



Artificial Intelligence in Assessments

Dr Sajeel Ahmed

Acting Principal Lecturer in Business Operations

University of Bedfordshire

Agenda

01. Introduction

02. Assessment
Considerations

Product vs Process
Evaluation

04. Strategies for
assessment design

05. AI
considerations
moving forward



Introduction

- Definition of AI (Cugurullo, 2020):
 - There is not a universal definition of AI, however AI can be broken down into:
 - **Integration of artificial** (not a natural process, but one induced by machines)
 - **Intelligence** (skills of learning, to extract concepts from data and to handle uncertainty in complex situations).
- Assessment
 - Advance HE (2024) definition: Assessment provides judgement, so it needs to be valid and reliable. It also supports student learning and feedback, so it should be designed to promote desirable learning behaviours, develop subject-specific and professional competencies, as well as other graduate attributes.
 - While technology can significantly enhance the learning process, it also introduces the risk of undermining academic integrity. Universities must confront this challenge by devising strategies to safeguard against such misuse

Assessment Design Considerations

- Equality, diversity and inclusion (EDI)
- Sustainable Developmental Goals
- University policies, systems and processes
- Subject/ industry consideration
- Constructive alignment

Product vs Process evaluation

Traditional assessments are designed for Product evaluation – the questions have been

- Have the task been answered?
- The Product approach focuses on the results of the tasks

Process Evaluations

- How have the task been answered?
- Process assessment refers to the systematic recollection of information on the development of the learning process. The focus is not merely on the final result of the learning process, but, more importantly, on the way the objectives are pursued and achieved



Strategies for Assessment Design

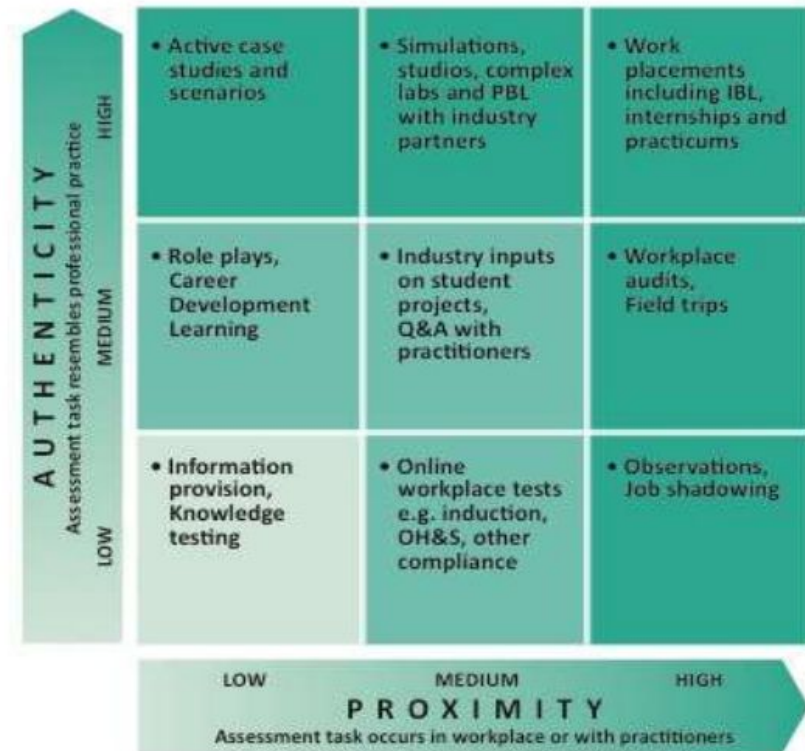


Strategy 1: Focus on the Learning Process

- Shift the focus from grades to learning outcomes
- This process-centred approach focuses on assessing the actions and tactics students employ throughout their learning journey
- Similar approaches – Mathematics tests often involves students explaining how the answer was achieved
- The use of AI tools are helpful for students, but if workings are not shown then that can raise academic integrity concerns.

Strategy 2: Authentic Assessments

- Design assessments that require students to apply their knowledge to contemporary real-world scenarios or problems.
- Authentic assessments are more meaningful to students and demonstrate their ability to apply knowledge in practical situations
- Application of AI use to real life scenarios
- Demonstrating knowledge and skills using AI tools



An Authenticity Proximity Matrix (Kaider et al 2017)

Strategy 3: Personalised Assessments

- Create assessments with unique parameters for each student
- This could involve student input or choice in developing the assessment topics.
- Incorporate AI tools that is appropriate for individual students
 - Challenge: use of AI tools requires time: there is a learning curve to using a particular tool
 - Each student will have different knowledge and skills around AI tools

Strategy 4: Oral Assessments/ Live Presentations

- This makes it difficult for students to use external resources without being detected.
- Discourage the use of generative AI tools
- Interactive oral assessment (IOA) is an authentic assessment approach that involves a genuine, unscripted conversation between an assessor and a student(s) framed around a workplace scenario (Sotiriadou et al., 2020).
- Word of caution: oral assessments may provide their own unique set of challenges for neurodivergent students

Strategy 5: Peer Assessments

- Incorporate peer evaluations where students assess each other's work. This can help deter cheating, as students are less likely to cheat when assessing their peers' work.
- Peer assessment encourages active learning and students gain a deeper understanding of the subject matter and learning objectives.

AI considerations moving forward

- Pedagogical aspect of AI application remains relatively underrepresented
- Most application of AI is currently applied to formative assessments rather than summative
 - This is due to unclear regulation
 - Question of academic integrity
- AI needs to be humanised, Research so far shows that a machine cannot assume the role of a teacher, and the way artificial intelligence works and carries out processes in the context of teaching is far from human intelligence
- AI requires specific training of our students as future professionals,
- It is crucial to train teachers in the use of this technology
- It is important to think about:
 - Learning with AI (the use of these tools in education)
 - learning about AI (how to use these tools)
 - preparing for AI (understanding their potential to change our lives).



Thank you

Questions?

Dr Sajeel Ahmed

Sajeel.ahmed@beds.ac.uk