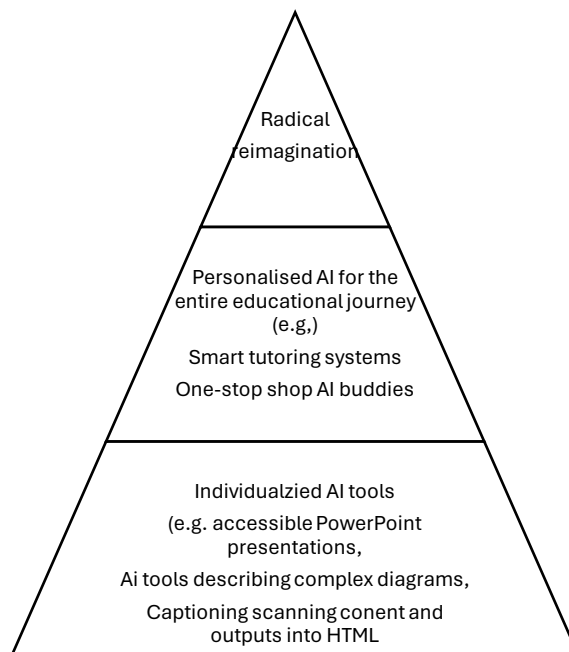
Collaboration is also important to ensure that the overall higher education environment can adapt to a fluid and dynamic changes as the technology and practices advance. Finding ways to do so will be key in unlocking the potential for accessible AI in higher education.

## Summary of Findings

### *Opportunities*


The participants' approaches to accessible AI in higher education can be illustrated by a pyramid, where the top represents the most transformative vision for accessibility for the sector, and therefore the hardest change to achieve, while the bottom tier represents the transformation of tools that are already being used, and therefore, from an accessibility perspective, may be seen as the most 'low-hanging fruits' to develop and adapt.

Fig. 1: Opportunities for accessible AI in higher education:



Specifically, the top tier represents those who envisioned a radical reimagination of how AI can transform accessibility in the higher education sector. For these participants, radical reimagination would entail structural and systemic change and necessitate a radical vision for new pedagogy and the future of learning.

The second tier represents the approach envisioned by participants who wanted a new approach to accessibility through the adoption of more holistic and systemic tools, such as smart tutoring systems or 'AI



buddies' which could as a 'one-stop-shop' for students with accessibility needs. These AI buddies would accompany the students throughout their entire journey at a higher education institution. For these participants, collaboration and co-design with students are key approaches to ensure that the specific student's accessibility needs are met.

The third bottom tier represents the adoption of existing AI tools and how these should be made accessible. For some participants, it was important not to focus on adopting a radical new AI system in the future, but rather ensure that the digital tools that were already being used were accessible. Participants made specific suggestions to how existing tools can be developed and improved for accessibility.

## Barriers

The participants also identified numerous barriers to the uptake of accessible AI in higher education:

Table. 1: Barriers to uptake of accessible AI tools in higher education

<b>Technical</b>	<ul style="list-style-type: none"> <li>• Biases in the datasets and systems</li> <li>• Culturally hegemonic outputs</li> <li>• Failing to prevent bullying and harassment</li> <li>• Invasion of privacy</li> <li>• Failing to prevent and detect academic misconduct</li> <li>• Lack of transparency</li> <li>• Replacing human in the learning process</li> <li>• Disproportionate burden on students</li> </ul>
<b>Institutional</b>	<ul style="list-style-type: none"> <li>• Need for informed leadership and decision-making</li> <li>• Lack of coordination across the sector</li> <li>• Lack of skills, especially in procurement and teaching</li> <li>• Different institutional capacities and needs</li> <li>• Lack of financial resources</li> </ul>
<b>Regulations</b>	<ul style="list-style-type: none"> <li>• Lack of risk assessment</li> <li>• Too much information, not enough policies and guidance</li> <li>• Don't know what accessible is in this context</li> <li>• Lack of enforceable procurement framework</li> </ul>
<b>Market</b>	<ul style="list-style-type: none"> <li>• Lack of incentives for tech developers and vendors</li> <li>• Tech vendor monopolies</li> <li>• Lock-in and bad technology</li> <li>• Lack of customer support by tech vendors</li> </ul>

There was a shared view that the challenges to unlocking the potential for accessible AI should be met by upskilling the workforce (including addressing psychological barriers such as stigma from not knowing how to use the technology), ensuring safeguarding of the individual students using specific AI tools and structurally ensuring equality of access across the higher education sector. Procurement policies should be adopted whereby vendors must

demonstrate the safety and accessibility of their products. A standardised framework for procurement is needed across the sector.

## What Next?

These findings will guide the ADF project going forward. Specifically, we may look to explore the following asks and solutions:

Ask	Potential Solution
AI skills	Ongoing upskilling of teaching staff, leadership, and procurement departments. This includes devising a framework for how those skills will be measured and assessed.
Sectoral procurement standards framework, including mandatory demonstration by technology vendors	<p>Sector-wide adoption of standards for accessibility in AI tools, including how the definition of accessibility interacts with standards of privacy, data security, equality, intellectual property (including copyright), and transparency (especially concerning measures to counter biases) in AI procurement.</p> <p>These standards must also include measures to ensure that AI tools do not allow for bullying or harassment. As such, they should include clear specifications for how accessible AI tools should be measured for Equality Impact Assessments (EIA)</p> <p>Mandatory demonstration by technology vendors that they meet this standard. There could be a potential kitemark of excellence. The vendors should be obliged to keep customer support widely and readily available.</p> <p>Ongoing updating and collaboration of the standards and testing regime for new products across the sector.</p>
Student input	Students with accessibility needs must be at the centre of the co-design and collaborative process of adopting accessible AI tools in higher education.
Human-centred policies	Related to the need for AI skills is the need for overarching sector-wide human-centred policies. Plans for the adoption of accessible AI should be grounded in a principled framework that promotes AI tools that foster (and do not replace) human interactions and relationships. Accessible AI tools cannot replace human educators.
Sectoral Collaboration	Higher education institutions need to adopt a mechanism for the sharing of intelligence, policies, practices, and experiences. This mechanism should also be a forum to stimulate and enable collaboration.
Institutional capacity	<p>More institutional guidance and policies are needed.</p> <p>Institutions need to develop and execute a workplan for upskilling their workforce across the board, particularly the skills of their teaching staff, procurement departments, and leadership.</p> <p>Institutions need to develop and execute workplans for not only how to procure new products in the future, but also how to upgrade already adopted AI tools to ensure they comport with the recommendations of the proposed procurement framework.</p>



## Final Remarks

We need to acknowledge that AI cannot solve all accessibility issues.

We also need a wider debate about the role of AI in society. For higher education it means that it will not only concern how AI is used as a pedagogical and practical tool, but also a more ambitious agenda about how AI should be part of the curriculum for the design of the educational needs of tomorrow.

It is imperative that higher education institutions are forward-looking and willing to think about procurement and upgrading their AI technologies. Leaving AI out of the picture will have a profound impact on the quality of their educational offers as students will either use the tools the institutions provide, thereby also being subjected to the pedagogical method and learning objectives as intended; or they will use these tools outside the institutions without the benefits and safety of institutional oversight.

The discussion of the workshop participants consistently circled back to the needs of students. The focus was on building internal capacity for how AI tools used inside the institutional framework can be made accessible. The workshop participants therefore did not discuss how accessible AI can be an outward-facing opportunity to promote institutions as inclusive and accessible. The impression was that the sector needed to get its house in order internally before it can make such a bold claim.

The final takeaway was that there was a great appetite for further discussion. The feedback we received after the event requested further topics to include international lessons, intellectual property and copyright, assessments for procurement, and assessments of product design. We will follow up with more events, activities, and outputs in the coming months. This is just the beginning of our journey to unlock the potential for accessible AI in higher education.