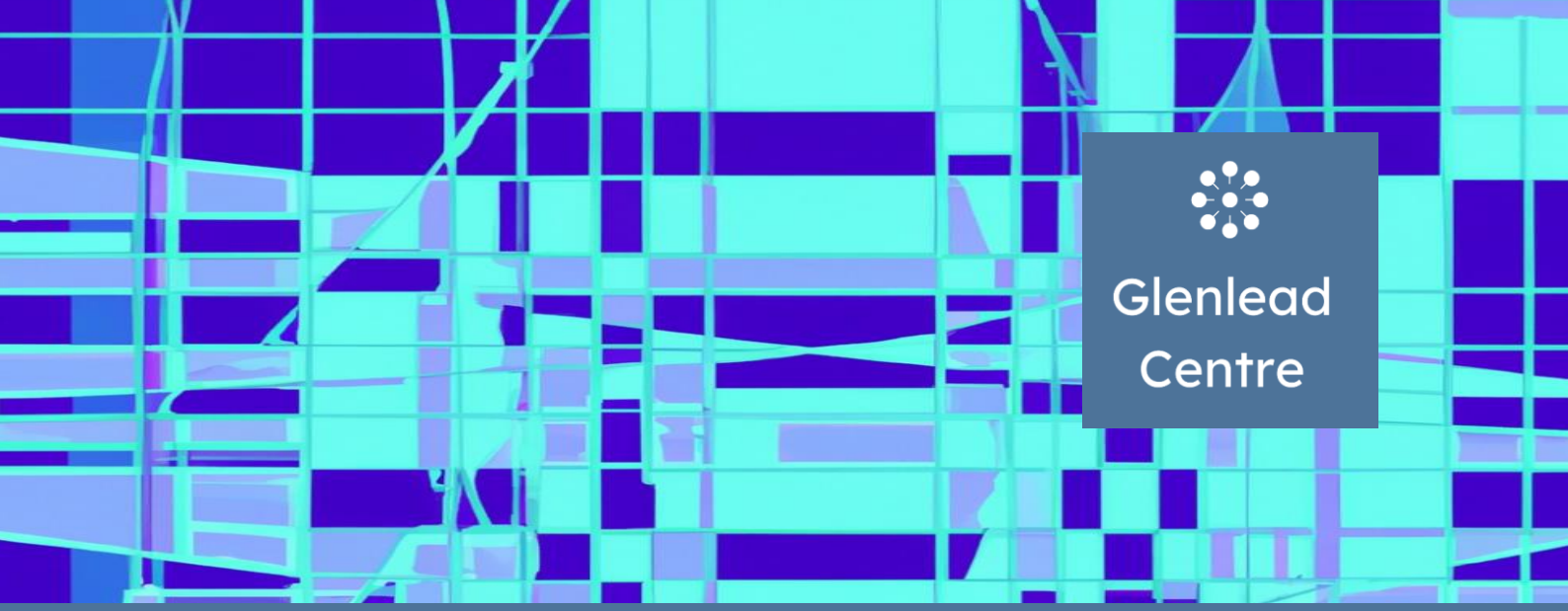


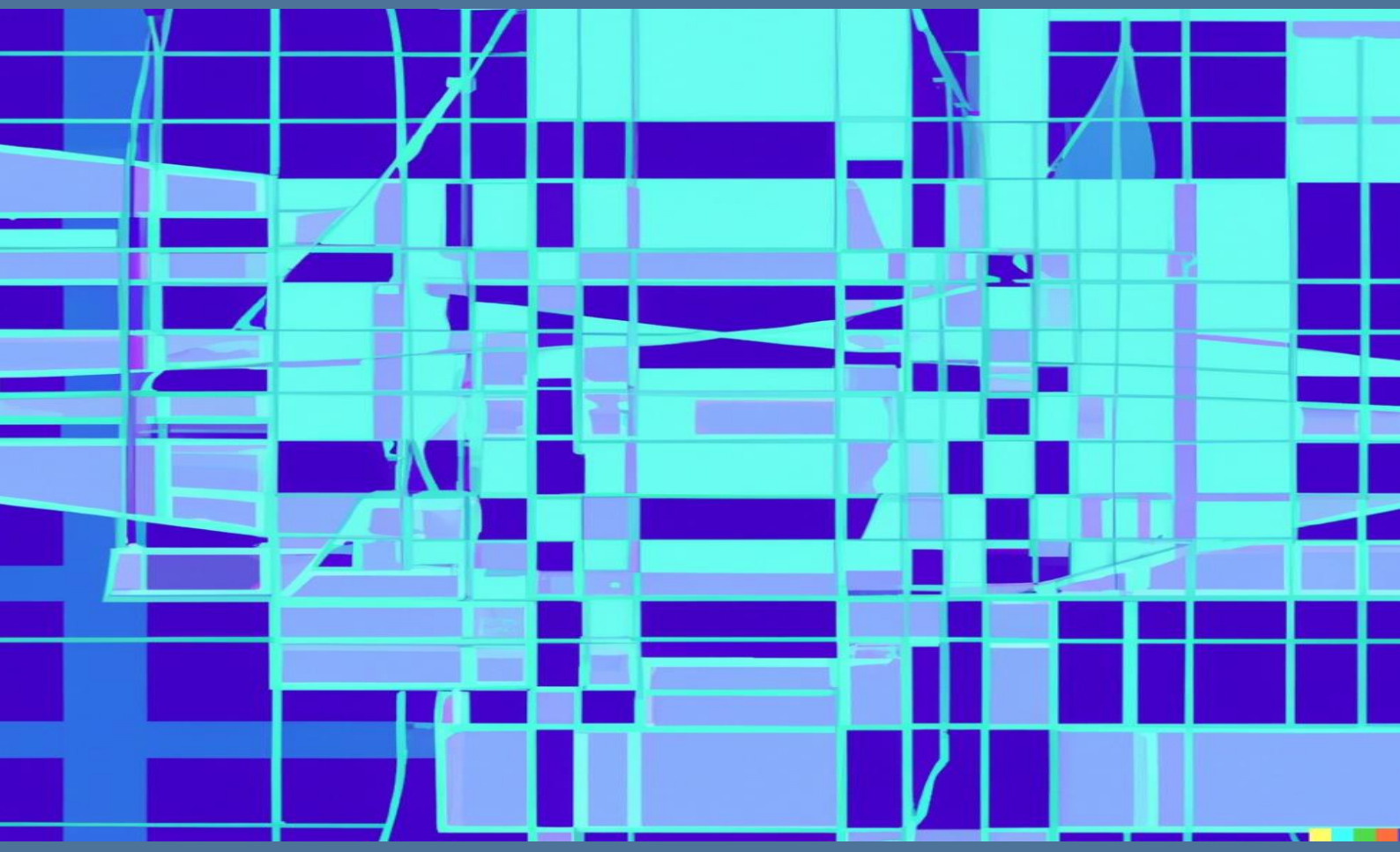
Glenlead Centre

Generative AI and Education

Changing landscape of assessment and feedback

Dr Steven Watson

12 September 2023



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Generative AI and Education

Changing Landscape of assessment and feedback

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Introduction

The Glenlead Centre's Executive Director, Dr Ann Kristin Glenster, attended a roundtable discussion on Generative AI and Higher Education held in Westminster Palace on 12 September 2023. Chaired by Daniel Zeichner MP, the event was hosted jointly by the Higher Education Commission, Policy Connect, and by the All-Party Parliamentary Group on Data Analytics. For nearly two hours, key stakeholders from academia and policy discussed the challenges of generative AI for higher education and how they can be addressed through a sector-wide approach.
The roundtable set out to examine four questions, prepared by Policy Connect researcher Alyson Hwang:

1. What are the current risks and challenges associated with the use of generative AI in higher education? How do stakeholders in the education sector perceive such challenges?
2. What are the most critical issues that the sector needs to discuss in relation to generative AI and changes to assessment/feedback, and why?
3. What potential changes does generative AI bring to assessment methods in higher education? Are these changes positive?
4. What can policymakers do to support educators and higher education providers to benefit from generative AI use in assessment?

This report by the Glenlead Centre's Head of Education Research, Dr Steven Watson, Associate Professor at the Faculty of Education, University of Cambridge, answers these questions and sets out a set of five crucial policy recommendations going forward.

Summary of recommendations

1. **Develop Dynamic Regulatory Frameworks:** Given the evolving nature of Large Language Models (LLMs) like ChatGPT, policymakers should prioritize the creation of dynamic and adaptable regulatory frameworks. These frameworks should be designed to be updated as empirical data on the usage and impact of these technologies in educational settings become available.
2. **Fund Empirical Research and Educator Training:** Policymakers should allocate resources for empirical research into the effectiveness and ethical implications of LLMs in educational settings. Alongside this, investment in training programs for educators is crucial for the responsible and informed deployment of such technologies.
3. **Establish Multi-Stakeholder Groups:** To ensure a nuanced understanding and representation of various viewpoints, policymakers should form multi-stakeholder committees involving educators, technologists, and ethicists. These committees could play a vital role in advising on regulatory matters, ethical guidelines, and curriculum integration.
4. **Address Resource Inequality:** As ChatGPT and similar technologies can be expensive and proprietary, specific measures should be considered to prevent widening the digital divide. Policies could include subsidies for educational institutions lacking the necessary resources and initiatives that encourage the private sector to offer more accessible versions of their technology.
5. **Implement Public Awareness Campaigns:** Policymakers should collaborate with educational institutions and media to disseminate accurate information about the capabilities and limitations of LLMs like ChatGPT. This would help counterbalance often polarized media narratives and contribute to a more informed public discourse.

Risks and challenges

Academic misconduct

The capabilities of ChatGPT in generating coherent and contextually relevant text can be a double-edged sword in academic settings. While the platform is often used by students as a tool for enhancing writing and reading skills, there exists the risk that such technology could facilitate academic dishonesty, particularly plagiarism. Herein lies the complexity; ChatGPT can act both as an enhancer of legitimate academic efforts and a potential facilitator for academic misconduct. Differentiating between these two uses necessitates a nuanced understanding of student intent and the role technology plays in modern academia.

Ethical concerns

Concerns related to data privacy and ethical considerations with Large Language Models (LLMs) like ChatGPT are often underscored by misconceptions. While many perceive these models as information retrieval systems akin to search engines, it's crucial to note that they don't possess stored information. These models function based on statistical analyses of publicly available data and are not designed to collect or store user information. However, the biases inherent in the data they are trained on remain an area requiring attention, particularly to understand how these biases interact with user perceptions and usage.

Resource inequality

The proprietary nature of ChatGPT, coupled with the costs associated with its deployment, poses a risk of exacerbating existing educational inequalities. This issue extends beyond the technology itself to a broader discussion about resource allocation in education, access to advanced tools, and the potential widening of the digital divide.

Stakeholder perception

Public perception of ChatGPT is a volatile mix influenced heavily by media portrayals, which tend to oscillate between utopian visions of technological salvation and dystopian warnings. This underscores the need for nuanced discourse grounded in empirical data and actual user experiences.

Critical issues

Authenticity

Ensuring the authenticity of student work remains a pivotal concern when incorporating technology into educational assessment. Teaching students how to use tools like ChatGPT responsibly—to enhance their learning rather than to shortcut it—should be integral to its implementation in higher education. Despite the potential for misuse, there also exists significant apprehension among educators and students alike regarding how to authenticate work in a tech-assisted educational environment.

Standardization vs. individualization

The adaptability of LLMs in providing personalized feedback challenges traditional paradigms of standardized assessment. With the advent of technology-enabled personalized learning, the objectives of assessment itself are being questioned. This sparks a debate over balancing competency-based approaches with interdisciplinary and critical assessment frameworks.

Ethical guidelines

As of now, the ethical considerations surrounding the use of AI in education are a moving target. Because we are still gathering empirical data on how these tools are utilized in practice, any guidelines for ethical usage remain in a state of flux. To expedite this, focused research and development projects in real-world teaching and learning contexts are necessary.

Changes to assessment methods

Increased automation

While ChatGPT offers the potential to automate assessment tasks, the view that such automation will necessarily free up educators' time is an oversimplification. Teachers still need to invest effort in understanding and effectively employing the technology for its pedagogical benefits to materialize. Beyond that, the technology has the potential to facilitate new forms of inclusion, such as accommodating neurodiverse students or those with English as an additional language (EAL), although this comes with its own set of challenges like deepening the digital divide.

Policy measures

Develop regulatory guidelines

Policymaking in the realm of AI in education is challenging due to the fluidity of technological capabilities and methods of utilization. Regulatory initiatives must therefore be adaptable and open to revision as our collective understanding matures.

Funding and training

Adequate funding and focused training programs are essential for maximizing the benefits of technology like ChatGPT in educational settings. At a national level, investment in these areas could offer competitive advantages.

Role of official bodies

Coordination and collaboration

There is a clear need for central bodies that can coordinate the research, development, and ethical deployment of ChatGPT and other LLMs. This is not merely a matter of national interest but also offers opportunities for international collaboration.

Public awareness

Such bodies should take the lead in demystifying the technology, clearly outlining its capabilities and limitations to avoid misconceptions.

Research and development

Investing in R&D can offer deeper insights into the most effective and ethical ways to implement this technology.

Auditing

Routine audits to assess compliance with ethical guidelines and educational standards can ensure that the technology serves its intended purpose effectively.

Glenlead Centre

The Glenlead Centre researches and delivers policy solutions to legislators, regulators, policymakers, universities, public sector bodies, non-governmental organisations, and private enterprise. We lead projects focussed on building stakeholder capabilities and capacity to better inform decision-making on policies for a digital and AI-driven future.

Our mission is to conduct and leverage high-quality research and support human-centric policy development and solutions in the digital and AI for the benefit of the public good. Our work is designed to ensure that decision-making affecting our digital lives are informed, balanced, and adapted for the future. Our aim is to encourage responsible, ethical, and human-centric technologies that will contribute to epistemic justice and a more prosperous and sustainable future.