

## Designing Authentic Assessment to Improve Academic Integrity

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### **Abstract**

*The use of AI chatbots has sparked worldwide debate regarding assessment practices in higher education. Early indications on the use of AI chatbots, signal significant disruption to the higher education system in relation to academic misconduct concern. In terms of the research approach, initially, a systematic literature review was conducted to examine the association between academic integrity and authentic assessment with 32 focused publications from 2019 to 2023 analysed. This led to the development of a robust 'Model for Practice' to guide the implementation of authentic assessment in a way that simultaneously improved academic integrity. This paper presents the main findings of a case study approach with two final year student groups whose teaching and assessment schedule was based on this Model. Results show that the Model addresses the issue of assessing students in a manner that engages students, improves their employability skills, and ensures adherence to academic integrity guidelines.*

**Keywords:** *Authentic Assessment & Design; Academic Integrity; Contract Cheating; Academic Misconduct; ChatGPT*

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### **1. Introduction**

The rapid launch of ChatGPT in November 2022 has resulted in a dearth of educational research into the relationship between assessment design and the use of advanced machine learning algorithms in higher education. This lack of literature, along with the changing educational landscape, has motivated the current study exploring the impact of authentic assessment design on academic integrity. The uncertainty surrounding ChatGPT has led to widespread disparity on the possible implications for higher education, with some studies warning of a potentially catastrophic impact on assessment, and others dismissing these concerns, stating that ChatGPT may bring opportunities in terms of new modes of learning and assisting educators. The necessity for higher education institutions to produce 'employment ready' graduates has positioned authentic assessment as a primary tool for developing students' professional skills

needed for today's multifaceted workplace (Ajjawi *et al.* 2023). The acquisition of these employability skills, however, is reliant on evaluation and assessment procedures that hold students to the highest academic standards. The legitimacy of a higher education institution will be undermined if the institution cannot guarantee that an assessment accurately measures student learning. Although guidance on how authentic assessment can incorporate ChatGPT will undoubtedly increase, the novelty of such studies means that empirical evidence is urgently required to support this guidance and to ensure confidence in any findings.

## **2. Research Context: Authentic Assessment and Academic Integrity**

Authenticity has long been recognised as an inherently valuable characteristic of assessment design (Ajjawi *et al.*, 2023). Authentic assessment is defined as 'assessment which aims to engage students in real-world scenarios that are complex, ambiguous, and unpredictable, to simulate the real-life situations and problems that students will face in their careers (Bretag *et al.*, 2019). Authentic assessment has emerged as an alternative to standard exams, which emphasise memorisation and recall and, instead, aims to assist students in contextualising their learning, encourage internal motivation, promote inclusion, and improve higher-order critical thinking, problem-solving, application and self-reflection skills (Sotiriadou *et al.*, 2020).

Bretag *et al.*, (2019) define academic integrity as compliance with ethical, moral, and professional principles, values and standards that serve as guidance for making decisions and taking action in education, research, and scholarship institutions. Ellis *et al.*, (2020) state that there is a growing awareness of new academic misconduct practices, such as contract cheating, in higher education institutions and yet there are no definitive answers in relation to the volume of assessments procured through contract cheating providers, and the optimal management and penalisation processes for academic misconduct. Academic misconduct threatens academic standards, quality, and credibility in higher education, leading institutions, and regulators globally to urgently explore potential solutions. Maintaining the trust placed in assessment and its ability to ensure that students have demonstrated learning to a level that is worthy of an award is critical in combatting academic misconduct. Assessment needs to evolve along with a changing academic integrity landscape to ensure that students who engage in academic misconduct are not awarded a qualification that they have not earned (Ellis *et al.*, 2020).

It is proposed that authentic assessment should be at the forefront of an assessment movement that addresses; the requirement for improved student equity, the rise of artificial intelligence, and threats to academic integrity in higher education (Ajjawi *et al.*, 2023). Studies have challenged the view of authentic assessment as an academic integrity panacea; for example, although authentic assessment may reduce academic integrity breaches, there is no one assessment that can prevent it, and, furthermore, the assessment type itself is not enough to address academic misconduct (Bretag *et al.*, 2019). Moreover, the real-world, career-focused,

complex problem-solving task aspects of authentic assessment may be overly complicated for academically and linguistically diverse students (Ellis *et al.*, 2020). Additionally, lecturers may lack resources to provide scaffolded support to students, leading students to seek assistance from illicit sources. Nevertheless, there is sustained interest in authentic assessment, and its place in the pedagogical environment cannot be disputed. Evidence supporting the claim that authentic assessment is the solution to academic integrity remains absent. This paper aims to address the research question; “*Can Authentic Assessment Design Improve Academic Integrity?*”

### **3. Methodology**

#### **3.1. Systematic Literature Review**

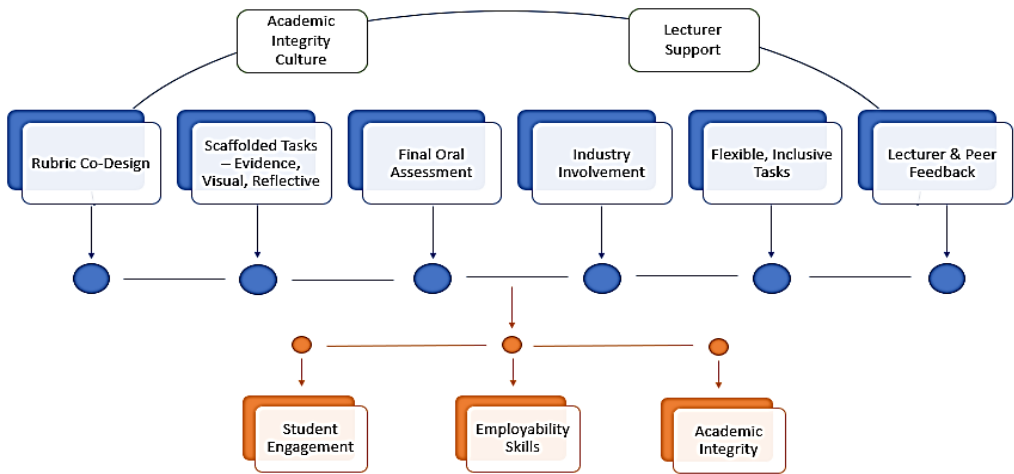
The initial research method employed in this paper was a systematic literature review, where clearly defined searches, rigorous inclusion criteria, and comprehension evaluations were used. The article searches used Scopus, Taylor and Francis, ERIC and Science Direct databases to provide a comprehensive, multi-disciplinary view of the relationship between authentic assessment and academic integrity. Articles were included if they were peer-reviewed, written in English and focused on higher education. Articles before 2019 were excluded due to the plagiarism focus, as this study aims to incorporate new cheating practices. Articles were included for further analysis if the title, abstract or keywords included the keywords ‘authentic assessment/task/learning’ and ‘academic integrity/misconduct/contract cheating’. These keywords were selected to ensure that all relevant papers would be returned while accounting for differing terminology globally and across disciplines. 760 initial results were limited to 32 articles, which were analysed in detail (the five seminal papers that influenced the current research are referenced in this paper). This systematic and critical literature review identified a dearth of authentic assessment designs that grapple with the complexities of the new academic integrity landscape. A thematic analysis was conducted to identify key theoretical perspectives on improving academic integrity through authentic assessment design; summarised in Table 1. Specific guidance on how to incorporate these theoretical perspectives into assessment design is summarised under the Authentic Assessment section of Table 1, and the subsequent impact these elements will have on academic integrity is also shown.

Based on a summary of the systematic literature review and resulting theoretical perspectives, six characteristics are recommended as essential authentic assessment design features. The proposed framework (Figure 1), developed in this study, displays these characteristics, and it is proposed as part of this research, that the design should minimise academic misconduct, and improve student engagement and employability skills. The framework recognises that a holistic academic integrity culture and lecturer assistance are necessary for implementation.

**Table 1. Theoretical Perspectives on Authentic Assessment Design to Improve Academic Integrity**

<i>Theoretical Perspective</i>	<i>Authentic Assessment</i>	<i>Academic Integrity</i>	<i>Main Authors</i>
<b><i>Well-Timed, Personal, Unique Tasks</i></b>	Adequate time, Personalised; Evidence gathering	Meaningful; Verifies participation; Peer pressure	Sotiriadou <i>et al.</i> , 2020
<b><i>Engagement</i></b>	Active contribution; Students as partners	Motivation; Partnership gives students support	Bretag <i>et al.</i> , 2019; Ellis <i>et al.</i> , 2020
<b><i>Complexity</i></b>	Scaffolded complex tasks; Group work; External engagement	Difficult to outsource complex tasks; External scrutiny	Bretag <i>et al.</i> , 2019; Ellis <i>et al.</i> , 2020
<b><i>Teaching &amp; Learning Environment</i></b>	Personalised teaching, feedback; Student-lecturer relationship; Clear assessment requirements	Lecturer detection due to student ability awareness; Early identification of struggling students	Harper, Bretag and Rundle, 2021
<b><i>Scaffolding</i></b>	Distinct, interconnected, progressive, reflective assessment components	Subsequent progressive tasks; Reflecting on class and group sessions; Feedback on each task	Bretag <i>et al.</i> , 2019; Ellis <i>et al.</i> , 2020; Sotiriadou <i>et al.</i> , 2020
<b><i>Support/Instructional Material</i></b>	Assessment support; Clear instructions; Lecturer recordings; Exemplars; Rubrics; Training	Expectations clarified; Student understanding of assessment requirements and marking criteria	Sotiriadou <i>et al.</i> , 2020
<b><i>Inclusion</i></b>	Assessment and Rubric Co-Design	Refine assessment design; Adapt to learning styles	Sotiriadou <i>et al.</i> , 2020
<b><i>Feedback</i></b>	Peer feedback; Feed-forward	Familiarity with work; Learning Ownership; Student-lecturer dialogue	Bretag <i>et al.</i> , 2019
<b><i>Industry Partners Culture</i></b>	Partner with a company; Real-world setting	Presenting externally; Employment opportunities	Ellis <i>et al.</i> , 2020
	Assessment Design to minimise cheating; Supportive environment	Promote academic integrity culture and visuals; Dedicated staff	Ellis <i>et al.</i> , 2020
<b><i>Assessment Type</i></b>	In-Class Tasks; Personalised work; Orals/Vivas; Reflections	Random nature of lecturer questions; Defending personal work	Harper, Bretag and Rundle, 2021

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*Figure 1. Authentic Assessment Design Framework*

**3.2. Implementation**

To explore an authentic assessment approach with the students, the authentic assessment characteristics and theoretical perspectives were broken down here into a weekly implementation plan for a 13-week semester, as shown in Figure 2.

This plan was implemented with two final year student groups – Marketing (97 students) and Home Economics and Business (32 students) taking a mandatory Corporate Strategy module. The industry partner for the authentic assessment element was the Marina Market, a local market to the University and City consisting of a multipurpose venue with an indoor food hall set up in an old warehouse with 40 vendors permanently occupying the space. Confirmation was sought that all students visited the Marina Market before deciding on this partner, so that no student

<b>Week 1</b>	<ul style="list-style-type: none"> <li>• Introduction to Industry Partners and Real-World Issue</li> <li>• Students form Groups</li> </ul>	<b>Week 7</b>	<ul style="list-style-type: none"> <li>• Students Submit Draft Assignments</li> </ul>
<b>Week 2</b>	<ul style="list-style-type: none"> <li>• Online Discussion Forum for Rubric Co-Design</li> <li>• Workshop for Rubric Co-Creation</li> </ul>	<b>Week 8</b>	<ul style="list-style-type: none"> <li>• Students Provide and Receive Feedback on Drafts</li> </ul>
<b>Week 3</b>	<ul style="list-style-type: none"> <li>• Rubric Finalised</li> <li>• Lecturer Recording Explaining Assessment Criteria</li> </ul>	<b>Week 9</b>	<ul style="list-style-type: none"> <li>• Lecturer/Student Meetings to Provide Feed-Forward</li> </ul>
<b>Week 4</b>	<ul style="list-style-type: none"> <li>• Student Reflection on Rubric Co-Design Process</li> </ul>	<b>Week 10</b>	<ul style="list-style-type: none"> <li>• Students Finalise Assignments</li> </ul>
<b>Week 5</b>	<ul style="list-style-type: none"> <li>• Students Gather Evidence, Create Mindmaps/Storyboards</li> </ul>	<b>Week 11</b>	<ul style="list-style-type: none"> <li>• Student Presentations</li> </ul>
<b>Week 6</b>	<ul style="list-style-type: none"> <li>• Workshop - Students Critique Past Exemplars</li> </ul>	<b>Week 12</b>	<ul style="list-style-type: none"> <li>• Student Reflection on Authentic Assessment Experience</li> </ul>

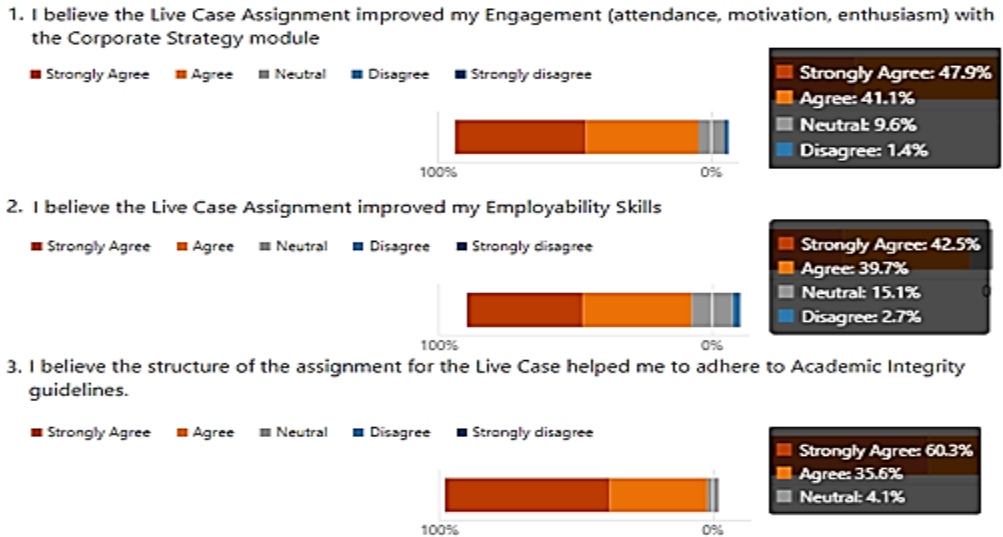
*Figure 2. Authentic Assessment Weekly Implementation Plan*

would be disadvantaged. Representatives from the Marina Market presented information on the businesses and outlined that they were seeking unique event ideas for their venue. Students formed groups and took part in a rubric co-design workshop where they were provided with a past assignment rubric and asked to suggest changes individually using an online discussion forum on the learning management system, Canvas. Students could not view suggestions from their peers until they commented. Marks for this element (5% of module) depended on critical thought process leading to the students' suggestions. The lecturer analysed all suggestions, altered the rubric, and recorded a tutorial explaining the rubric, marking criteria and all assignment requirements, and posted this recording on Canvas.

The main assessment task (32%) was to carry out a strategic analysis of the Marina Market and students proposed that this be presented in a 'scrapbook' document, consisting of a mix of visuals to evidence their learning and analysis in text format. An exemplar workshop took place, where students reviewed examples of past assignments, graded, and ranked each assignment and provided feedback. The presentation (30%) focused entirely on the students' event idea for the Marina Market, to tie in with industry partners' requirements. Students submitted drafts of their event ideas anonymously to Canvas. Each idea was reviewed by two peer groups and feedback returned anonymously. Students were awarded up to 8% for this peer feedback process depending on the quality of the feedback provided. Lecturer-student feed-forward sessions took place before the scrapbook and presentations were completed. Finally, students were asked to reflect on the experience (25%) and express their thoughts on authentic assessments' role in upholding academic integrity. A quantitative survey was utilized to gather empirical data directly from this large student group. A positivist approach was taken to verify students' views on the authentic assessment process through objective analysis of the survey results. Questions on academic integrity were included, therefore, the survey was conducted anonymously in the hope that students would be honest about their experiences. The majority (57%) responded (73 out of 129), providing confidence in the reliability and representativeness of the results. Ethical clearance was received for this research adhering to university policies.

#### **4. Initial Findings**

Initial survey results (Figure 3) present definitive evidence that there is a positive alignment between authentic assessment design and academic integrity improvement. The overwhelming majority of students agreed that the authentic assessment 'live case' with the Marina Market improved their engagement with the module, enhanced their employability skills, and helped with academic integrity guidelines. Additional results from the survey show that students believe they could approach the lecturer for support, they felt they received sufficient feedback, and they clearly understood the assessment requirements. It is evident that the authentic assessment framework helped to create a supportive and collaborative learning environment



*Figure 3. Authentic Assessment and Academic Integrity Survey Results*

which led to the anticipated framework outcomes being met – improving engagement, employability skills and academic integrity.

## **5. Discussion**

Along with the survey results, informal student feedback was received through lecturer-student meetings and classes about the authentic assessment experience. Survey results indicate that the framework process reduced student motivations to cheat as students report being engaged, motivated and enthusiastic. There was strong interest and attendance at the rubric co-design and exemplar workshops, and students spoke to the lecturer about how they felt their voice was heard and their opinion was valued. The industry partner’s event idea allowed students to develop events targeting their demographic, which they felt was inclusive and meaningful. The top event ideas were chosen by the Marina Market and students presented their ideas to industry representatives. The potential opportunity to be chosen as a finalist served as a further motivator for students. The opportunities to cheat were reduced through scaffolded tasks which began at the beginning of the semester with the rubric co-design. Each task was progressive, therefore, students had to understand the previous task to move forward. In terms of lecturer detection, each students’ input into suggested changes for the rubric was verified by the lecturer on Canvas and the rubric was discussed with each student group in the workshop. Students evidenced their learning with visuals which included pictures of the group visiting the Marina Market and working on the project which reduced opportunities to cheat and aided lecturer detection. The

lecturer asked each student a question at the end of the presentation to verify their understanding of the task and their involvement in the project. Students were extremely encouraged by the lecturer-student feed-forward sessions and felt that these were invaluable to their learning and skill development. These sessions also allowed the lecturer to become very familiar with students' work. The personalised nature of students' final reflections made it difficult to cheat, as students needed to participate to be able to reflect deeply.

## **6. Limitations and Conclusion**

The authentic assessment framework proposed in this paper can transfer across academic disciplines, however, it will only be viable where assessment types involve industry interaction. Student reflections continue to be analysed and feedback sought to further probe student views on the experience and improve practice. The framework developed in this study lays the foundations for the emergence of evidence-based approaches to authentic assessment design that foster academic integrity across multiple disciplines and will be a useful tool to offset assessment disruption. This paper provides evidence to support the claim that incorporating authenticity and key theoretical perspectives into assessment design provides a potential solution to the issue of assessing students in a new ChatGPT landscape.

## **Acknowledgements and Conflicts of interest**

No funding or competing interests.

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