Innovations in Education and Teaching International

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/riie20

Interactive oral assessment case studies: An innovative, academically rigorous, authentic assessment approach

Monica Ward, Fiona O'Riordan, Danielle Logan-Fleming, Dervila Cooke, Tara Concannon-Gibney, Marina Efthymiou & Niamh Watkins

To cite this article: Monica Ward, Fiona O'Riordan, Danielle Logan-Fleming, Dervila Cooke, Tara Concannon-Gibney, Marina Efthymiou & Niamh Watkins (2024) Interactive oral assessment case studies: An innovative, academically rigorous, authentic assessment approach, Innovations in Education and Teaching International, 61:5, 930-947, DOI: 10.1080/14703297.2023.2251967

To link to this article: https://doi.org/10.1080/14703297.2023.2251967

Published online: 29 Aug 2023.

INNOVATIONS IN EDUCATION AND TEACHING INTERNATIONAL
2024, VOL. 61, NO. 5, 930–947
https://doi.org/10.1080/14703297.2023.2251967

Routledge
Taylor & Francis Group

Interactive oral assessment case studies: An innovative, academically rigorous, authentic assessment approach

Monica Ward[a], Fiona O'Riordan[b], Danielle Logan-Fleming[c], Dervila Cooke[d], Tara Concannon-Gibney[e], Marina Efthymiou[f] and Niamh Watkins[e]

[a]School of Computing, Dublin City University (DCU), Dublin, Ireland; [b]Teaching Enhancement Unit, DCU, Dublin, Ireland; [c]Arts, Education and Law Group, Griffith University, Nathan, Australia; [d]School of Applied Languages and Intercultural Studies, DCU, Dublin, Ireland; [e]School of Language, Literacy and Early Childhood Education, DCU, Dublin, Ireland; [f]DCU Business School, DCU, Dublin, Ireland

ABSTRACT

Assessment is a central feature of teaching and learning. It is both complex and challenging in ordinary times, and these aspects are magnified in an online learning environment. Given its central role, it is crucial that its design and purpose is rigorous and robust. This paper presents justification for using interactive oral assessment as an online, innovative, authentic assessment approach that prepares students for professional life, combats plagiarism and promotes academic integrity. It shares findings through four brief case study examples of using interactive oral assessments in computing, education, French literature, and aviation. This study also demonstrates the value of a Community of Practice in developing expertise, confidence, and resources to support the effective application of interactive oral assessment.

KEYWORDS

Assessment; interactive oral assessment; academic integrity; transversal skills; community of practice; rubrics

Introduction

Life as we all knew it was suddenly interrupted due to the global pandemic. Like many other sectors, higher education had to pivot suddenly to an online environment. Trying to navigate a way through the new world of higher education was challenging. Designing robust assessments that could quality assure students' learning became a key priority for all. This paper presents findings from a pilot study in Ireland at Dublin City University (DCU), which took place over two semesters in the academic year September 2020 to May 2021. The aim is to examine the role of Interactive Oral Assessment (IO) in promoting academic integrity, and engaging learners in an authentic way that prepares them for professional life.

CONTACT Fiona O'Riordan fiona.m.oriordan@dcu.ie Teaching Enhancement Unit, Dublin City University, Glasnevin Campus, Dublin 9 D09 V209, Ireland

Context

Despite the 'limited use of distance learning in higher education prior to the COVID-19 crisis within a constraining regulatory framework' and 'limited digital readiness within higher education institutions prior to the COVID-19 pandemic crisis' (OECD, 2021, pp. 9–12), providers had to rise to the challenge of a rapid transition to online teaching and assessment. More recently, advances in artificial intelligence such as chatbots have made assessment methods such as Interactive Orals that combat plagiarism more necessary. In addition to the essential need to assure quality learning and promote academic integrity in an online assessment environment, there is the ever-present requirement of preparing students professionally, and developing key transversal skills (Deloitte Insights, 2019; Smit et al., 2020; World Economic Forum, 2020).

An effective assessment approach using Interactive orals (IO) has emerged to help provide a viable assessment alternative. Initially developed and trialled at Griffith University, Australia from 2015 as a balanced solution to the deeply complex assessment design challenges of student engagement, scalability, integrity and employability, the practice of designing and implementing IOs has been strategically embedded across Higher Education curriculum and rigorously evaluated ever since. Sotiriadou et al. (2019) from Griffith University have evidenced the role IOs play in enhancing student engagement, developing transversal skills in oral communication, deterring academic misconduct and more recently, in developing student metacognition and assessment literacy. Purposefully designed for HE and building on the work of the International Baccalaureate syllabus, IOs are genuine and unscripted interactions between a student and a marker, or a student and other students. They are driven by constructivist theory and are informed by andragogy principles, as students' learning is active and contextualised. They consolidate student learning in experiential contexts that enhance employability. IOs assure student learning within an authentic workplace or industry scenario that is orally based, requiring students to synthesise and apply acquired knowledge and skills.

In a review of the authentic assessment literature, Ashford-Rowe et al. (2014) identified eight key characteristics. To be authentic, an assessment (i) should be challenging, (ii) be a performance or product, (iii) ensure knowledge transfer, (iv) have metacognition as a key component, (v) accuracy in assessment performance, (vi) designed carefully, (vii) with opportunities for discussion and feedback, and (viii) ensure collaboration is central. This paper will demonstrate how each of these characteristics is addressed in the IO and the way in which an IO Community of Practice (IO CoP) is used to implement the assessment model.

The transition to online assessment and the need for quality assurance was a key influence in considering this assessment design for the DCU pilot. However, this initiative stemmed from Griffith University's work on IOs long before the pandemic or chatbots created concerns around assessment (Sotiriadou et al., 2019). In a non-pandemic situation, IOs can be held in a face-to-face environment, but there was no need to consider this option under the circumstances, and indeed no possibility. This paper presents four case studies from DCU academics implementing IO assessment. Initial, valid concerns of the academics were addressed by scaffolded support from the Griffith University expert and the weekly IO CoP meetings, which enabled them to successfully carry out interactive oral assessments with 322 students, in 7 modules across 4 faculties.

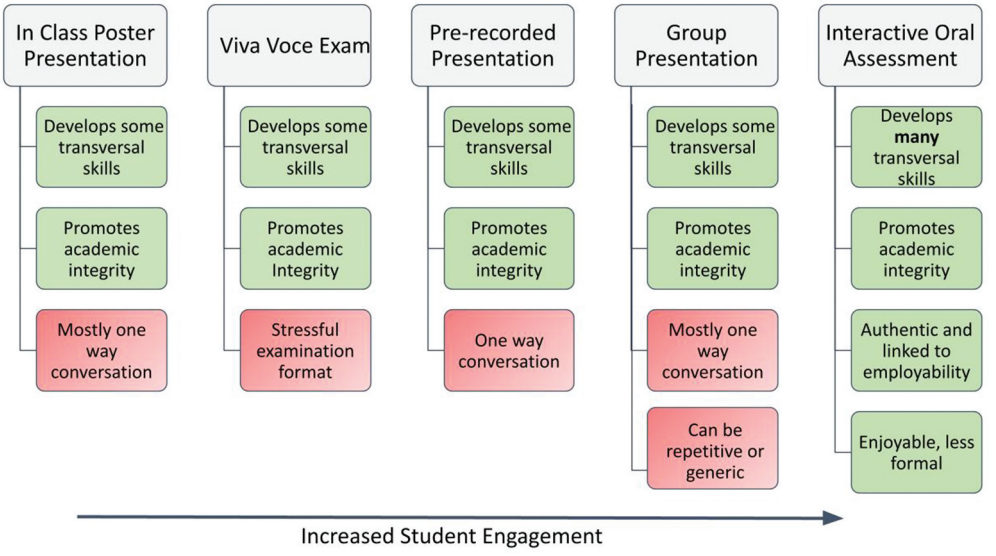

Figure 1. Comparison of different oral assessment types [insert].

IOs are innovative in the way they use authentic scenarios and prompts to drive a two way interactive conversation. In this way students are encouraged to showcase their learning through agile and critical analysis, using underpinning best practice or theory to demonstrate application and metacognition in conversational manner. The research presented in this paper clearly demonstrates that IOs encourage them to behave with integrity, develops transversal skills, is authentic and enjoyable. We argue, through the following comparison of different oral assessment types, outlined in Figure 1, that IOs are a more powerful form of oral assessment than many others.

Method

Sotiriadou and Logan-Fleming's collaborations and strategic partnerships have so far resulted in six institution-based Interactive Oral Communities of Practice (CoPs) in Australia, New Zealand, Singapore, Ireland, USA and Columbia, including the Dublin City University IO CoP referred to throughout this article, founded in 2020. Encouraged by the work on IOs by Sotiriadou et al. (2019), staff at the Teaching Enhancement Unit (TEU) at DCU, including an academic developer, sought out a collaboration with the Griffith University research team in Australia, led by a learning and teaching design consultant. The TEU and DCU academics formed a cross-disciplinary IO community of practice (IO CoP) to support the further development and refinement of IO practice in design and delivery. The collaboration with an experienced forerunner at Griffith University, and, through her, with some other Griffith University colleagues, was instrumental in ensuring the success of the CoP. Individual members of the CoP had a rich diversity of approaches and learned from and supported each other. In times of rapid technological change and innovation, it has been noted that 'institutions should align the technological and operational supports to the specific educational needs of staff and

students' (Brady et al., 2019, p. 3081). The IO CoP drew on existing University supports (i.e. an academic developer working in TEU, existing technologies etc.) while also creating their own peer-support environment, thereby facilitating a robust and integrated assessment design for all the pilot participants in this study.

Lave and Wenger (1998) proposed the term Community of Practice (CoP) for a group of people who share a concern or a passion for something they do, and learn how to do it better, as they interact regularly. The IO CoP did not have an explicit agenda for each meeting and encouraged members to share their enthusiasm, knowledge, and expertise in an engaged and creative way. The aim was to foster new approaches to challenges, or indeed solutions to problems, as Wenger (2011) proposes. The challenge in this context was to provide an alternative assessment to traditional examinations, which would engage learners, prepare them professionally, and promote academic integrity. During the IO CoP meetings, expertise, examples, and opportunities for discussion provided invaluable support. Tangible examples of this support were evident in the following aspects: collaborative designs that were constructively aligned; scaffolded assessment strategies that had an integrated IO component; scenario planning; development of rubrics and prompts for the IOs. CoP members helped their colleagues to create examples of recorded IOs for each pilot, which were captured during the weekly CoPs. All this collaborative input culminated in the creation of a DCU IO User Guide (O'Riordan, 2022). The CoP meetings were supported each week by the academic developer from DCU's TEU, and the learning and teaching design consultant from Griffith University. There was an open invitation extended to all DCU academics and those who were interested joined the CoP. Contributions from CoP members were very organic and natural, supporting Lave and Wenger's (1998) proposition that a CoP is a commune of like-minded passionate groups of people with a similar objective.

Five DCU academics across four different schools and faculties in the university piloted IOs in seven modules (courses) during the academic year 2020–21. Although the module contexts were different, each module received positive student feedback, achieved successful results, and enhanced the academics' own teaching and learning experience. While all academics had different foci, each of them valued the weekly IO CoP meetings as a way of helping them to apply this innovative and engaging method of assessment. The meetings, which took place online, were a safe and supportive space to help build expertise and confidence in IO. All of the academics also felt that the CoPs offered them the opportunity to build skills and learning in assessment beyond the application of IOs.

Ethical approval for this study was secured by the Research Ethical Committee at DCU. Data was collected at the end of both semesters (December 2020 and May 2021) using a digital survey to gain student feedback anonymously. The survey sought feedback on how useful students felt the support resources and teacher guidance were in helping them prepare for the IO and the extent to which the IOs were authentic, engaging, enjoyable, and promoted academic integrity, and (where applicable) collaboration.

The number of students across all modules in the pilot was small, but sufficient (n.322), with a response rate of 43.47% response rate (n.140). The assessments varied between individual, pair, and group IOs. While the overall module weighting ranged from 10% to 90%, 30% and 50% weightings were the most common.

Table 1. Student ratings for supports used.

	Use of rubric	Use of recorded example	Use of assessment brief/ guidelines	Use of in class discussion
Strongly agree	35%	35%	34%	37%
Agree	41%	29%	39%	36%
Neutral	16%	21%	15%	18%
Disagree	5%	10%	8%	5%
Strongly disagree	1%	5%	2%	3%
Not answered	3%	1%	1%	1%

Student profiles were spread across all four-year undergraduate stages and post-graduate levels. The 90% continuous assessment weighting for IO assessment took place within the postgraduate teacher training students, and the 10% allocation was with first-year computer science students. Details of each pilot are outlined separately in the next section.

Findings

Each case used a real-life scenario to guide the two-way, free-flowing, unscripted conversation. The CoP helped design the scenario, and record an example in every case. Again with the support of the CoP, each academic designed a rubric to guide the conversation and to facilitate ease of marking. Both the rubric and example IO recording were used in class as a discussion activity to help prepare students for their assessment.

Overall, students reported that they found the IOs beneficial and useful across many different criteria. The findings (Table 1) show that the detailed rubric, assessment brief with guidelines, and in-class preparatory discussions were most useful (76%, 73%, and 73%, rating these features as good or very good respectively), and the use of a recorded IO example was rated highly by students (64%). Whilst the authors recognise detailed rubric and assessment guidelines as assessment best practice, what was interesting in terms of this study was the value of the IO CoP in designing and refining more focused and detailed rubrics and assessment briefs. Furthermore (Table 2), the IOs were found to be very effective (rated good or very good) in encouraging students to do the right thing in terms of academic integrity (82%) and discouraging them from cheating (77%), thus showing IO are a rigorous form of assessment. A strong majority of students also felt that the IOs allowed them opportunities to collaborate (79%), and to understand what was required of them (79%), and that they provided authentic and real-life assessment experiences (78% and 79% as good or very good respectively).

Correlations found in the data included students feeling engaged throughout the module, and enjoying the assessment (0.78); feeling engaged throughout the module, and involved in the assessment (0.76); feeling involved and enjoying the assessment (0.74); and understanding the assessment brief guidelines and discussion in class (0.70). Overall analysis across all cohorts found that this assessment approach had multiple benefits, particularly when used with a rubric, recorded example, assessment guidelines, and in-class discussions. Detailed findings are presented below in case study format for each of the different disciplines that piloted this approach.

Table 2. Students rating of IOs.

	Understood requirements	Authentic	Opportunity to collaborate	Provided real-life practice	Engaging	Felt involved	Enjoyed	Discouraged contract cheating	Encouraged the right thing
Strongly agree	44%	45%	42%	43%	35%	47%	33%	44%	49%
Agree	35%	33%	37%	36%	31%	28%	29%	33%	33%
Neutral	15%	18%	17%	15%	23%	18%	19%	19%	11%
Disagree	4%	3%	3%	5%	8%	5%	9%	4%	5%
Strongly disagree	2%	1%	1%	2%	3%	2%	9%	0%	1%
Not answered	1%	0%	0%	0%	0%	0%	0%	0%	0%

Computing case study

IOs were used in three modules in DCU's School of Computing: a first-year module in Collaboration and Innovation (n.90 cohort 1), a postgraduate module on the same topic (n.12, cohort 2), and a third-year module on Technical Communications Skills (n.65, cohort 3). In all three modules, the scenario involved students forming software consultancy teams that were commissioned to give advice to an external organisation. For cohorts 1 and 2, the software consultancy team was asked to help the organisation choose between two different technologies (e.g. between Zoom or MS Teams), while for cohort 3 the students had to outline how technology could improve the way things could be done in a given context (e.g. technology in the Irish health service). In each scenario, the teams had to carry out the relevant background research and be able to articulate their recommendation in a professional manner. In the scenario, the team had a discussion with their department manager before going out to meet the client from the external organisation. Although they participated as a group, the students were marked individually. Each IO component was scaffolded throughout the modules with integrated formative and summative assessment opportunities.

There were four main symbiotic motivations for using an IO with these students. Firstly, it would enable the students to show their knowledge in a real-world context. Secondly, computing students tend to prefer technical subjects, and the IO assessment is a good vehicle for them to apply their communication skills in an authentic setting, as it integrates transversal skills which showcasing their technical knowledge. Thirdly, many of these students will work in multinational companies or liaise with clients globally and they will have to be comfortable with meetings online (these IOs took place online, but could also have taken place in a physical setting had the pandemic permitted). Finally, an IO assessment is academically rigorous.

Feedback from the students (Table 3) across the three cohorts (n.72, 43%) indicate that they thought it was very authentic, related to employment, encouraged them to do the right thing in terms of academic integrity, and fostered collaboration (82% rated good or very good for each of these features).

Similar to the overall findings, there was a strong correlation between engagement and level of involvement (0.73), enjoyment and involvement (0.74), and enjoyment and engagement (0.78). Students reported that they liked the move from written to oral presentation, highlighting '*The opportunity to discuss and express the ideas of the group project in an interactive setting, rather than just submit a written piece*.". They valued the authenticity of the approach: *"I really liked the interaction that this assessment provided. It was a real-life simulation. I felt like I was in a meeting of a company'*. Some students even reported enjoying the assessment itself, remarking that the '*interactive oral was good and fun*'. It was encouraging to see that students felt the assessment approach was authentic, related to employment, and prompted them to do the right thing in a collaborative and interactive manner, as these were the symbiotic motivations for the academic for engaging in IO.

Table 3. Computing.

	Rubric	Recorded example	Brief/ guidelines	In-class discuss-ion	Under-stood requiem-ents	Authentic	Opport-unity to collabo-rate	Real-life practice	Engag-ing	Felt involv-ed	Enjoyed assess-ment	Discour-aged contract cheating	Encour-aged to do the right thing
Strongly Agreed	32%	36%	32%	35%	46%	44%	46%	43%	33%	47%	33%	35%	39%
Agreed	39%	32%	35%	36%	29%	38%	36%	39%	35%	28%	32%	43%	43%
Neutral	19%	19%	19%	17%	19%	14%	14%	13%	18%	18%	21%	18%	11%
Disagreed	6%	7%	8%	7%	4%	3%	3%	3%	7%	4%	7%	4%	3%
Strongly disagreed	1%	4%	4%	4%	1%	1%	1%	3%	7%	3%	7%	0%	3%

Education case study

The team in the Institute of Education used IO assessments for 90% of the marks in their 100% continuous assessment 'Literacy in the early years' module (n.67, first-year post-graduate masters in primary education, 2.5 European Credit Transfer System (ECTS) credits). The module focussed on literacy pedagogy in the primary school. The scenario was that the students, who attended the IO in pairs but were individually marked, were having a conversation with a colleague in the staff room of a primary school. The scenario required students to plan a unit of work in literacy using high-quality children's literature as preparation for a conversation at the IO, where they adopted the role of a classroom teacher who is sharing how to teach early literacy skills using children's literature to other teachers in their school (played by the assessors). In the pair scenario, the staff room colleagues (i.e. the academics), could probe more deeply with an engaged student and try to tease out information from a less prepared student.

There were several motivations for adopting the IO approach. There was a need to ensure academic integrity in this 100% continuous assessment module. Additionally, the academics felt it would be helpful for these pre-service teachers to have the experience of discussing pedagogical topics in a professional setting, to show both their competence and confidence. Furthermore, the academics were keen that this new assessment approach did not over-burden the students, while at the same time adequately assessing their knowledge.

The feedback from students (n.35, 52.2%) was very positive (Table 4). There were particularly high ratings for employability (78% rated this feature good or very good), and for the opportunity to collaborate with peers (75% rated this feature good or very good), and 74% of students felt that it encouraged them to do the right thing. All of this chimed with the academics' motivation for using this approach. Further reaffirmation in terms of motivation to use this approach was provided by the correlation between the IO being 'enjoyable and engaging' (0.76) and also authentic and involved (0.77).

Open-ended responses were generally positive in nature, with students noting that the IO '*was engaging and practical in becoming future primary school teachers*' and that they '*gained much knowledge from the collaborative work as being able to speak about what I have learned consolidated my learning*'. Indeed, one student even commented '*I hope this kind of assessment continues across the PME course*', demonstrating an eagerness to engage in further IO assessments. The academics felt that their aims in using the IO approach were achieved, as the students had to be able to articulate their knowledge and application of their chosen pedagogy. They could also assess the students in a more effective manner than a closed-booked invigilated one-hour examination, as was the traditional mode of assessment for this module. Having the opportunity to converse with each student assured academics (assessors) of the students' learning.

French literature case study

The French literature case study involved two undergraduate literature and culture modules (n.19; n.17). In both cases, the IO replaced a written exercise and was worth 50% of the overall module mark in these modules. The scenario for the IO was a 15–20 minute radio show, where the student was a literary correspondent and the academic

Table 4. Education.

	Rubric	Recorded example	Brief/ guidelines	In-class discuss-ion	Under-stood requiem-ents	Authentic	Opport-unity to collabo-rate	Real-life practice	Engag-ing	Felt involv-ed	Enjoyed assess-ment	Discour-aged contract cheating	Encour-aged to do the right thing
Strongly Agree	26%	9%	23%	23%	29%	31%	31%	49%	17%	29%	9%	49%	40%
Agree	57%	31%	54%	43%	51%	37%	43%	29%	29%	31%	26%	20%	34%
Neutral	9%	23%	9%	29%	14%	26%	23%	17%	34%	29%	26%	23%	9%
Disagree	6%	29%	14%	3%	6%	6%	3%	3%	20%	9%	17%	9%	17%
Strongly Disagree	0%	9%	0%	3%	0%	0%	0%	3%	0%	3%	23%	0%	0%
Not answered	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

acted as a radio host. These were all individual IOs with a single student being assessed at any one time, in contrast to the other modules in the DCU pilot. The IO format was chosen in order to achieve a form of authenticity, and so that the students could 'go beyond' themselves and beyond the traditional lecturer-student roles. In one of the modules, the IO was set as the first assignment, as the academic sought to improve the students' written assignments by encouraging an initial oral engagement and in-depth analysis of a text, along with its cultural context and reception by critics. As the IO came as the first assessment, it provided a forum for students to establish a connection with the academic early in the module. In another module, the IO was the final piece of assessment, and in this case the academic sought to build on an initial written assignment through the IO.

The main motivation for the choice to change to an IO assessment from an all-written assessment was to combat academic misconduct (plagiarism) that had been occurring with written assignments. However, the academic had been hoping to redesign the assessment for some time, in order to increase the engagement and motivation of students. The opportunity to pilot an IO was therefore timely and welcome, as it seemed to tick the boxes of preventing academic misconduct while also enhancing student engagement and satisfaction.

Student response was very positive (n.12, 33.33%) (Table 5). Respondents gave a very high satisfaction rate across all criteria, especially those of feeling engaged and involved (95% of students rated both of these as good or very good), enjoying the assessment and feeling it was authentic (both features were rated 90% good or very good). Additionally, students found that IOs encouraged them to avoid copying and to do the right thing (80% and 90% respectively rated these as good or very good). Interestingly, although the IO in these two modules did not focus directly on employment-based tasks, a high number of students rated this aspect highly (75%, good or very good). Again, there was a correlation between feeling involved and enjoyment (0.74), and between involvement and engagement (0.71); and this was supported by some of the qualitative responses.

As with other case studies in this pilot, many students reported finding this assessment approach enjoyable – '*I enjoyed the "talk show" aesthetic. It was quite fun and the first time I have experienced such an assessment*'; citing '*the opportunity to actually talk about what I had learned and enjoyed without feeling pompous*' and '*a more enjoyable interaction with module assessments and resources*'. Several students commented that they enjoyed the '*acting*' element of the oral. Others noted that they '*learned so much*' from these courses, as the format obliged them to engage deeply with the material and to conduct independent work in order to consolidate their understanding and learning. Despite the excellent feedback from students, a few students shared their concerns about the limited time they had to discuss their learning, especially as it represented 45% of the module mark. This is also an indication of how much the students felt they had learned. The academic was very encouraged by the overwhelming positive feedback from students in relation to their feelings of being engaged, involved, and enjoying the assessment, while also combatting academic misconduct by being encouraged to do the right thing. Since the proliferation of use of artificial intelligence chatbots such as Chat GPT, the lecturer is even more likely to use interactive orals as part of assessment in her modules.

Table 5. French literature.

	Rubric	Recorded example	Brief/ guidelines	In-class discuss-ion	Under-stood requiem-ents	Authentic	Opport-unity to collabo-rate	Real-life practice	Engag-ing	Felt involv-ed	Enjoyed assess-ment	Discour-aged contract cheating	Encour-aged to do the right thing
Strongly Agree	50%	70%	65%	70%	75%	60%	45%	45%	65%	75%	75%	65%	80%
Agree	35%	20%	30%	20%	20%	30%	20%	30%	30%	20%	15%	15%	10%
Neutral	15%	10%	5%	10%	5%	10%	30%	25%	5%	5%	5%	20%	10%
Disagree	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	5%	0%	0%
Strongly Disagree	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Sustainable aviation case study

IO assessments were used in the Sustainable Aviation year two module (5 ECTS; n.52) in the BSc Aviation Management, contributing 30% to the module mark. In this scenario, students attended the Irish Aviation Student Association (IASA) conference and were tasked with discussing, in pairs, sustainable aviation with another conference delegate (the assessor). Each student was marked individually. Being able to form, communicate, and argue well-informed points in real-time and under realistic scenarios is vital for future aviators, and these learning outcomes provided the motivation for engaging in this assessment approach. Moreover, the topic of sustainable aviation requires a holistic approach that is not always well reflected in a traditional written assignment.

As with the other case studies, this IO was scaffolded and supported by using detailed rubrics designed in consultation with the students, based on the principle of students as partners in assessments (Ní Bheoláin et al., 2020). The IO pre-recorded example was used as an interactive preparation tool for students by overlaying the recording with interactive feedback points and resources, using H5P technology. In addition, students had an opportunity to work in pairs in zoom from the very first class in this module. The motivation for this was to help create a safer and more collaborative experience for the students, particularly as they were studying remotely. Since the conference was online, the assessment took place via zoom, and the recording was shared with the students for self and peer reflection.

The feedback survey was completed by 21 students (40.38% response rate) and was overall positive across all the criteria (Table 6). In particular, students rated highly the opportunities to collaborate (90% rating good or very good), do the right thing (86% good or very good), behave with integrity and be involved in the assessment (81% good or very good). There was a correlation between class discussion and understanding of the assessment (0.70), class discussion and assessment brief/guidelines (0.74), and involvement and enjoyment (0.71).

Students reported that they enjoyed that it was different from traditional assessments ('*it was different from standard essays, made it more enjoyable*'); and saw it as '*a welcome change from the essays and discussion papers required for continuous assessment in other modules*'. They also valued the opportunity to work in pairs while still being marked individually, as evidenced in these two sample excerpts responding to what they enjoyed most: '*That each student received an individual grade in the pair work*'; and '*how engaging it was and working in a pair*'. Two further comments that illustrate the value of this approach in understanding and communicating the learning are that '*It forced me to fully understand the information I was discussing'* and '*gave me the ability to speak freely and engage with course material in a manner other than a traditional essay*'. Despite the overwhelmingly positive reception to this assessment approach, some students reported finding it somewhat stressful ('*stressful as wasn't sure what to expect*'';*nerve-wracking to speak*'; and'*pressure of being on a zoom call*'). However, since a significant impetus for using IO assessment was to prepare students professionally, and this approach allowed them to do this within a safe environment, the academic IO assessment achieved the objective.

Table 6. Sustainable aviation.

	Rubric	Recorded example	Brief/ guidelines	In-class discuss-ion	Under-stood requiem-ents	Authentic	Opport-unity to collabo-rate	Real-life practice	Engag-ing	Felt involv-ed	Enjoyed assess-ment	Discour-aged contract cheating	Encour-aged to do the right thing
Strongly Agree	48%	38%	29%	38%	33%	52%	38%	24%	43%	48%	33%	43%	62%
Agree	24%	19%	43%	43%	43%	19%	52%	48%	24%	33%	38%	43%	24%
Neutral	19%	33%	19%	10%	10%	29%	5%	10%	33%	14%	19%	14%	14%
Disagree	5%	0%	5%	5%	5%	0%	5%	19%	0%	5%	10%	0%	0%
Strongly Disagree	0%	5%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%
Not answered	5%	5%	5%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Discussion

The technologies leveraged for the IO assessments were the use of zoom to conduct the IO and record the assessment, along with the scheduling tool and rubric on the University's Virtual Learning Environment (VLE), Moodle. Reliance on technology was not problematic for this study; rather it was an enabler. It enhanced the quality of assessment since the recorded IOs could be used for subsequent moderation and external examination purposes, and in some cases for student self-reflection. This is in contradiction to the aforementioned OECD concern that there can be risks for higher education institutions as a result of their reliance on technologies in the online assessment space. Leveraging technology also offered logistic efficiencies using the VLE, through the Moodle scheduling tool, aligned with zoom recordings. An additional spin-off from the use of technology is that it supported the development of students' digital capacity, which is a key requirement for successful graduates today (Smit et al., 2020).

The pivot to online assessment during the COVID-19 pandemic shone a light on accountability for many in terms of academic integrity and the necessity of combating plagiarism has become more pronounced since the advent of artificial intelligence chatbots. The study shows that IOs reduced the risk of cheating and encouraged students to do the right thing. Students reported feeling the need to be more prepared and accountable for their performance in the IO, and requiring them to showcase their own learning. Moreover, there is evidence in this study that students felt better able to share their learning in a meaningful and creative way using this assessment approach. Overall, students reported that they enjoyed the approach. Many welcomed the rubric and the examples of recorded IOs, along with opportunities to collaborate. Others appreciated the non-threatening and more authentic nature of the assessment. While it is encouraging to hear students enjoying assessment, one of the main objectives of this assessment approach was to prepare students professionally. The development of transversal skills that equip students for professional life is an essential deliverable of higher education today. This study shows that IOs offer a robust and authentic assessment approach that promotes the development of transversal skills in preparation for employment such as collaboration, professional communication, higher-order, critical and agile thinking.

It was encouraging to note how transferable the IOs were to the different disciplines, and how a cross-disciplinary CoP contributed to creating a community of academics who could use the IO blueprint and apply it to their own context with the support and guidance provided. From the academics' perspective, the IO was a success, particularly in such volatile and uncertain global circumstances. Initially, the DCU academics were slightly unsure about the approach, however, they recognised the potential of using IOs to turn a challenge into an opportunity. As is usually the case, it helps if there is an early adopter in the group, and there was one in the DCU community. It was also important that an experienced academic developer in the DCU TEU was enthusiastic and willing to learn from Griffith University, and to facilitate the CoP. The CoP provided a safe space to develop and design IOs in a pedagogically robust manner.

Marking assessments is usually not an enjoyable task for academics. However, the academics in this study reported that, although the process was perhaps more challenging than traditional assessment approaches, it was certainly more creative and enjoyable. Notwithstanding this, academics involved in this pilot reported that the time

required to tool up for this type of assessment was considerable, although time invested proved worthwhile. The CoP helped to mitigate this demand by sharing expertise and knowledge.

Academics reported that IO assessment was more authentic and academically rigorous than the usual written examination. It enabled them to explore their students' ability to apply and analyse their knowledge of the module content, assessing students at higher levels on Bloom's taxonomy (Engelhart et al., 1956). The scenario-based approach enabled the academics to explore student learning in a real-world context that was meaningful and relevant for students, and which would be of benefit in their future careers. A further value of the CoP was in helping address a concern that academics had which was one of fairness, particularly when the IO assessment was in groups or pairs. One academic assessed pairs together, giving both students the same grade. In the other cases where IO's were in groups or pairs students were graded individually, with some rubrics including a grading criterion to reward students for allowing classmates to contribute effectively. For example, a rubric criterion from the French Literature case study was 'the ability to listen to what teammates/speakers are saying and to link in with those points accordingly and at the appropriate time'.

Rubrics for each IO assessment were rigorously designed, reviewed and refined with the help of the expert from Griffith University during the weekly CoP sessions. In conjunction with the recorded examples of IO videos, these rubrics were subsequently used with the students during class time (see examples in DCU Interactive Oral User Guide, O'Riordan, 2022).

Overall, this pilot study showed IOs are a pedagogically sound, academically robust assessment method that can effectively prepare students for employment, develop many transversal skills such as collaboration, professional communication, integrity, critical and agile thinking. As outlined in this paper, each of the four case studies presented had different objectives for engaging in IOs. In all four cases the academics felt their objectives were surpassed, and their motivations were validated. Moreover, feedback and interaction in the IO CoP indicate that the academics enjoyed the experience, and valued the contribution of colleagues from different disciplines to their assessment design. Although most academics in this study felt IOs are an efficient and effective assessment method, one of the academics felt that time involved was slightly greater than correcting traditional exams. However, student enjoyment and engagement factors have convinced her to continue, and like the other academics in this study, she has expanded use of IO assessment in subsequent years.

Conclusion

This pilot proved successful overall. Findings show that the approach was successful in terms of promoting academic integrity and of helping students feel more prepared for professional life. As an assessment approach, it offered a robust, quality-assured, authentic assessment that promoted transversal skills required by industry. Despite the success, it must be acknowledged that some students found the assessment approach, and use of technology daunting, which in turn led to some of them feeling anxious and stressed. However, any assessment can cause anxiety. Also, this was the first iteration of IO in DCU, and academics can now use the feedback from former IO students to allay any concerns.

Using the recorded example and rubric frequently for in-class discussions can also help with any student anxieties. Equally, a few students were concerned about the limited time allowing them to sufficiently showcase their learning, but this also indicates how well they had engaged with the course. Conversely, the IO allows the academic to draw students out on important points in order to gain fuller understanding, and also to prompt when necessary.

Key to the success of this work was the role of the weekly CoPs. They provided a safe space to explore the approach from a pedagogical perspective, and allow academics to share their concerns with like-minded colleagues, and gain confidence and experience in this assessment approach. The CoP has expanded in DCU and more academics are now using IOs. The original group that piloted this approach continued to use IO assessment and success. Success of the pilot has resulted in exponential growth of IO across the university since its inception in 2020–21. Twelve additional DCU academics joined the IO CoP, and IO assessment is now used in 18 different modules (courses), across all faculties and many different disciplines/schools (e.g. Aviation, Computing, Education, Engineering, French Literature, Law and Psychology, Nursing). In total, over 2,000 DCU students have experienced IO, with feedback across all cohorts remaining very positive. All founding members of the CoP continue to use this mode of assessment, as they are convinced of its benefits in terms of student engagement, authenticity, transversal skills, and in order to combat plagiarism.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributors

Monica Ward is an academic in the School of Computing at Dublin City University. Her areas of research include computer science education, the Scholarship of Teaching and Learning (SoTL), educational technology, and Computer Assisted Language Learning.

Fiona O'Riordan is an academic developer in the Teaching Enhancement Unit (TEU) at Dublin City University (DCU). She was recently seconded to the European Consortium of Innovative Universities (ECIU) as Educational Portfolio Coordinator. Her areas of research include curriculum development, assessment, academic integrity, and academic professional development.

Danielle Logan-Fleming is a Learning & Teach Consultant in the Arts, Education and Law Group, at Griffith University. She has received University awards for Innovation, Teaching and a National Citation for Outstanding Contributions to Student Learning in recognition of the impactful SoTL projects she has led. Danielle's areas of research include assessment, academic integrity, learning loss as a result of the COVID-19 pandemic, and curriculum development.

Dervila Cooke teaches in French and Francophone studies at Dublin City University. The bulk of her research has been on contemporary cultural production (fiction and film, drama, and prose) in France and Québec. More recently, she has worked on assessment in education and on sustainable local growing initiatives.

Tara Concannon-Gibney lectures in the area of literacy. Her research interests include early literacy instruction, literacy instruction for English language learners, literacy integration across the curriculum, and the enhancement of teaching and learning in higher education.

Marina Efthymiou is an Associate Professor in aviation management. Her research interests include sustainable aviation, Air Traffic Management, and current issues in aviation and aviation training.

Niamh Watkins is an assistant professor in the school of Language, Literacy and Early Childhood Education (LLECE). Her research interests include the reading-writing connection, writing genres; literacy in the context of educational disadvantage, and innovative pedagogy in the area of literacy.

ORCID

Monica Ward http://orcid.org/0000-0001-7327-1395
Fiona O'Riordan http://orcid.org/0000-0002-0139-5169
Danielle Logan-Fleming http://orcid.org/0000-0002-1414-5847
Dervila Cooke http://orcid.org/0000-0003-3633-4988
Tara Concannon-Gibney http://orcid.org/0000-0002-6373-3362
Marina Efthymiou http://orcid.org/0000-0001-8611-5973

References

Ashford-Rowe, K., Herrington, J., & Brown, C. (2014). Establishing the critical elements that determine authentic assessment. *Assessment & Evaluation in Higher Education*, *39*(2), 205–222. https://doi.org/10.1080/02602938.2013.819566

Brady, M., Devitt, A., & Kiersey, R. A. (2019). Academic staff perspectives on technology for assessment (TfA) in higher education: A systematic literature review. *British Journal of Educational Technology*, *50*(6), 3080–3098. https://doi.org/10.1111/bjet.12742

Deloitte Insights. (2019). *The path to prosperity: Why the future of work is human*. Deloitte Development LLC. https://cica.org.au/wp-content/uploads/90572c4f-4bb5-4b54-bf27-cc100d86890d_20190612-btlc-inbound-future-work-human-report.pdf

Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). Taxonomy of educational objectives: The classification of educational goals. In B. S. Bloom (Ed.), *Handbook 1: Cognitive domain* (pp. 17–20). David McKay.

Lave, J., & Wenger, E. (1998) *Communities of Practice*.https://valenciacollege.edu/faculty/development/teaching-learning-academy/documents/CommunityofPractice.pdf

Ní Bheoláin, R., Lowney, R., & O'Riordan, F. (2020). *Students as partners in assessment: A literature scoping review*. Dublin City University. https://doi.org/10.5281/zenodo.4270579

OECD. (2021). *The state of higher education: One year into the COVID-19 pandemic*. OECD Publishing. https://doi.org/10.1787/83c41957-en

O'Riordan, F. (2022). *DCU Interactive Oral User Guide*. https://www.dcu.ie/teu/academic-integrity-0#tab-79706-2

Smit, S., Tacke, T., Lund, S., Manyika, J., & Thiel, L. (2020). *The future of work in Europe: Automation, workforce transitions, and the shifting geography of employment*. McKinsey Global Institute. https://www.mckinsey.com/~/media/mckinsey/featured%20insights/future%20of%20organizations/the%20future%20of%20work%20in%20europe/mgi-the-future-of-work-in-europe-discussion-paper.pdf

Sotiriadou, P., Logan, D., Daly, A., & Guest, R. (2019). The role of authentic assessment to preserve academic integrity and promote skill development and employability. *Studies in Higher Education*, *45*(11), 2132–2148. https://doi.org/10.1080/03075079.2019.1582015

Wenger, E. (2011). Communities of practice: A brief introduction. https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/11736/A%20brief%20introduction%20to%20CoP.pdf?sequence%E2%80%B0=%E2%80%B01

World Economic Forum. (2020). *The future of jobs report, 2020*. WEF Publishing. http://www3.weforum.org/docs/WEF_Future_of_Jobs_2020.pdf