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Learning from COVID-19 to futureproof assessment in Business Education

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The prevalence of face to face invigilated exams in Business Schools across Australia and New Zealand (indeed around the world) needed to be reconsidered quickly during the recent COVID-19 pandemic crisis. With teaching and learning activities moving to online mode due to social distancing requirements, the need to consider technology enabled assessments and how they could be efficiently and effectively implemented became a crucial focus of universities in early 2020, affecting staff and students alike. This paper looks at the experiences of a group of academics and academic developers from five ANZ Business Schools and the lessons that they learnt from these experiences.

Keywords: Business Education; Technology enabled Assessment; COVID-19

Background

COVID-19 social distancing requirements have necessitated all workplaces, including universities, to interrogate their current or predominant practices. Most Australian and New Zealand (ANZ) Business schools entered 2020 with prior experiences of teaching online. However, a prevalence of end of term, high stakes, in-person invigilated exams in ANZ business schools (Suri & Krishnan, 2020) posed significant challenges. ANZ Business schools are typically characterised by large class sizes and a significant proportion of international students. This makes certain assessment practices, common in other disciplines, less viable in business schools. Large cohorts of international students necessitated business schools to remain more vigilant about state censorship issues (e.g., with students from China) and internet access issues. International students who were living in ANZ needed more pastoral care. Issues of collusion became more of a concern with several students doing the same units live in the same house. Business schools did not experience the challenges faced by performing arts schools and laboratory-based disciplines.

Method

This paper shares the learnings from staff experiences at five ANZ business schools in their adoption of various technology facilitated assessment forms in response to this challenge. Drawing upon the logic of maximum variation sampling (Patton, 2012), we believe our insights are transferable to ANZ business schools. The universities involved provide a broad cross-section including metropolitan based and rural/remote institutions; fully online, combined online/face-to face cohorts and full face-to face cohorts; as well as varying learning management systems (LMS). This paper is a co-constructed account of how we understood our school's response from the partial and perspectival views as teachers and academic developers (Ely et al., 1997). By sharing on the ground realities informed by the collective experiences, this paper will assist business educators in making informed decisions about designing authentic and rigorous technology facilitated assessments. Contributors to this paper initially constructed a reflective account of their own school's response. Then, the key themes emerging from our individual responses were dialogically identified and resulted in the co-construction of this collective account with the goal of highlighting commonalities and variations in how we approached assessment. Co-constructing this account also empowered us to develop a more holistic understanding of the various technology facilitated assessment forms to support informed decision making in our own schools.

Assessment design has profound implications on how university students approach their learning, as assessment drives learning for most of them (Boud & Falchikov, 2007). A variety of assessment approaches are regularly used within business education including essay, report, individual and team assessment, as well as exams. Before 2020, in most ANZ Business schools, end of term high stake closed book in-person invigilated exams were commonly used for the following reasons: to minimise unauthorised collusion or contract cheating; to meet the requirement of accreditation bodies for authenticating that the assessed work has been done by the relevant student; to assure learning of knowledge from all the topics taught in the unit while maintaining efficiency in marking time (Suri & Krishnan, 2020). At the same time, an increasing number of Business educators are also opting for authentic assessment tasks (Biggs & Tang, 2011) aimed at assuring development of higher order thinking and transferable skills that are essential in workplace (Succi & Canovi, 2019; McMurray, Dutton, McQuaid & Richard, 2016).

COVID-19 pushed Business schools into unprecedented times where in-person invigilated exams were no longer a viable option under the social distancing requirements. Flexibility in when and where to undertake the assessment tasks also needed to cater for students with competing commitments on their time and with special needs. It is timely for Business educators to have multiple conversations about affordances of various technology-facilitated assessment approaches that are informed by the experiences of lived realities from diverse contexts.

Our collective and varied experiences

Various technology facilitated assessment approaches

As the pandemic crisis escalated, alternative examination methods needed to be considered urgently. A variety of technology facilitated assessment options were considered and used, with significant variations and levels of success, across our schools. Table 1 identifies the assessment approaches considered during this time together with the advantages and disadvantages of using each assessment approach.

Table 1: Technology facilitated assessment options

Assessment Option	Advantages	Disadvantages
Proctoring	Authenticate student identity through live proctoring and AI. Cost-effective solution when used to replace in-person, invigilated paper-based exams, especially with geographically dispersed learners. Sessions recorded for future reference.	Students can find ways around invigilation. Less appropriate for answers requiring hand-drawn graphs and calculations Space and stable internet connection to use the proctoring tool may not always available.□ Requires students to stay within camera view throughout. Student and data privacy issues. Perceived to be expensive.
Quiz tools	Random allocation enables generation of a unique exam for each student to minimise potential collusion. Response time can be restricted for flexibility in when to take the quiz. Automated marking possible for questions with objective responses. Simultaneous marking of sections for the same set of submissions. Analytic data available.	Significant set up time for unique generation of tests. Designing and marking higher order questions can be time consuming. Some options not easily adapted to format. Stable internet connection required. Potential for copy and paste from online sources and contract cheating.
LMS Dropbox	Textual responses can be run through text-matching software. Suitable for multiple software submissions. Supports multiple writing genres. Can include questions requiring higher order thinking skills. Internet connectivity required intermittently.	Potential for collusion, copy and paste from online sources and contract cheating. Designing and marking higher order questions can be time consuming.

Oral/Video Communication & presentation tools	Synchronous interviews can assess deep learning & verify individual contribution. Enable assessment of presentation skills.	Staff and students need to upskill to use new technologies.
Collaboration platforms	Provides a single hub for group communication and collaboration. Groups can be provided with individual collaboration space. Insights into communication activities.	Requires planning to setup groups. Mostly stand-alone platform without integration or minimal integration with LMS
Assessment platforms (e.g., Cadmus)	Textual responses can be run through text-matching software. Secure non-invasive online platform with cloud autosaving. Integrates with LMS. Provides analytics related to text-matching, words directed pasted, extent of editing before submission & the number of unique devices used completing assessment.	Learning curve for staff and students when using for the first time, students can input only texts and images (for assignments requiring spreadsheets, only images of the spreadsheets can be uploaded) When students are working offline, requires students to keep their internet browser open and not clear internet cache/history.
Simulations	Provide authentic assessment scenario. Able to monitor student progress. Can provide individualised data. Team or individual options. Provide specific/generic business situations.	Can be expensive. Need to allow time for orientation for both students and staff.

Universities that had 100% online programs with proctored exam projects at varying stages of testing accelerated the broad implementation of these projects to ensure that students were able to complete exams necessary for professional accreditation. The use of proctored online exams was considered by all contributing Business schools however concerns regarding student privacy, technology access and internet reliability led to the consideration of alternate methods of examination. In some cases, staff also made the change from exam to assignment to overcome these issues and implementation logistics.

Lived experience

Across all our schools, a significant challenge was to think of alternatives for in-person invigilated exams and other forms of face to face assessment (e.g., teamwork, presentations).

Logistics of rapid change: In moving from face to face to online learning, students and staff alike experienced a time of rapid change. Even though all our institutions were already in the online teaching space, making informed technology facilitated assessment choices and implementing them incurred a large investment in time from academics, academic developers and professional staff. This included the challenge of implementing large scale setting up of online exams without prior experience and detailed understanding of potential problems that could eventuate. Even the highly experienced online universities faced problems in moving from a smaller number of students doing online exam (OLX) to have almost all students completing them. It was similar to any business experiencing rapid growth but without the systems and the trained staff to handle increased workloads. Further, the additional students added to the OLX experience were far more inclined to be those who would experience (or create) problems.

Proctored exams: Two schools proctored most of their exams to authenticate student identity through live proctoring and AI. However, both refrained from fully proctored online exams as they are much more bandwidth intensive and students sometimes see them as being more invasive (Harwell, 2020). Further, at times proctoring did not guarantee academic integrity; particularly when the proctoring service did not require the student to move the camera around to show the entire space in which the student was taking the exam, a student could quite easily place large pages of notes on the wall/space behind the computer or even around the edge of the computer screen so that they could view these during the exam.

Enhancing exam integrity and open book exams: Time allocated to take the exams ranged from on-demand exams to scheduled 3-hour exams to 48-hour exams. Decisions were based by balancing the flexibility offered to students with the longer timeframes against the increased potential for breaches of academic integrity. To

minimise collusion, several academics used technology effectively to generate multiple sets of assessment questions using the randomisation feature of the LMS quiz tool. The analytics of meta-data associated with individual submissions was sometimes used for detection. Without invigilation, the notion of closed book exams became questionable and open book exams were considered by many academics which required them to think differently as they had no prior experience of designing open book exams. With additional support and encouragement, several academics designed more complex and applied questions requiring deeper level of learning, than most standard closed book exam questions. Also considered were more authentic assessment tasks similar to those that students are likely to perform in the workplace. Designing and marking unique and authentic assessment tasks often involved additional workload.

Balancing flexibility and equitability: In response to the disruptions in students' lives, conditions for extending the assignment due dates were relaxed in many cases. Some other forms of accommodations included offering supplementary exams, upgrading of grades and the ability to remove marks from Grade Point Average (GPA) or Weighted Average Mark (WAM). All these changes increased the workload for academics and professional staff. Extensions were utilised to increase flexibility and equity; however, they were, and continue to be, a double-edged sword. Whilst they provided flexibility to students, they had a domino effect. Students who were granted extensions could not keep up with the content being taught in the class as they didn't have the assumed knowledge. Also, some students with extensions carried their pending work into the next term. With progressive assessment design, feedback on each assignment fed forward into the next assignment. This posed a challenge for staff in terms of releasing the feedback within a fortnight for students who had submitted on time but then giving away the answers to those who had got extensions. It is often the area of extensions where the pastoral care responsibilities became critical, and thus academics achieved a deeper understanding of the challenges faced by their students. Such challenges included change of power dynamic in the workplace, loss of income or total loss of employment, increased workload, more challenging study environments, and increased responsibilities in caring for children or aged parents.

How practice has changed/Lessons learned

There are several key take-aways from our experiences that Business schools should consider moving forward.

Developing skills in using technology effectively

Assessment changes necessitated by COVID-19 required staff and students to hastily learn how to use various technologies, such as communicating through Zoom, collaborating through MS Teams; scanning and uploading files with different formats. In addition to building digital literacy skills, this highlighted the need for universities to develop efficient processes for rapidly upskilling staff and students in using various forms of technologies effectively.

Academic Integrity

Secondly, the shift of all assessments online also raised difficult questions around academic integrity. Many academics noted increased instances of academic integrity breaches and one commented that it was 'a rock most academics chose not to look under during the semester'. Regardless of the type of assessment – low stakes online LMS quiz, written assignment/report, high stakes LMS exams (proctored or unproctored) - conducting assessments online creates new possibilities for students to engage in academic misconduct. Not requiring invigilation was sometimes seen as quasi-approval to cheat in assessments as some students commented that if the institution was serious about preventing cheating on an online quiz or test, that they would have provided invigilation. A common call is that exams should be replaced with authentic assessment to reduce the potential for academic misconduct, however, the evidence indicates that contract cheating, and misconduct still occurs in many forms of authentic assessment (Ellis et. al, 2020). Educators, of course, must consider assessment design as well as student education on completing assessment tasks with integrity. To ensure academic standards are maintained, educators should be supported in identifying and reporting suspected breaches of academic integrity to the relevant university authority.

Weighing on academics during this time are also the financial pressures faced by the university sector. There are concerns that types of assessment which improve academic integrity may not be approved for use because they are expensive to implement.

Accessibility

The third key take away is around accessibility. Accessibility issues were experienced by a large number of students in remote and international settings where bandwidth was low/variable, or censorship of the internet meant students/institutions had to find alternative ways to deliver the content. This was also an issue for students who relied on university facilities to study. For example, some students did not have adequate internet and/or computer access, in response to which some universities arranged for laptops to be provided. If the goal to widen participation is to be achieved, institutions must consider how to provide opportunities and facilities to assist disadvantaged students to learn online.

Duty of Care

It is in the assessment, especially related to extensions, where students' personal circumstances became visible and our duty of care responsibilities were heightened. While moving to online or remote learning, a key concern was not just content delivery but the development of a trusting relationship between students, peers, instructors and institutions.

The Covid-19 disruption changed the way institutions, academics and students will engage, now and into the future. Valenzuela (1999) defined two forms of caring in the educational sector. Firstly, aesthetic caring which is focused on the instructional relationship between the teacher and the students. Secondly, authentic caring which fosters a reciprocal relationship that goes above the formal role of education and looks at the holistic needs of the student. For many educational institutions, the ramifications of adapting to a changing tertiary landscape, included a shift in the concept of care from aesthetic to authentic (Valenzuela,1999).

Naturally, this led to an increase in workload for academics who bore the additional responsibility of connecting with their students in a meaningful way, to provide even greater pastoral care than pre-COVID. Staff encountered novel situations during this time that required innovative solutions. Most institutions in this ANZ business schools group responded by creating institution wide structures and processes to engender more trust and engagement. Institutional responses included the creation of a stronger network of support for international students in their home countries and personalised support for students who had courses and programs deferred. Examples of these initiatives included the creation of centres where students could move to locations closer to their homes for the semester and receive high speed internet access and academic support; and 'no-fees' courses and financial bursaries were established to retain and engage students. Nonetheless, these changes were not adopted by all ANZ business schools and this is an area that needs further improvement in the form of stronger structures for international on campus students, especially those in first study period and were still finding their way around.

Future Opportunities

The disruptions caused by COVID-19 have given us an opportunity to more seriously explore affordances of various forms of technology facilitated assessment and critically evaluate our practices. Moving forward post-COVID 19, we can either go back to our old practices premised on assessment *of* assessment with a prevalence of end of term high-stake, in person, invigilated exams. Or, we can critically interrogate our current practices and harness the affordances of technologies for adopting practices premised on assessment *as* learning (Wiggins, 1998).

The term "new normal" has been prominent in recent months, not only in academia but in all areas of our lives. What we have seen is not new but potentially a 'reimagined normal' with necessity being the mother of invention. Academics, support staff and students have worked together to ensure that the learning, no matter how it is achieved, is the most important thing. How we assess the learning in the coming months and years will change and potentially the reliance on high stakes invigilated exams may be reduced with the introduction of more authentic business-like assessment, preparing our students for their future work lives. As educators we now have a much deeper understanding of student issues/challenges faced. With this in mind a trend towards designing assessment with the students as partners should be carefully considered.

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