

Title:**Turning Threats into Advantages: Leveraging AI in Management Education Assessments****Summary:**

In the realm of management education, the quest for excellence and a commitment to high-quality teaching are driving forces behind the adoption of innovative and inclusive pedagogical strategies. Integrating Artificial Intelligence (AI) into the assessment process represents a critical juncture, offering unprecedented opportunities for pedagogical innovation and teaching quality enhancement. This paper explores the transformative potential of AI in redefining assessment methodologies. Rather than entirely preventing students from using AI, this paper suggests embracing AI by integrating it into assessment processes as an effective approach to mitigate AI's influence on assessments and avoid plagiarism. This paper will alleviate educators' concerns regarding students' use of AI in assessments, shape new assessment designs in the AI era, encourage students to employ AI tools more conscientiously and ethically, and contribute to "Innovative and inclusive ways of transforming management education".

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This is a developmental paper

The popularity of incorporating Artificial Intelligence (AI) is witnessing an upward trend. Apprehensions within higher education accompany this popularity. Academics in higher education have expressed concerns about plagiarism (Francke and Bennett, 2019). Especially in management education, writing-based assessments play a crucial role in evaluating student performance. How to evaluate students' work authenticity arises as a significant challenge in adjusting existing assessment approaches (Sweeney, 2023) and even in developing innovative new approaches. However, in addition to arising challenges, AI also holds the potential to bring innovation in assessment methodologies within management education. Therefore, this paper aims to explore how management educators could turn the perceived threat of AI into opportunities by integrating AI into the assessment process and maintaining the quality of the assessment design.

In this paper, first, we will discuss the current challenges of developing effective assessments and explore potential solutions to address the challenges posed by AI. Second, we will explore how to transform these challenges into opportunities by suggesting an innovative assessment strategy, specifically by integrating AI into assessments and using it ethically. Finally, this paper will discuss the impact on the practical field and how technological advancements can benefit other domains.

Current Challenges

In Higher Education, evaluating student progress is crucial as it allows educators to assess their different levels of learning outcomes. However, creating effective and engaging assessments can be challenging in today's fast-paced academic environment and a challenge faced by higher education practitioners. Management education scholars are researching modern business and management schools' difficulties with assessment and feedback. These challenges arise from various factors, such as the shift to virtual instruction due to COVID-19, the growing use of AI, and the rise of Generative AI since OpenAI's ChatGPT introduction in November 2022. In addition, if generative AI is solely relied upon for assessments, it may not effectively cultivate the critical thinking and problem-solving skills crucial for developing future management professionals. While AI can enhance and streamline certain aspects of the assessment process, it is still essential for educators to incorporate a variety of assessment methods that challenge students to apply their knowledge and skills in diverse and complex scenarios. (Hyde, Busby, and Bonner, 2024). Therefore, it is vital to rethink the purpose, content, and methods of assessment to overcome these hurdles.

According to a recent report by the Quality Assurance Agency for Higher Education (QAA) (QAA, 2023), there are concerns about accurately attributing assessments to individual students due to the widespread use of Generative AI tools. These challenges are expected to intensify with this technology's continuous advancement and integration with other software. As a result, Higher Education is actively discussing and accepting a call for assessment enhancement, in which AI could potentially catalyse such improvements.

Mitigating AI Influence: Avoid or Embrace

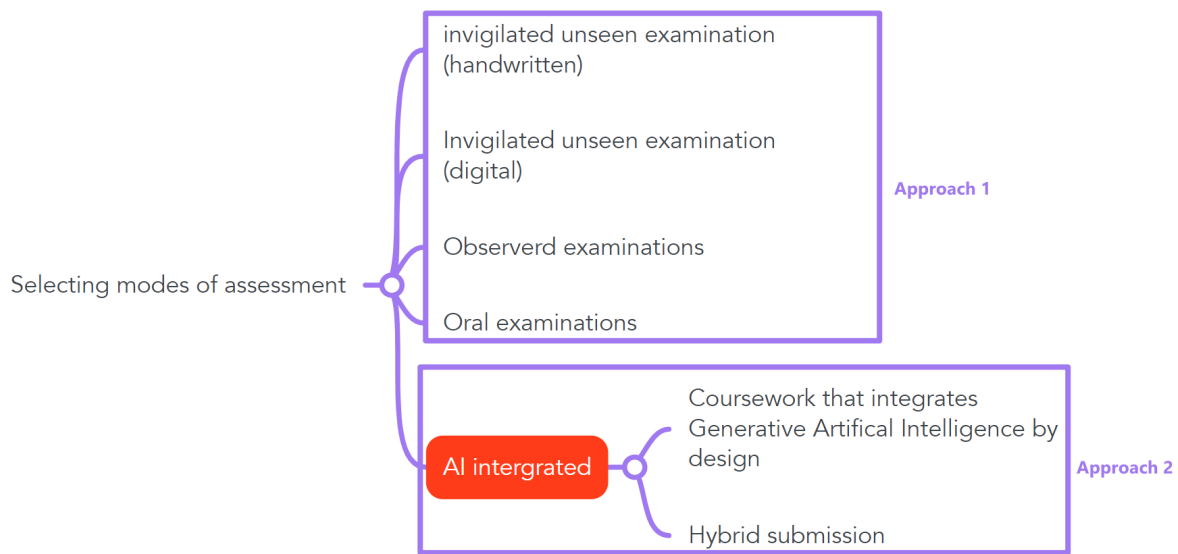


Figure 1 Modes of assessment (Amended from QAA, 2023)

Based on QAA's findings in 2023, two types of approaches can be employed to mitigate the influence of AI on student grades (Figure 1). One approach involves offering alternative assessment methods that prevent students from using AI during the assessment process. For instance, it would be significantly more challenging to utilise AI tools if the assessment is conducted via handwritten submissions in a physical location.

While the first approach can effectively mitigate the influence of AI in assessment processes, unseen examinations have the potential drawback of promoting rote memorisation and may need to improve in evaluating a student's capacity to apply theoretical knowledge to practical situations. This is particularly problematic in management education, where developing problem-solving and critical thinking skills is vital. Furthermore, oral examinations are inherently subjective, depending on the examiner's judgement. Due to time constraints, oral examinations may cover only a subset of the course material. Therefore, educators should be cautious about relying on these traditional assessment methods to mitigate AI influence.

The second approach involves integrating AI technology into assessment processes. This includes transitioning from traditional methods to AI-enhanced formats that promote critical thinking and ethical usage. Examples of AI-driven tasks illustrate how technology can streamline assessment, improve engagement, and support more profound learning objectives. Rather than resisting this technology, educators are looking for ways to design assessments that include AI elements (Wang, Stewart and Wang, 2023). This approach does not oppose the use of AI, but further explorations of its roles in education are needed. Such thinking patterns are eliminated, saving time for students and teachers and reducing the need for hide-and-seek games. The focus is guiding students in a more responsible and ethical use of AI technology while still achieving the learning objectives. An effective way to integrate AI like ChatGPT into education is by using it for routine and repetitive tasks. For instance, students can use ChatGPT and other literature search engines to conduct preliminary research. In this scenario, the focus is on evaluating students' steps to complete the search. The use of AI should not be considered cheating but rather a means to make the process more

efficient. Educators can encourage students to be mindful of using AI by asking them to reflect on its usefulness. This can help management students prepare for a workplace that looks to the future. According to Ayinde et al. (2023), organisations today depend more and more on information and data. Therefore, professionals must learn to use available tools effectively to find and manage information and data.

Broader Impacts of AI Integration

AI-powered tools such as ChatGPT have played a significant role in advancing assessment methods and approaches. As noted in the QAA's 2013 report, it provides a compelling impetus for providers to encourage their program and module teams to evaluate and, if needed, reinvent their assessment strategies. Additionally, the COVID-19 pandemic has hastened the integration of technology and digital education practices in education (Baidoo-Anu and Owusu Ansah, 2023). However, many issues arise when the assessment is enhanced and reinvented. As JISC (2023) summarised, AI poses legal, ethical, and technical challenges. Reactive responses to external technology drivers hinder progress towards digital transformation.

Apart from enhancing assessment, AI can improve quality in many areas. JISC (2023) summarises AI's role in education, which involves expanding or enhancing educators' capabilities (Figure 2). Mantai and Huber (2021) mentioned increasing interest in studying management worldwide, leading to large class sizes and challenging timely feedback for management educators. By utilising AI to mark a high volume of assignments, educators can reduce their workload, while students can receive more prompt and valuable feedback. However, it is vital to remember that increasing the capacity for marking assignments and receiving feedback does not necessarily equate to improved quality. Instead, it increases the quantity of provided feedback. When educators utilise AI to save time, they can focus on more impactful tasks (JISC, 2023).

Furthermore, educators may need more resources to offer early intervention to high-risk students when expanding capacity. AI can analyse large amounts of student data in real-time, leading to timely warnings to identify at-risk students. Essentially, AI can aid in implementing better pastoral care in higher education.

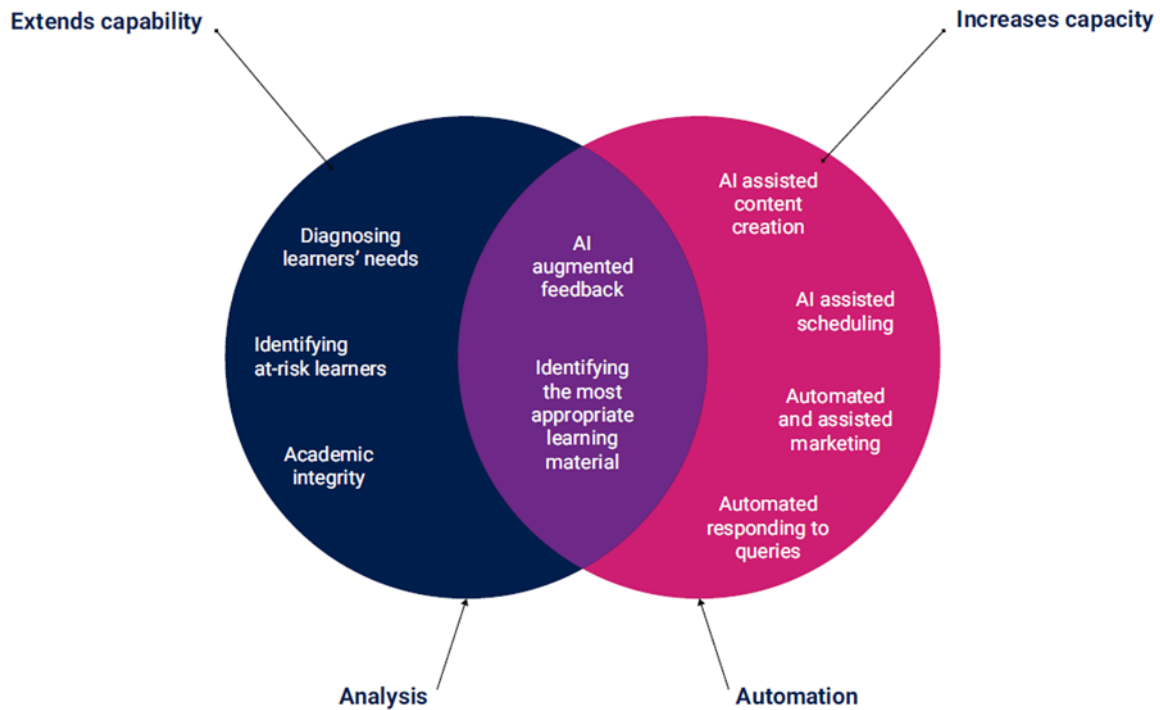


Figure 2 The role of AI (JISC, 2023)

Limitation and Future Development

A limitation of this paper is its exploratory nature and the constraints imposed by word count, which restrict the depth of discussion on the integration of AI in management education assessments. To address this, future iterations of the paper will employ the Teaching Practice Evaluation Framework outlined by Clinton J. et al. (2019) to offer a more practical lens and enrich the discussion with structured, evidence-informed examples. This approach aims to enhance the paper's foundation, ensuring a comprehensive exploration within the framework's guidelines.

Utilising the Teaching Practice Evaluation Framework provides a systematic approach to assess and enhance the pedagogical effectiveness of integrating AI in assessment processes within management education. It offers a structured methodology for reflective practice, enabling educators to identify strengths and areas for improvement in their teaching strategies. By applying this framework, the paper aims to ground its exploration in a proven educational model, ensuring that the proposed AI integration strategies are practical and evidence-based. This methodological approach will help ensure that AI recommendations in education are actionable, align with best teaching practices, and contribute to meaningful educational outcomes.

Conclusion

Integrating AI into the assessment process marks a significant advancement in management education, offering a pathway to more inclusive and effective teaching and learning. By embracing innovative assessment strategies informed by the Teaching Practice Evaluation Framework, educators can leverage AI to meet contemporary challenges and enhance the educational experience. This exploration underscores the importance of a strategic approach to AI integration, promising a brighter future for management education.

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