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## Sustaining Authentic Assessment (AA): A pilot survey of student perceptions of AA to improve higher order thinking and employability

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### Abstract

Authentic assessment (AA) is a reform in higher education that has been less explored from students' perspectives. In this paper we report findings from a pilot study that explored student perceptions of authentic assessment in the Islam West Relations Major (IWRM) Bachelor of Arts program, at an Australian university. This study used a survey that the authors created to explore two aspects of AA including its capacity to 1) develop higher order thinking skills, and 2) improve employability of students. In addition to surveying student's attitudes towards AA, this study is the first to ask students to suggest alternative forms of authentic assessment. Students recommended oral presentations, government submissions, briefing papers, study tours, and cross-cultural interviews as providing skills they perceived relevant to their future careers. In contrast, students rated exams, quizzes, and tutorial readings as the least helpful form of knowledge evaluation in terms of higher order thinking and employability skills. Initial findings indicate that undergraduate students show support for authentic assessment, as it develops skills transferable to the workplace and their future careers. Finally, AA is best integrated at both program and curriculum levels as a sustainable education model. This model focuses on developing higher-level critical and creative thinking skills that equip graduates to work on, and find solutions for, complex world problems.

**Keywords:** authentic assessment; higher order thinking; employability; sustainable education; mixed analysis.

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## 1. Introduction

Assessment is the most significant factor that impacts the quality of student learning in higher education (Bryan & Clegg 2019). Research has found that the nature of assessment strongly influences 'what and how learners' study at university (Villarroel et al., 2020: 39); and impacts student satisfaction levels (James & Casidy., 2018). In higher education there is growing awareness that assessment needs to be more meaningful to students, including relevant to their future employment and careers (Andrews & Higson, 2008; Wu et al., 2015).

The OECD Future of Education and Skills 2030 report has emphasized that, 'creativity and critical thinking are needed to find solutions to complex problems' (OECD, 2019: 5). The report highlights the need for graduates to have well-developed analytical skills to tackle problems, such as climate change and food insecurity (Cross & Congreve, 2021; Worosz et al., 2020). Within the sustainable higher education movement (Boud & Soler, 2016) which moves the focus away from disciplinary knowledge to what students do in real life, there is greater emphasis on teaching of higher order thinking (HOT) skills and problem-solving assessment (Karyotaki & Drigas, 2016). However, the shift to a paradigm of assessment for learning, rather than measurement of learning, has been volatile (Goos, 2011; Manville, 2022).

One pedagogical approach that has potential to develop students' higher-level skills is authentic assessment (Ozan, 2019; Villarroel et al. 2018). Authentic assessment tasks generally assist students to access cognitive (e.g., analytical thinking), creative (e.g., finding solutions for complex problems), methodological (e.g., applying digital techniques), and social domains (e.g., working in cross disciplinary/cultural teams); to solve real life problems (Herrington et al., 2010). AA tasks often approximate or simulate work-like environments, have work integrated learning components, or deal with authentic issues (Ellis et al., 2020; Lasen et al., 2018; Green et al., 2022). Yet, little is known about what students think of AA.

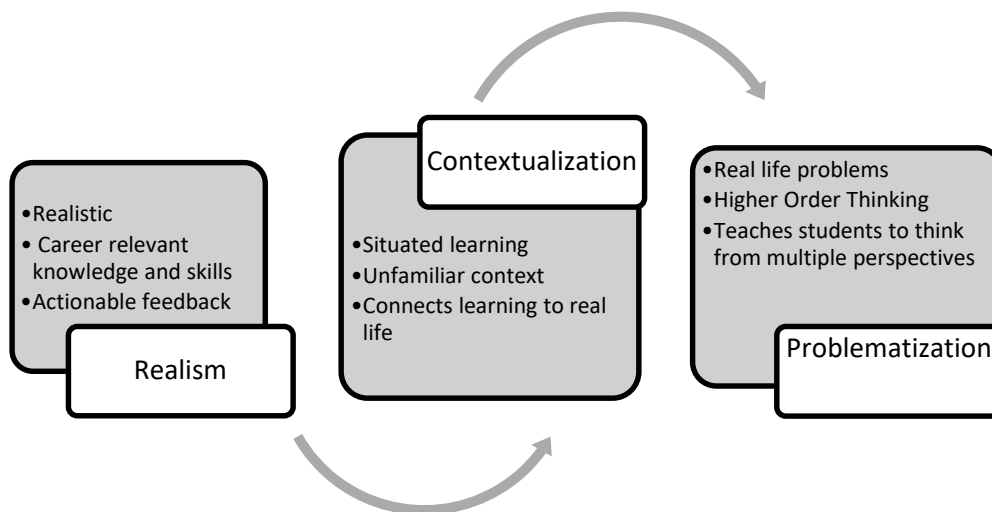
To date, limited research has explored university students' perceptions of authentic assessment (AA). James and Casidy (2018) study found that authentic assessment increased student satisfaction with their subject of study, although this was based on hypothetical assessment scenarios rather than completed assessment tasks. An earlier study by Cassidy (2006) found students regarded peer assessment to be a meaningful preparation for employee reviews in the workplace. Another study by Arsenis et al. (2021) found students valued group video tasks for developing teamwork and communication skills that would be useful for future jobs. Problematically, most previous literature has focused on what course designers and instructors consider as authentic assessment in higher education (e.g., Maclellan, 2004; Ozan, 2019). For this paper we report on findings from a pilot study we designed to conduct an initial investigation into Bachelor of Arts students' perceptions of AA. The main research question is: What kinds of assessment do students perceive as authentic in terms of 1) developing higher order thinking skills, and 2) employability?

## 2. Conceptualising Authentic Assessment

Although there is no single definition for authentic assessment, it can be understood as “a way to relate learning and work, creating a correspondence between what is assessed in the university and what graduates do in settings in the outside world” (Villarroel et al., 2020, 40). Similarly, Deneen (2024) regards AA as extending beyond the academic program to emulate meaningful experiences in the broader context of people’s lives. A set of criteria developed from a systematic review of the literature conducted by Villarroel et al. (2018) identifies three key characteristics for AA: 1) having a practical purpose and value beyond the classroom, 2) improving student abilities to solve problems that exist in real life, and 3) providing relevant skills for successful job performance (Villarroel et al., 2018).

Villarroel et al. (2020) recommend AA incorporate aspects of realism, contextualization, and problematization. Realism enables students to link knowledge learned in class with real life situations; for example, examining food waste issues to create a strategic plan for a restaurant manager (Steriopoulos et al., 2022). Contextualization requires instructors to assess student knowledge in a contextually relevant ways such as via work-integrated learning placements that involve having students write up a reflection on their developing professional identities (Green et al., 2022). Problematization incorporates problem-based learning that is applied to real life situations. For example, an assessment task for engineering students required them to work in team to find renewable energy solutions in different kinds of communities in Columbia (Colmenares-Quintero et al., 2023). Deneen (2024) suggests the aim of AA is to develop students’ capacity to apply higher order cognitive skills using realistic practices and contexts that promote thinking from multiple perspectives. Figure 1 demonstrates a conceptual framework for AA, adapting elements from Deneen (2024) as well as Villarroel and colleagues (2018; 2020) to illustrate key features of AA.

Figure 1 – Conceptual Framework for Authentic Assessment



Sources (Deneen, 2024; Villarroel et al., 2018, 2020)

### 3. Study Aim and Method

This study aimed to conduct an initial exploration into the perceptions of authentic assessment from a learner's perspective, for a group of students who had completed an Islam-West Relations major (IWRM). The IWRM refers to Islam-West Relations Major and is part of Bachelor of Arts (BA) degree offered at a university in Brisbane, Australia. In 2021, the authors co-designed an online survey consisting of 15 questions asking about two aspects of authenticity; its capacity to develop higher-order thinking (HOT) skills and be relevant to student's future work. Then, the authors validated the survey qualitatively following steps suggested by Artino and colleagues (2014). This started with a targeted literature review followed by discussions to check for relevance, clarity and interpretability of survey items. (A copy of the survey is available via DOI: 10.13140/RG.2.2.21100.17284).

### 4. Recruitment and Sample

Respondents were recruited via an existing online group that comprised of self-referred past and current IWRM students. Twelve participants who had completed the IWRM as part of their Bachelor of Arts Degree, completed the survey. Although 12 is a relatively small sample size, it was considered sufficient for a related HEA fellowship action research project. The survey respondents spent an average of 42 minutes to complete, indicating that the quality of responses was high. The sample comprised of 67 per cent male, 33 per cent female. The majority (91.7 per cent) were young, aged between 25-34 years, while 8.3 per cent were aged over 35 years. Most students (66.6 per cent) had completed the IWRM completely (i.e., 7 subjects) while others had taken 3 to 5 courses.

### 5. Analytic Strategy

To analyze the survey, we applied a mixed analysis strategy that uses both qualitative and quantitative techniques to analyze the survey under the unifying conceptual framework of AA (Rose et al., 2023). Mixed analysis works with a single data set (e.g., survey or interviews) and applies qualitative and quantitative analysis to that data. This entailed qualitative analysis of responses to open-ended questions combined with descriptive statistical analysis of close-ended responses. The analysis of open text box responses used qualitative descriptive research methodology to interpret findings (Sandelowski, 2010). For this paper we only report results from assessment that students rated highest (top three) and lowest (bottom three) in terms of authenticity criteria. The range of assessment items covered written, oral, online, tutorial, quiz, and examinations.

### 6. Results

Table 1 shows the top three most highly rated forms of assessment students perceived helped to develop higher order thinking skills. First, was *Essay Major* (58 per cent 'a lot,' 33 per

cent 'most'). Combined, these two categories represented 91 per cent of students' views on this assessment task. Second, was *Research Article* (42 per cent 'a lot,' 33 per cent 'most'). Combined, they represented 75 per cent of respondent's views on this assessment task. Third, was *Essay Minor* (66 per cent 'a lot,' 8 per cent 'most'). Combined, these two categories represented 74% of respondent's views. Overall, students perceived written assessments as most effective in developing their higher-order thinking skills.

**Table 1. Assessment Students Perceive Assists Higher Order Thinking**

	Not at all	Somewhat	A lot	Most	N/A	Total (%)
<i>Essay Major</i>		8%	58%	33%		100
<i>Research Article</i>		8%	42%	33%	17%	
<i>Essay Minor</i>	8%	16%	66%	8%		100

N/A = respondent did not do this form of assessment

Source: Own elaboration

The following comments illustrate the link between highly rated written assessments and the development of higher order thinking skills:

*Long form essays assisted me in developing research and communication skills that lent to the development or higher order thinking skills [Respondent 10]*

*I believe that relying most heavily on essays and research papers can develop the higher-order thinking skills, particularly for undergraduates [R. 6]*

These student comments underscore the perceived value of written assessment tasks in cultivating HOT among IWRM undergraduates.

Next, we report on assessments students perceived to be relevant to their future employment. Results in Table 2 indicate these to be *Essay Major* (67 per cent 'a lot' and 17 per cent 'most' - 84 per cent combined). Second was *Research Article* (42 per cent 'a lot' and 33 per cent 'most' - 75 per cent combined). The third was *Essay Minor* (75 per cent 'a lot'). These findings are similar to assessments students perceived developed HOT.

**Table 2. Assessment Students Perceive Relevant to Future Employment**

	Not at all	Somewhat	A lot	Most	N/A	Total (%)
<i>Essay Major</i>	8%	8%	67%	17%		100
<i>Research Article</i>	8%	8%	42%	33%	8%	100
<i>Essay Minor</i>	8%	17%	75%			100

N/A = respondent did not do this form of assessment

Overall, students overwhelmingly viewed essay-based and research-focused assessments as most beneficial for developing HOT and preparing them for future careers. The following comments show how students regard these forms of written assessment as providing job-ready skills.

*I found that both the research article and essays were the most helpful forms of assessment for my desired area of employment. This is because research skills are helpful to master for a policymaking context [R. 7]*

*I strongly believe that my essay writing skills will contribute to me getting a job. [R. 3]*

Table 3 shows the forms of assessments students recommended lecturers set for enhancing student employability were *Oral Presentation* and *Research Article* (58 per cent 'recommended' and 42 per cent 'highly recommended'). Following this was the *Journal Article* whereby (42 per cent 'recommended' and 50 per cent 'highly recommended' - 92 per cent combined). These results suggest that students want assessment to develop skills directly relevant to what is required future careers. While essay tasks provided skills that students valued, they preferred lecturers to set genres that are used in workplaces.

**Table 3. Assessment Students Recommend Lecturers Set for Employability**

	Do not Recommend	Recommend	Highly Recommend	Total (%)
<i>Oral Presentation</i>		58%	42%	100
<i>Research Article</i>		58%	42%	100
<i>Journal Article</i>	8%	42%	50%	100

Source: Own elaboration

The following comments address assessment tasks, activities, and skills that students perceive increase employability.

*The Oral Presentation was quite an intimidating piece of assessment... I believe that experience provided me with the confidence necessary to approach job interviews as well as being receptive to criticism and collaborative efforts in the work environment [R. 4]*

*I think a practical element of a course, such as ... engaging with community members who have limited understanding of Islam, could be beneficial [R. 1]*

*The [IWRM] course teaches critical thinking, research, analysis and communications skills that can be adapted across multiple areas of employment' [ R. 2].*

## **7. Discussion and Conclusion**

This study explored students' perceptions of authentic assessment to investigate its capacity to develop higher order thinking and relevance to future careers. Exploring student perceptions of authentic assessment has required greater attention according to our review of the literature, and doing so within a Bachelor of Arts program, Islamic-West Relations Major, offers a new contribution to the AA field as, '... Islamic studies programs in Australia were only established in the last decade.' (Rane et al., 2021, p.2).

The key takeaway from this pilot study is that students prefer assessment formats directly aligned with workplace practices (e.g., briefing papers, research articles, oral presentations) over more traditional academic genres (e.g., quizzes and exams). Recent research has found the use of 'viva' (oral form of assessment) is a useful tool for AA as it requires students to demonstrate or apply knowledge and skills in-situ or in face-to-face settings (Harper et al, 2021). As exams and quizzes typically requires a single correct answer, they are not well suited to problems that require multiple solutions (Boud & Soler, 2016; Weiss, 2003). Further, examinations (set under traditional exam conditions) are not usually ideal for assessing complex cognitive thinking (Kelly et al., 2022), although research suggests they can be more carefully designed to do so (Villaroel et al. 2020).

In conclusion, there are benefits and challenges in providing AA to foster 'engagement with real world problems' (Cross & Congreve, 2021: 496). A sustainable AA focus means that 'students should be given tasks that develop and test the skills and practices that they will need in their future careers—tasks that mirror professional practice and test more than just rote memorization' (James & Casidy, 2018: 401). This may require more effort from educators who may have relied mainly on traditional forms of assessment to assess undergraduates. To enhance sustainability of AA, experts suggest leadership is needed at an institutional level to implement strategies, build resources, and develop policy across the university (Deneen, 2024). At a program level (e.g. Bachelor of Arts), there needs to be regular consultation, evaluation and training for both students and staff to implement AA successfully and in a sustainable manner (Daneen, 2024).

Finally, the main limitation of our study was the short HEA Fellowship action research timeframe (12 weeks) which limited our sample size. As an unfunded project there was no financial incentive for students to complete the survey. Thus, findings cannot be generalized. In the future it would be beneficial to disseminate the survey to a wider population of students.

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## Conflicts of interest

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

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