DEAKIN UNIVERSITY

NCSEHE
National Centre for Student Equity in Higher Education

Curtin University

Re-imagining exams: How do assessment adjustments impact on inclusion?

Joanna Tai, Rola Ajjawi, Margaret Bearman, Joanne Dargusch, Mary Dracup, Lois Harris and Paige Mahoney

2022

Make tomorrow better.

ncsehe.edu.au

Re-imagining exams: How do assessment adjustments impact on inclusion?

2022

Joanna Tai, Deakin University

Rola Ajjawi, Deakin University

Margaret Bearman, Deakin University

Joanne Dargusch, CQUniversity

Mary Dracup, Deakin University

Lois Harris, CQUniversity

Paige Mahoney, Deakin University

National Centre for Student Equity in Higher Education
Tel: +61 8 9266 1743
Email: ncsehe@curtin.edu.au
ncsehe.edu.au
Building 602 (Technology Park)
Curtin University
Kent St, Bentley WA 6102
GPO Box U1987, Perth WA 6845

Acknowledgements

This project was conducted under the National Centre for Student Equity in Higher Education (NCSEHE) Research Grants Program, funded by the Australian Government Department of Education, Skills and Employment.

We thank the members of our advisory group—Matt Brett, Phillip Dawson, Susan Grimes, Merrin McCracken, Cate Rooney, Poojith Thummala, and Denise Wood—for their valuable guidance and feedback.

This research would not have been possible without the generous contributions of CQU and Deakin students through interviews and narrative submissions – we thank all of our student participants and the many additional students willing to share their stories, especially during the stress and uncertainty of a pandemic.

Thank you to the students, staff members and accessibility team members across CQU and Deakin who shared their experiences and embraced the challenge of re-imagining exams, including Nadine Adams, Jude Blandford, Roland Dodd, Nicole Downes, Amanda Edgar, Shane Egan, Elizabeth Hamilton, Penne Kaddatz, Megan Mahar, Tina McAdie, Sagarika Mishra, Steve Morgan, Kaitlyn Rice, Cate Rooney, and Elaine Smit.

Contents

List of tables

List of figures

Abbreviations and acronyms

ADHD	Attention deficit hyperactivity disorder
APAC	Australian Psychology Accreditation Council
CQU	CQUniversity
EDM	Ethical decision-making model
FiF	First in family
NCSEHE	National Centre for Student Equity in Higher Education
NHMRC	National Health and Medical Research Council
OSCE	Objective Structured Clinical Examination
PTSD	Post-traumatic stress disorder
RRR	Regional, rural and remote
SES	Socioeconomic status
SWD	Student with disability
UC	Unit chair/coordinator; Deakin uses the term ‘unit chair’ to refer to the academic staff member who leads the teaching team for a unit and coordinates its overall delivery, while CQU uses the term ‘unit coordinator’. At both universities, a unit is a single subject or module of study.
UDL	Universal Design for Learning

Executive summary

Exams and other high-stakes time-limited assessments can act as barriers to success for some students in higher education. Though required by Australian law, adjustments do not necessarily lead to equitable academic outcomes (Brett, 2016; Kilpatrick et al., 2017), nor do they always address students' actual access requirements (Waterfield & West, 2006). A system which focuses only on making reactive accommodations is likely to become overwhelmed as diverse students increasingly participate in higher education. Rather than continuing to view disability as a problem to address at an individual level, a shift to focus on inclusive assessment design may also hold promise for a broader range of diverse students.

In addition to students with a disability (SWD), in recent years students across equity groups, including regional, rural, and remote (RRR) and/or low socioeconomic status (SES) (Koshy, 2019), are increasingly participating in higher education. Social inclusion therefore becomes a concern when considering what happens in assessment practices. There are also groups such as First in Family (FiF) students who have not been formally designated an equity group by the government, yet due to intersecting demographic, social and cultural characteristics, share similar experiences to other equity groups within higher education (O'Shea, 2016). There is a need to better understand how these types of equity markers intersect to compound disadvantage (Drury & Charles, 2016; Nelson et al., 2017). This is highly important within the context of assessment, since assessment has a substantial impact on success and retention for all students, but particularly those with intersecting equity group memberships (Ajjawi et al., 2020).

This research project therefore aimed to 1) understand SWDs' experiences of exams, and 2) transform exam design and practice to be more inclusive. It focused on high-stakes, time-limited assessments: traditional examinations and their ilk. It considered the impact of disability on students' exam experiences and also considered effects relating to their intersecting identities, with particular attention on the effects of RRR, FiF, and/or low SES backgrounds. With a multi-disciplinary team spanning two universities, researchers sought to identify how adjustments impacted on inclusion as perceived and experienced by SWDs. A series of participatory workshops were then used to explore what could be done to re-imagine exams. By recasting high-stakes assessments as contextualised practices where people and materials interact in social environments, insight was gained into how disadvantage occurs through these practices for SWDs, and how challenges are compounded where SWDs are also RRR, FiF and/or low SES.

A two-phase research design was used to achieve the two aims. The first phase invited SWDs to share their experiences of exams through interviews, taking into account the complexity of their individual circumstances. Across two universities, 40 students participated in interviews and 11 additional students contributed written or audio responses to the interview prompts. The second phase invited assessment stakeholders (academics, accessibility staff, and students) to participate in workshops, grappling with aspects of exam design to identify what could be modified to improve inclusion in four specific units (i.e. modules or subjects) of study, two at each university.

Project findings overall suggest that, while most students had experiences that were not inclusive in relation to their high-stakes timed assessment, there was no single "easy" solution to re-imagining exams, with a combination of approaches required. From the student interviews, patterns were identified in terms of which aspects could be improved. Staff support, including the development of relationships, was powerful in ensuring students felt included. Minimising the bureaucracy required to obtain adjustments was spoken of positively. Within the context of Covid-19, the places and spaces of exams shifted to the home environment and, while this was generally seen as reducing the need for some types of adjustments relating to equipment, furniture and separate exam spaces, some students spoke of disruptive home environments with little space for study-related requirements.

Exam design was a key factor in students' experience, including time and timing, format, and authenticity. The complexity of individual circumstances created a different combination of considerations in each case, and this is demonstrated in further detail through a student case study.

Participatory workshops were used to explore what was possible both short-term and longer-term to re-imagine exams. While narratives from the first phase of the study were included as part of the workshops, contributions from student workshop participants were particularly valued. A shift to a broader understanding of inclusion underpinned actions to improve student-staff interactions, communication between stakeholders, and assessment arrangements. Changes made possible due to Covid-19 were also recognised as contributing to inclusive assessment. From the workshop series, four unit case studies are presented, outlining the context, the assessments under review, and potential, implemented and future planned changes. While formally investigating the impact of these changes is beyond the scope of this project, where unit chairs/coordinators (UCs) were able to implement change during the life of the project, these changes have been perceived positively by students. The most valued aspect of the workshops was that there was a series of opportunities to come together to discuss dilemmas, with input from a wide variety of stakeholders with different perspectives.

Key messages that arise from the project findings are:

- Inclusion is an ongoing and proactive process which needs to be continually enacted by all stakeholders in assessment.
- Assessment design must balance the ideal and the pragmatic in context: there is no single solution which will work for all situations.
- A coordinated and comprehensive approach to inclusive assessment design is required.
- We must create opportunities to listen, discuss, and collaboratively problem-solve.

The findings of this work have led to the development of a range of resources which can be taken up beyond the project: specific advice relating to exams; an inclusive assessment framework for designing assessment; guidance for universities; and workshop resources to effect change. These are available from the project website.

Recommendations

Inclusive assessment does not take place in a vacuum and involves institutional commitment to diversity and inclusion. Developing inclusive assessment is a desirable goal for social, moral and legal reasons. It is a process involving interactions between many stakeholders, including academic staff, learning designers, students, accessibility staff, and accrediting bodies. Altering one aspect of assessment may require others to change, and so no assessment can be considered in isolation.

Particular adjustments work for some students but not for others, due to a complex entanglement of personal circumstances, course requirements, and institutional configurations and constraints. For instance, though the majority of students in this study preferred to sit exams at home, others found attending campus with peers to be a more inclusive experience, including in the case of more practically-focused assessment. The entangled nature of assessment means that there is unlikely to be one solution or set of adjustments that will work for everyone. Whilst Universal Design principles are helpful in considering what aspects of assessment may act as barriers to inclusion at a task level, we found that in real-world contexts, improving assessment materials alone is insufficient for students to feel included: contextual factors and interactions with people are also important.

The specific contexts of any assessment must be considered, including the purposes of assessment, institutional resourcing constraints, and the students who will participate in the assessment. Students will experience varying forms of disadvantage due to personal circumstances and background characteristics including, but not limited to: disabilities; medical and mental health conditions; living in rural, regional or remote areas; socioeconomic status; culture, race and gender difference; language proficiency; age; and care and work commitments.

Across contexts and situations, two key principles should underpin all efforts to improve the inclusivity of assessment:

- **Assessment should credential or develop capability in relation to learning outcomes, not irrelevant attributes, skills, or behaviours.**
- **Assessment should support diverse students to demonstrate what they know and what they can do, without unfair barriers and in a way that benefits their development.**

With regards to re-imagining exams, we have created a **one-page handout with five "top tips" to improve the inclusivity of exams.** They are:

1. Ensure task requirements are realistic.
2. Set reasonable conditions.
3. Communicate and be approachable.
4. Streamline adjustment requests.
5. Replace the exam with a different task.

For specific advice about developing inclusive assessments within programs, the **Inclusive Assessment Design Framework** provides prompting questions intended to guide those involved—academic staff, students, accessibility practitioners, learning designers, education technologists—through a four-stage cycle, which comprises:

1. Plan for inclusion
2. Develop assessment tasks
3. Implement assessment, and
4. Evaluate and reflect.

Ideally this work should be done in partnership with students and other stakeholders in an iterative process that adapts to the context.

Through the workshops, we also found that changing assessment was not an easy task due to many factors including disciplinary traditions, external expectations from others around assessment (e.g., professional bodies), and academic integrity concerns. Assessment change cannot happen in isolation or only at the individual assessment task level: there are necessary institution-wide and administrative shifts that also need to be made. To this end, we also provide **university-wide guidance to develop an approach to inclusive assessment**. The guide elaborates on the following five recommendations:

1. Create a culture of inclusion.
2. Support the reimagining of exams.
3. Improve the clarity of inclusive assessment processes.
4. Streamline access procedures.
5. Promote evaluation with respect to inclusive assessment.

This project was not intended to generate evidence that specific assessment modifications would improve inclusion, beyond what students reported has worked for them previously. While we have made recommendations for processes for inclusive assessment design, we also recommend that these be further tested and explored with diverse cohorts of students, and in different contexts. Even if all exams are re-imagined in the future, this will not be the magic bullet for assessment that eliminates all concerns for all students. There cannot be global assumptions about what diverse students need, and so ongoing monitoring of the impacts of assessment is required to ensure it is possible to continue improving the inclusivity of assessment.

Introduction

Exams and other high-stakes time-limited assessments can act as barriers to success for some students in higher education. In accordance with Australian law, institutions have responded with 'adjustments' for students with disabilities (SWDs) to address these barriers. However, adjustments do not necessarily lead to equitable academic outcomes (Brett, 2016; Kilpatrick et al., 2017), nor do they always address students' actual access requirements (Waterfield & West, 2006). A system which focuses only on making reactive accommodations is likely to become overwhelmed as we continue to see diverse students participate in higher education. Furthermore, accommodations for SWDs in high-stakes time-limited assessments are frequently adjustments such as changes to timing including extra time and breaks, changes in location such as a quieter or individual room, and the provision of assistive measures such as a scribe or electronic devices (Hanafin et al., 2007; Madriaga et al., 2010). While these material aspects are significant, what happens in the interactions with people, and in preparation for the exam, may also contribute significantly to students' experiences and outcomes. These considerations highlight the need to take a different path to adjustments and accommodations: to focus on more inclusive assessment design, rather than continuing to view disability as a problem to address at an individual level.

The concept of inclusive assessment also holds promise for a broader range of diverse students. In addition to SWDs, in recent years students are increasingly participating across equity groups, including regional, rural, and remote locations (RRR) and/or low socioeconomic status (SES) regions (Koshy, 2019). There are also groups such as First in Family (FiF) students who have not been formally designated an equity group by the government, yet due to intersecting demographic, social and cultural characteristics, share similar experiences within higher education (O'Shea, 2016). Social inclusion therefore becomes a concern when considering what happens in assessment practices. There is also a need to better understand how equity markers like RRR, FiF and/or low SES intersect with disability to compound disadvantage (Drury & Charles, 2016; Nelson et al., 2017). This is highly important within the context of assessment, since assessment has a substantial impact on success and retention for all students, but particularly those with intersecting equity group membership (Ajjawi et al., 2020).

This research project therefore focuses on high-stakes, time-limited assessments: traditional examinations and their ilk. We focus not only on SWDs but their intersecting identities, with particular attention on RRR, FiF and low SES backgrounds. With a multi-disciplinary team spanning two universities, researchers sought to identify how adjustments impacted on inclusion as perceived and experienced by SWDs, and what could be done to re-imagine exams through a series of workshops. By recasting high-stakes assessment as contextualised practices where people and materials interact in social environments, we gain insights into how disadvantage occurs through these practices for SWDs, and how this is compounded where SWDs are also RRR, FiF and/or low SES. We therefore posed four research questions to be addressed in this project:

Research questions

1. What are the social and material arrangements that impact on the inclusivity of high-stakes timed assessments?
2. Within high-stakes timed assessment practices, how does disadvantage for SWDs intersect with RRR, FiF and/or low SES?
3. How are the social and material arrangements of high-stakes timed assessment amenable to change?
4. Can modifying social and material arrangements result in more inclusive assessment design?

Background

In higher education, all students have to participate in assessments in some form or another. High-stakes, time-limited assessments such as examinations are commonplace across countries and disciplines (Lipnevich et al., 2021). They might be used for many reasons, including tradition, relative ease of scaling, and assessment design inertia (Dawson et al., 2013). Assessment has several purposes: it is necessary for progression and certification, including external accreditation leading to professional qualifications, and can also function as a learning opportunity (Bearman et al., 2017). Boud (1995, p. 35) points out, "Students can, with difficulty, escape from the effects of poor teaching, they cannot (by definition, if they want to graduate) escape the effects of poor assessment." Assessment is also intentionally designed to exclude those who have not yet met the learning outcomes, but it should not have the effect of preventing students from demonstrating their diverse capabilities. Australian legislation (*Disability Standards for Education*, (Cth) 2005), requires that SWDs are provided with "reasonable adjustments" to ensure course design allows for participation on the same basis as a student without a disability. This includes assessments and certification requirements, which are likely to include exams. Similar legislative requirements exist in other jurisdictions across the world.

The questionable impact of assessment adjustments

There is limited evidence to inform the efficacy of assessment adjustments, and adjustments do not always meet student needs. Additional time is a common provision, which has been demonstrated to support students in situations where speed of task completion is part of the assessment (Lewandowski et al., 2013). However, additional time may be counter-productive for students who experience fatigue, and may not help students with dyslexia whose outputs can be affected regardless of time allowed (Waterfield & West, 2006). Other groups may need even more time than allotted (Grimes et al., 2019b). Regardless of break provision, writing continuously for a period of time can be difficult and may disadvantage students with particular conditions, or for particular types of tasks (Golan et al., 2020; Madriaga et al., 2010; Waterfield & West, 2006). "Adjustments" can also cause students to feel excluded or different, for example, the physical location of ramps and toilets, or being seated in a separate room (Hanafin et al., 2007; Waterfield & West, 2006). Stress and anxiety can result from exam-style assessments, which could exacerbate pre-existing mental health conditions, and may contribute to failure (Ajjawi et al., 2020).

These studies suggest that current adjustments are unlikely to provide equitable outcomes for students, despite being enshrined in legislation. There are also a variety of conditions and experiences encompassed that need to be considered (Waterfield & West, 2006). While some students report that adjustments are helpful (Grimes et al., 2019b), Waterfield and West (2006) found that one-third of students provided with adjustments did not believe their requirements had been met. A broader range of assistance is often available in un-timed assessments, such as access to voice-activated technology (Hanafin et al., 2007). Indeed, students report selecting their units of study according to assessment format (Morris et al., 2019; Waterfield & West, 2006).

Students' suboptimal experiences with assessment

Beyond SWDs' variable experiences with adjustments, there are additional problems with a focus on adjustments. As SWD participation in higher education increases, workload relating to individual ad-hoc adjustments also increases, impacting efficiency and timeliness (Kilpatrick et al., 2017; Waterfield & West, 2006). While 5-6% of students disclose their disability, this is well below the estimated population prevalence of 20% (Grimes et al., 2019a). To gain access to adjustments, students must self-advocate and/or disclose personal information – something that not all students are prepared to do. Those not yet formally diagnosed may lack necessary documentation. Obtaining a diagnosis can also be

time-consuming and costly (Lightner et al., 2012). Finally, students may choose not to disclose their disability, or request needed adjustments, since they perceive this gives them an unfair advantage, or signals their inability to meet expectations without assistance (Grimes et al., 2017; Lightner et al., 2012).

Disability is also not the only challenge for assessment design (Lawrie et al., 2017). Efforts to increase the participation of low SES students in higher education have been successful, yet these students continue to face challenges with poorly designed or inflexible assessments (Naylor & Mifsud, 2019). For example, students from low SES backgrounds report challenges in understanding the assessment tasks, and appreciate opportunities to clarify requirements and ask questions (Devlin & O'Shea, 2012). Students in RRR areas may also be disadvantaged by the lack of local examination facilities (Nelson et al., 2017) and poor internet connections or home working environments, resulting in an impoverished or impossible remote assessment experience. Mature-aged RRR students also reported difficulties in understanding the language of assessment tasks, and pointed out that keeping to a Monday to Friday, 9-to-5 schedule for task release was not inclusive of those who worked full time (Crawford, 2021). While there is a growing body of work examining the impacts of multiple markers of disadvantage on students (Drury & Charles, 2016; Naylor & Mifsud, 2019; Nelson et al., 2017; Walker-Gibbs et al., 2019), to date this has only briefly touched on how students experience exams. Together, these findings suggest there is an urgent need to explore if and how assessment disadvantage is amplified for SWDs who also belong to other equity groups, and how this can be addressed. Therefore, this work seeks to move beyond investigating assessment solely in relation to disability, taking a broader and nuanced approach to considering diversity.

A broader approach through a focus on inclusive assessment design

A shift away from adjustments towards inclusive assessment design could better support increasing diversity in the student population. Universal Design for Learning (UDL) has sought to improve the inclusivity of education where, from the outset, a range of abilities and backgrounds are accommodated in the design process via multiple forms of representation, expression and engagement (CAST, 2018). While UDL has informed assessment policy (O'Neill & Maguire, 2019), and students and staff have responded positively to a potential UDL assessment approach (Morris et al., 2019), little is known regarding the means whereby UDL principles can be translated into effective assessment practice.

To explore these issues, this study takes a more expansive approach, in line with UDL principles. Within the higher education literature, 'inclusion' can refer to both disability and social inclusion, where social inclusion encompasses student diversity in line with widening participation initiatives (Lawrie et al., 2017; Stentiford & Koutsouris, 2020). Many SWDs may not identify as such. Even for some who identify as having a disability, the nature of their disability may not always impact on their success. The continuation of a sole focus on assessment adjustments may perpetuate a "deficit" model (O'Shea et al., 2016), and has the potential to preclude us from re-imagining the way assessment might be implemented to better improve outcomes. A focus on inclusive assessment through better exam design, or a move to an alternative assessment paradigm, offers the potential to more effectively facilitate inclusion of students with differing abilities and backgrounds, and promote their success.

Despite significant amendments to higher education policy (Pitman, 2017), and the availability of UDL principles, assessment practices have remained inequitable (Grimes et al., 2019b; Lawrie et al., 2017). This is not surprising: assessment is a complex contextual practice that involves academics, educational designers, students, policy, disciplinary norms, technology and location, all of which have an influence on the design and instantiation of assessment (Dawson et al., 2013). One successful example of inclusive assessment development occurred in the context of the implementation of inclusive assessment policy,

university-wide changes to curriculum design, and substantial support (Kneale & Collings, 2018). However, it is unlikely that all universities will be able to effect change in such a holistic manner due to a variety of constraints (Bearman et al., 2017). A deeper understanding of the enablers and barriers to inclusive assessment and how these may be overcome is required. This requires a different approach and a broader line of enquiry than previously taken; drawing from Boud et al. (2018), we take a practice perspective to assessment, in particular, a sociomaterial approach.

Conceptual framing: a sociomaterial approach

A sociomaterial approach (Fenwick, 2010) can conceptualise high-stakes timed assessments as a series of dynamic interactions between people, objects and spaces; the concept of the assemblage. This perspective helps us to interpret the relative inclusion of students through their opportunities to act within social and material arrangements, and who or what is involved. In the case of high-stakes timed assessment, the exam "machine" is formed through associations and relationships, and thus by its very nature variably includes and excludes actors (Bearman & Ajjawi, 2021). This draws focus to the social and material arrangements (the human-human and human-material entanglements), previously relegated to the background, that permit some people to participate fully but only variably includes others. For example, Mayes (2019) shows how disability and exclusion are constituted in school committees for a student who used a wheelchair, through the material arrangements of rooms, chairs, doors and stairs. This example highlights the role of material arrangements not as neutral containers but as constituting disability. Fenwick and Edwards (2013, p. 53) write, "Material things are performative and not inert; they are matter and they matter." This is particularly important in relation to the present Covid-19 situation, which has increased the potential for inequity through the necessary but rapid shift online (Bartolic et al., 2021). Technology-mediated high stakes exam situations may not previously have been considered as commonplace but are now important to study in relation to inclusion. A sociomaterial perspective also supports us in specifically examining which actors and arrangements are most amenable to change.

Whilst sociomateriality accounts for human-human and human-material interactions, we also need to account for the individuality and diversity of our students. Intersectionality studies seek to raise awareness about and change systems of inequity, where sexism, racism and/or class bias (amongst other categories) intersect to produce complex relations of power and disadvantage (Cho et al., 2013). Intersectionality theory, stemming from the work of Crenshaw (1991) a Black, feminist lawyer, shows that the intersection of gender and race is not merely the sum of the parts. Crenshaw argues that neither racism nor sexism is enough to account for compound inequity. Using intersectionality theory as an analytical lens reveals multiple axes of power and inequity that affect experiences: "the complexities of intersectional identities and positionings cannot be meaningfully reduced to a perspective or to a combination of perspectives" (Nichols & Stahl, 2019, p. 11).

This research aims to transform exam design and practice to be more inclusive. This project, addressing the issue of inclusive assessment, is an initial step in a program of research which ultimately aims to promote success and retention for equity group students. We will take a sociomaterial approach to reconceptualise assessment. Through student narratives, we will explore how the experience of SWDs intersects with RRR and low SES in relation to exam practices. Participatory workshops will provide improved insights into, at the same time as aiming to change, assessment practices, with a goal of inclusive assessment practice. This will lead to the development of an inclusive assessment framework. In addition, due to the richness and complexity of the experiences of those considered by intersectionality studies, research is typically conducted through in-depth case studies (Nichols & Stahl, 2019) which we use here to "zoom in" on specific student experiences. Through a multi-pronged dissemination strategy, findings can be incorporated into education and policy, leading to institutional and nationwide change in assessment practice.

Methods

Ethics approval was granted by the Central Queensland University (CQU) Human Research Ethics Committee (22567) and the Deakin Human Research Ethics Committee (2020-339).

Student narratives

Recruitment took place across CQU and Deakin amongst students registered with their institution's disability support service. Students were contacted by email in late October 2020 by their disability support service and invited to express interest in participating in an interview. It was initially intended that 15 students from each institution would be interviewed (a total of 30 interviews) but, due to the high levels of interest in participation (approximately 150 students), this number was increased to 20 interviews per institution. To ensure a range of SWD, RRR and low SES student profiles were included. At CQU, this information, obtained from enrolment records, was used to invite a sample of students who were registered with the disability support service. At Deakin, students who expressed interest in response to an email from the disability support service were asked to indicate: their level of study; whether they had lived or were currently living in a RRR area; and if they were one of the first in their family to attend university. The difference in approach was taken to better understand intersectional experiences, and also related to the availability of information. An iterative sample of 20 students from each institution was then selected to maximise representation of diverse and intersecting SWD, RRR and low SES characteristics.

Data collection

Interviews were semi-structured and conducted remotely (via video conference or telephone) by members of the research team in November and December 2020. Due to the COVID-19 pandemic, remote interviews were most appropriate to mitigate health-related risks and comply with university and government imposed travel restrictions. Interviews ranged from approximately 30 minutes to 1.5 hours in length, averaging around one hour. Students were asked about their experiences with exams and/or timed assessments, their experiences of assessment more broadly, their special consideration or adjustments for exams, and their background, including circumstances which may have impacted their university study (please refer to Appendix A for the full interview schedule). Interviews were recorded and the audio was sent for transcription before being checked and deidentified. Students were assigned a unique identifying number and a pseudonym.

In order to provide all students who had expressed interest with an opportunity to share their exam experiences, an ethics amendment was obtained to allow students to submit a written or audio-recorded response to a list of prompts. The prompt questions addressed the same topics as the interview schedule, including past experiences of exams and/or timed assessments and personal background and circumstances that may have impacted university study. Eleven student submissions were received across December 2020 and January 2021: ten written, and one audio-recorded. The audio-recorded submission was sent for transcription, and all student submissions were deidentified, assigned a unique identifying number, and pseudonymised.

Data analysis

Analysis of the student interview transcripts and narrative submissions commenced in January 2020. Each research team member examined two transcripts (n = 12 examined) to identify possible themes and areas of focus, and the team met to discuss emergent themes and develop an initial codebook. Two members of the research team (MD and PM) then tested this codebook on two further transcripts, using NVivo software for coding; further themes and subthemes were added as they emerged, and data was cross-coded to ensure the full complexity of student experiences was captured. MD and PM then met to discuss

and refine the codebook, before a third member of the research team (JT) tested the codebook against a further transcript to ensure its stability as a coding framework. The three team members (MD, PM and JT) then met to discuss and further refine the codebook, including merging duplicate themes and reorganising themes and subthemes to improve the codebook's utility. The codebook was then circulated to the entire research team for review, followed by a team meeting in which several additional themes were identified and added. Coding of all interview data and student submissions was then carried out by three members of the research team (MD, PM and JT) throughout February and March 2020. A small number of codes were added to the codebook as additional themes surfaced through this coding process. Please refer to Appendix B for the finalised version of the codebook. The coded data was then exported from NVivo in a number of formats for further use, including within the participatory workshops.

We also conducted more fine-grained case study analysis (Yin, 2013) on one transcript (in response to RQ2) to allow us to examine the impacts of sociomateriality and intersectionality on one SWD's experiences of exams. The narrative selected is not generalisable in terms of the intersection of identities or sociomaterial assemblage, but it shows the layering of identities and relationalities that bring about particular assessment experiences. The analytical gaze of "sociomaterialists involves exploring the ways in which human and nonhuman elements are assembling to hold in place the scenario under study. Rather than focusing on individual people or things, we trace the relationships between people and things and what is being accomplished through these relations" (MacLeod & Ajjawi, 2020, p. 852). Two researchers (RA and LH) read a sample of student narratives and through discussion identified the multiple identities (e.g., mother, carer, partner, learner, worker), the social (e.g., working with peers, relating to the invigilator) and material arrangements (e.g., time, space, bodies, technology, books, notes, furniture) across the sample. We worked holistically with each case study, layering our interpretations of the text alongside students' stories.

For brevity, we illustrate one case study in this report that shows the intersection of multiple identities and sociomaterial assemblages rendering idiosyncratic experiences of assessment, othering and exclusion of a SWD through the adjustments process. Whilst we unpick the different layers of complexity in presenting our case study, we simultaneously acknowledge that these cannot be separated and dealt with separately in the real world, as "The social and material are deeply entangled, even inseparable, and work together to produce the everyday world" (Orlikowski, 2007, p. 1437).

Participatory workshops

The workshops were termed 'participatory workshops' as they followed aspects of participatory research principles where stakeholders come together to solve particular problems, taking an active part in determining the direction of the endeavour, reflecting and analysing data and experiences together (Northway et al., 2014). Recruitment of workshop participants across CQU and Deakin took place in late 2020. Unit chairs/coordinators (UCs) were recommended for participation by faculty heads of teaching and learning. Where unit assessment development involved a team, all team members were invited to the workshops. Equity practitioners (i.e., disability liaison or inclusion and access services) were invited to participate by their managers. Students with access plans (i.e. had registered with the university disability support service, and had an active set of accommodations in place) who had previously studied the selected units, or students with access plans from a contiguous discipline, were invited to participate by the research team. In one instance, a student was not available, so an additional teaching staff member was invited to provide a further perspective. A total of four units (two at each university) participated.

Procedures

Five online workshops were held via Zoom at each university between February and May 2021, ranging in length from 1 to 1.5 hours. The first two workshops were two weeks apart, and thereafter they occurred monthly. Prior to each workshop, participants were sent brief preparatory materials, such as short student narratives, and asked to reflect on these materials and respond to prompts in a Microsoft Teams worksheet (please refer to Appendix E to view these materials). Attendance varied between workshops due to teaching and other commitments; however, at least one staff member from each unit and one accessibility staff member was present at every workshop. Workshops were run collaboratively to ensure each participant had a chance to share their thoughts and allow for cross-pollination of ideas and understanding. Each workshop was recorded, and the audio sent for transcription, to ensure comparability between the workshops at each university. Through team meetings, the research team iteratively reviewed participant responses to the prompts, workshop discussion and unit progress. This helped to refine content and discussion points for subsequent workshops.

The first workshop provided participants with an overview of the project, introduced participants to one another, and allowed participants to share their initial thoughts and experiences of exams and inclusive assessment. The second workshop focused on student narratives to draw out key factors in supporting staff and students in exam scenarios, and the importance of relationships in fostering successful inclusive assessment strategies. The third workshop considered a specific exam or timed assessment from each unit and focused on assessment design, identifying aspects for improvement, strategies to enhance inclusiveness, and potential workload implications for both staff and students. The fourth workshop encouraged unit teams to think holistically about assessment, provided a conceptual overview of UDL principles, and discussed each unit's potential changes to assessment in terms of format, conditions, and mode of tasks. The fifth and final workshop asked participants to reflect on the progress of their proposed changes, consider system-level changes needed to support inclusive assessment, and evaluate whether the workshops had assisted them in re-imagining exams in more inclusive ways.

To examine the effects of the workshops, a multiple case study design (Yin, 2013) was adopted to examine the reported issues identified and changes made within each participating unit, drawing primarily on data from workshop transcripts. Members of the research team (PM, JD and LH) each conducted a preliminary analysis of the five workshop transcripts relating to their assigned case, identifying: a) points of opportunity and challenge the UC and/or other teaching team members identified via the workshops, around current experiences of SWDs within exams and real-world constraints; b) possibilities discussed; and c) changes planned and/or made. Summarised cases for each unit were constructed based on these data and UCs were then invited to check and revise the case.

Findings

Project findings overall suggest that, while most students had experiences that were not inclusive in relation to their high-stakes timed assessment, there was no single “easy” solution to re-imagining exams. Different students, with different conditions, and in different situations, had different experiences of assessment. Furthermore, what was possible and appropriate in terms of actions that could be taken to re-imagine exams, varied significantly across the contexts of workshop participants.

The findings section is arranged according to the phases of the project, which also aligns with the four research questions. Phase 1, focusing on student narratives, responds to research questions 1 and 2, whilst Phase 2, focusing on the participatory workshops, responds to research questions 3 and 4.

Phase 1

A total of 51 students participated in this phase of the research, with 40 participating in interviews (by telephone or video conference), and 11 asynchronously submitting responses to the interview prompts. A wide range of age groups were represented (Table 1), and many discipline areas were included; however, there was a substantial number of health professions (e.g., nursing) and health sciences (e.g., biomedicine) students, who made up 49% of all participants (Table 2). Students reported one or more conditions that required an access plan (Table 3): 27 students (53%) reported one condition, 19 students (37%) reported two conditions, and 5 students (10%) reported three conditions. Thirty-four students (66%) also reported they were either RRR, low SES or FiF, or a combination of these (Table 4). Though not all demographic information is available for all students (owing to differences in sampling and data collection methods), Appendix C provides a full table of individual student demographics.

Table 1. Age distribution of Phase 1 student participants

Age	n
18-25	11
25-34	15
35+	16
No age given	9

Table 2. Disciplines studied by Phase 1 student participants

Discipline area	n
Arts and Humanities	3
Business and Commerce	6
Engineering	3
Health professions	15
Health sciences	10
IT	4
Law	3
Science	3
No area given	4

Table 3. Phase 1 participants' conditions requiring an access plan

Learning disability*	
ADHD	8
autism spectrum	6
dyslexia	7
Sensory impairment	
Deaf	1
Blind	1
Mental health condition	
Bipolar	1
Depression/anxiety	15
Multiple conditions	4
Other	1
PTSD	9
Medical condition	
Chronic	15
Fluctuating	8
Temporary	3

*we use the term "learning disability" as this is the nomenclature used in relation to learning access plans, and indeed students also referred to "learning disabilities". They may otherwise be considered neurodiversity or learning difficulties.

Table 4. Phase 1 student participant additional equity group membership

	RRR	Not RRR	Total
FiF or low SES	15	8	**23**
Not FiF or low SES	11	17	**28**
Total	**26**	**25**	**51**

RQ 1 What are the social and material arrangements that impact on the inclusivity of high-stakes timed assessments?

Students' individual experiences of high-stakes timed assessments were quite varied. This was likely a result of the specific and situated configurations of social and material aspects in which each student was enmeshed. Across the variation in student experiences, however, there were some clear patterns in which factors made a difference to what students perceived as a positive and inclusive assessment experience. Significant factors included: staff relationships and support; the implementation of adjustments; the places and spaces in which exams were held; and the exam design itself, in terms of logistics as well as authenticity of format and content. In the following section, we report on each of these themes in turn.

Staff relationships and support

Both academic and accessibility staff had a substantial impact on students' exam experiences. While students reported that support from their families and friends was also occasionally important in their university journey overall, relationships with staff could play a crucial role in students' success and their sense of belonging at university.

> *My units where I've been successful and I've received high distinctions, the difference was the unit chair and their empathy and flexibility and I think that made the most difference for me.*
>
> – Yasmin, science, FiF, mental health condition

However, when academics were insensitive to student situations, students were typically faced with additional stress as they sought to ensure their adjustments were implemented. This left some students feeling like a burden:

> *Sometimes I guess I feel as though I'm an inconvenience, and it's difficult to talk to some lecturers depending on their personality.*
>
> – Courtney, health professions, RRR, physical condition and learning disability

Overwhelmingly, students spoke very positively of accessibility staff, who were described as highly supportive and understanding. Students also developed more familiarity with their accessibility liaison team than their teachers, as they interacted with the same person or people over time, whereas their UCs would typically change most semesters.

As Ethan, a RRR law student with complex intersecting mental and physical health conditions, explained:

> *engaging with Natalie was the best thing I could have done. Whilst it was triggered in a bad way, the outcome was positive. … The problem is that I was really good at masking my issues. … Natalie has navigated her way through and can see through my facade a lot now. … yes, she keeps in contact. We have a communication plan, so we organise that before the beginning of each term. … I cannot praise her highly enough for her support and her ability to diplomatically workaround and talk to the right people. … You need to have trust. For me, I can't speak on behalf of anybody else, but for me, trust is so important. Because this is such a huge thing to say, "I've got mental health issues."*
>
> – Ethan, law, RRR, mental health and physical conditions

To get to this stage, however, many students spoke of at-times lengthy processes to register with the accessibility service. These included obtaining particular reports from medical professionals, which could take time to acquire. The experience of Eliza, a RRR FiF health professions student with a learning disability, is illustrative:

> *they lump all mental disabilities all in one group, and they want a professional medical diagnosis, which I suppose again, for learning disabilities is quite difficult to get, especially as an adult. … For instance, when I was googling a psychologist local to myself, somebody that had some sort of experience with learning disabilities that didn't only see children, it probably took me three or four days just to find a health professional who could actually see me who had helped me with it. If you didn't know what you were doing or where to find that help, I can imagine it would be next-to-impossible. … I feel they're not flexible enough and they're not clear enough. They just sort of say, "Go and see a health professional and get a diagnosis," but that's the same for whether it's a physical disability, a mental disability, or a learning disability.*
>
> – Eliza, health professions, RRR and FiF, learning disability

Some students had previous diagnoses from school which could be carried over, but others related being unaware that support was available until by chance a friend or staff member told them their condition could qualify them for an access plan:

> *I had no idea that there was such a thing. I don't know if you hear that all the time. It wasn't until I had some really big challenges when I first started my studies, I booked in with one of the psychologists, because obviously I wanted to speak to someone that was within [the university] and she's the one that referred me on to [the accessibility service].*
>
> – Cassie, health professions, medical and mental health conditions

Implementation of adjustments

Those students who had access plans including adjustments to exams, which might include additional time, stretch breaks, separate rooms, an oral format, or assistance such as a scribe or technology, felt that those adjustments were extremely helpful in allaying their stress around demonstrating their capabilities in exam situations. With the shift to online exams as a result of Covid-19, many students found the increased reliance on technology—especially being able to type answers rather than handwrite—was helpful.

Additional time was a common and much-appreciated adjustment:

> *I would have really struggled had I not been given extra time. … that really assisted me when I just needed a break or when I was just having trouble with understanding questions and having to read them again and again.*
>
> – Cassie, health professions, medical and mental health conditions

Access to special equipment, such as a more comfortable chair or a standing desk, was often an important adjustment for students – and not only for those with a physical condition. For Kellie, a RRR and FiF health professions student with a mental health condition, having her noise-cancelling headphones and a small pillow with her in exams is “almost comforting. It's like a tool that sort of grounds me”.

For students with a physical condition making handwriting difficult, or those with a learning disability (particularly dyslexia), adjustments that allowed access to a scribe or assistive technology were often crucial. As Vanessa, a RRR and FiF health sciences student with a medical condition, explained: “if you've got a lot of typing to do, in a situation that might normally take you a while, if your hands are a bit sore or something, you can dictate to Dragon [speech recognition software] and Dragon will spit it all out”.

For some students, an adjustment as simple as access to a computer made a significant difference:

> *with [a] learning disability, handwriting and speed is not my friend. … I think I couldn't do this degree without [adjustments], to be quite honest. … without the allowances of extra time and being able to do the exams via the computer and using spellcheck, I don't think I'd get the marks that I would even though my knowledge base is good.*
>
> – Samira, health professions, mental health condition and learning disability

For others, the option to answer orally rather than in writing was a benefit:

> *TAFE's done it for me a couple of times where I was really struggling [with] writing just when I first started out, and they said, "Well, you can just do a verbal test. We'll just pull you away from everyone else so they can't overhear your answer and then we'd ask you questions and just verbalise it." That's something that I think should be looked at for some students certainly. Just verbalising an answer rather than writing it down, because writing ability has very little to do with knowledge, frankly.*
>
> – Dylan, arts, RRR and FiF, mental health condition and learning disability

However, many students reported hiccups in the process when their requirements were not communicated effectively and efficiently. This could occur both when requesting adjustments in advance from UCs, and with invigilators in the case of in-person exams. Such incidences could be distressing and significantly impact students:

> *I shouldn't have to fight for something that should just be given to me, because I actually have had a disability for years now. … I shouldn't have to, just because you*

can't physically see it doesn't mean it's not there … It is very frustrating emotionally more than anything.

– Ellie, health professions, medical condition and learning disability

In some instances, students' requirements for adjustments were overlooked and could not be rectified on the day of the exam, leading to students having to undertake exams in inappropriate conditions:

I have really extreme heat intolerance. In my accessibility plan, it says that the university was to provide an individual fan for me … I gave that to the relevant departments of the university, at four different places, it never happened. … I was lucky that it wasn't a horrible day in terms of the temperature. Also, the room I was in had some breeze air vents, so they could just shove my desk over next to one of the vents. They were able to do that physically. The plan was for me to be in a separate room and to have air-conditioner and to have a fan. That was what the [exam] slip said, but no one knew what to do about it.

– Glen, health sciences, RRR, medical condition and physical disability

Places and spaces

Students reported positive on-campus exam experiences when their place-related adjustments had been properly implemented; for example, when they were given a quiet room. Shifting to remote/online exams due to Covid-19 had substantial benefits for students with a range of conditions, including not having to travel sometimes long distances to exams, being able to access the physical supports they needed, and taking breaks without fuss.

There's no distractions within the home environment, I have all the different software packages I need to be able to use, and I can go and use my computer. It's essentially being within my own exam room, just being at home, rather than at the university. I don't need to worry about my exam accommodations being ignored or something like that, or the room changing. None of those problems occur.

– Ben, science, low SES, medical condition and learning disability

I think that's the difference. I go in relaxed. If I get overwhelmed, I can take a deep breath, I'm at home, and I can relax again and then go back to it. … If you just need to duck out and pee for example, you can just do that at home. It's not a big deal.

– Courtney, health professions, RRR, medical condition and learning disability

Not having to travel to exams was seen by many students as a significant benefit of the Covid-19 environment. For Danielle, a RRR health sciences student with a medical condition, "having the exam online … meant I wasn't drained from driving to an exam location".

Exam design

Sociomaterial factors combined within the actual design of assessments and exams in the way that tasks were represented. The move to online exams due to Covid-19 brought benefits for many students, with major changes to exam time allowances and conditions as well as to question formats. Though overall it seemed that exams were better designed when they were conducted remotely and without invigilation, there were still some drawbacks.

Time allowances

As a result of Covid-19 a large proportion of assessments shifted to more flexible timing arrangements, which many students found suited their conditions or commitments well.

Some timed online exams could be commenced any time within a 24- or 48-hour period, allowing students to start at a time that worked best for them, with maybe two or four hours to complete the task. This was beneficial to students with caring or work commitments they couldn't alter, as well as to students with certain conditions:

> *With a 48-hour exam, I can sleep, get a full night's sleep and I don't have to be up at 8:30, I can have breakfast and start my exam when I feel ready; whereas with the in-person exam you got to be there at 9 or you get locked out sort of thing. You have to wake up early and I'm not a morning person at all. So it was much nicer just start when I'm ready.*
>
> – Hannah, law, RRR and FiF, mental health condition

Other exam configurations involved extending the time period for which the exam stayed open, such as 24 or 48 hours, allowing students to work on the exam throughout the day, taking breaks for meals, rest or a mental timeout as required:

> *if I've got 24 hours, if I wake up with a migraine, I can drug up, download it, look at it, think about it, lay down for a bit, [chuckles] come back and do it. Whereas if I had to drive into uni, that would be-- I wouldn't get it done.*
>
> – Lisa, business and commerce, RRR, medical condition
>
> *I could still have a normal-ish day on those two days because they wrote it as if you should be able to complete it in a few hours. They didn't write it that you would need the 48 hours to do it. I could still have lunch. I could still have breakfast. I wasn't sitting there locked away … The exams, in the normal sense, don't usually show my actual capabilities maybe. Whereas with the 48-hour one, I can take the time and go and do what I need to do to try again, and I can tackle it all over again if I want to … or just even go and pat my dog for 20 minutes and go, "Right, we're starting again."*
>
> – Hannah, law, RRR and FiF, mental health condition

However, some students given an open timeframe felt it was difficult not to spend more of the time available on the task than the guidelines specified:

> *One of my exams … came out on Thursday at 1:00 PM and it was submitted Friday at 1:00 PM. That just to me didn't really feel like an exam, it felt like another assignment because you had 24 hours to work on it. ... They said it should take two hours but it really took much longer, and you just don't know when to stop. That I found wasn't really helpful.*
>
> – Charli, science, FiF, mental health condition

Exam formats

Students expressed differing preferences for various exam formats, some of which had changed as a result of Covid-19.

Online open-book exams with limited invigilation, which became common with Covid-19, increased concerns about cheating. A common response was to change exam question formats from multiple choice to longer answers. Some students found longer answer formats more difficult due to their condition or disability:

> *I definitely missed multiple choice … [it] is definitely the more relieving option because you have no idea what you're doing when you're typing things in and you always feel a little bit scared.*
>
> – Jacob, health sciences, FiF, mental health condition

Other students found the open-book format helped to reduce stress associated with the pressure to memorise information for closed-book exams, and also emphasised application of knowledge concepts to problems rather than testing memory – although this was not always the case:

> *it took away the mental stress that I've really felt in the past, sometimes cramming or going into an exam and realising I didn't spend any time on this. … I was just able to work through it easier. It just took that stress away, I guess, of having to sit there and memorise things when I wasn't in the mental space.*
>
> – Siobhan, health professions, FiF, mental health condition

> *[Open book] has been a positive experience for me as it has forced the exam questions to [be] re-written and focused on assessing understanding of the material rather than ability to memorise facts and figures.*
>
> – Vicki, health sciences, medical and mental health condition

One student found that case study–type questions were easier to answer than others she had encountered, but at the same time realised that not everyone might perform well with this style of thinking and way of demonstrating capability.

> *If you actually gave me a case study … and then asked me what it could be, then I can think about it and I can open up my brain in that way. Ever since I started my Podiatry unit, I've just done well because I just think that way. I think people need to be more careful with how exams are written because not everyone thinks in the same way. I don't think that it just applies to people with dyslexia.*
>
> – Ellie, health professions, medical condition and learning disability

Practical exams

Practical exams or assessments were mentioned particularly by those studying health professions courses. Students with learning disabilities (such as dyslexia) found the design of practical exams helpful, as they enabled the students to demonstrate their capabilities through a medium other than writing and might offer the potential for staff to explain points of confusion.

> *[Lab assessment] does give you the chance to say to the staff that, "I'm not really sure about this. Can you explain it again?" They're really good. They'll take the time to go over. Even if they have to go over it 10 times, they'll do it, because as I said, they're not there to fail you, they're there to help. They don't want you to fail. They'll do everything they can to help you get through. … I don't mind having the face-to-face hands-on lab assessment because I can always clarify if I don't understand something.*
>
> – Lynne, health professions, RRR, mental health condition

The Covid-19 environment significantly altered students' experiences of practical exams, particularly for health professions students. Some novel solutions were found to adapt to this new home-learning situation:

> *We pick up or we get mailed equipment. For example, an IV bag or diabetes insulin needle or cannulas, a fake blood bag. What we're doing in the lab, we're doing online, but they're giving us the equipment to do it from home. We've just got to show them at the Zoom, we go into breakout rooms and in groups of three or four, no more than four. We all took a turn of being the nurse, patient, whatever and we all get a chance to have a go at it I suppose. … I struggled with it at first but once I got used to it, it was really good.*

– Lynne, health professions, RRR, mental health condition

Authenticity of assessment

Students spoke favourably of exam designs to which they could relate their own future practice. They relished the opportunity to focus on and demonstrate capabilities and knowledge they saw as important for professional or disciplinary practice, even though these assessments could sometimes be more challenging:

> *it is easier to be prepared for an online exam in your own home, in your own space, and you do not have to deal with other people. … but at the same time … The career path that I'm following, you can't do it at home, you have to go into the clinic, you have to be scrutinised by the doctors checking your work. I feel it's something that you need to get used to doing.*
>
> – Eliza, health professions, RRR and low SES, learning disability

Rebecca, a FiF law student with a medical condition and mental health condition, described how in some cases written assessments allowed her to demonstrate her capabilities realistically, but time-limited exams did not reproduce the conditions she would encounter in practice:

> *it's the closest to what I do in practice, in that: I have all my resources; I need to provide advice; I obviously have a word count in doing that because if I get it too long the client's not going to read it; and so developing those skills and writing concisely … [and] communicating them in a more understandable manner is I think one of the things that's best prepared me for practice. […] with the exams I don't think I'll ever be in practice, and be told like, "You must write this memorandum of advice in two hours and you only have one book to do it, go."*
>
> – Rebecca, law, FiF, medical and mental health conditions

Some students also preferred to be assessed in authentic situations such as in clinical practice. The possibilities to demonstrate hands-on capability, with real-time feedback and opportunities to re-demonstrate capability and refine practice, were also seen as a positive in these settings. Even so, some still experienced exam stress in these situations:

> *my practical assessments, I get anxiety to the point where it freezes me. As soon as they put the camera on me, that's it. I can't move, I can't breathe. … Because I've had previous experience through work doing all the skill sets, I blitzed through it. Then came assessment day and I failed because I froze and didn't do the procedure correctly, a procedure that I've done plenty of times prior. Then as soon as they took the camera off of me I did it again and did it perfectly. The comment that I got back was I just need to get over the anxiety.*
>
> – Tegan, health professions, RRR and FiF, learning disability

Students reported being highly dissatisfied and demotivated when assessment did not seem authentic, or if it was perceived as 'busy work' with little relevance to the discipline or students' goals.

For instance, one student described her frustration with an exam that included logic and word puzzles rather than focusing on testing unit content:

> *you might have a sentence, and the sentence has been broken into four sections, and then jumbled up so you have to put the sentence in order. … They had a box with four lines, one column was blank, you had to put your corresponding number to the order that should be matched with the jumbled-up sentences. Okay, firstly, the sentences are jumbled up, it's in a box that's so bloody small and then you have to*

put numbers with it. I don't think that's a true measure of testing someone's intelligence in regard to content. … I couldn't do it. I looked at it and my eyes were going everywhere, I couldn't see the piece of paper properly.

– Ellie, health professions, medical condition and learning disability

As noted above, students also voiced frustration with assessments that prioritised memorisation of content over application of content in true-to-life contexts. As Jordan, a RRR and FiF information technology student with a learning disability, commented, “Timed assessments and exams, while they test your knowledge, it's cramming knowledge and just forgetting about it, [it] doesn't really have a real-world application to me”.

Complexity of individual circumstances

On top of what students grappled with within the university system, their individual circumstances also impacted on how they were able to participate in assessment. Complexity was identified in several dimensions: financial; work commitments; spaces/locations available for study; carer and family roles; distance; and cultural differences or obligations. Figure 1 demonstrates how each student case coded to one or more aspects of complexity, with the most being five, but many reporting two to four complexity aspects that impacted on their assessment experiences.

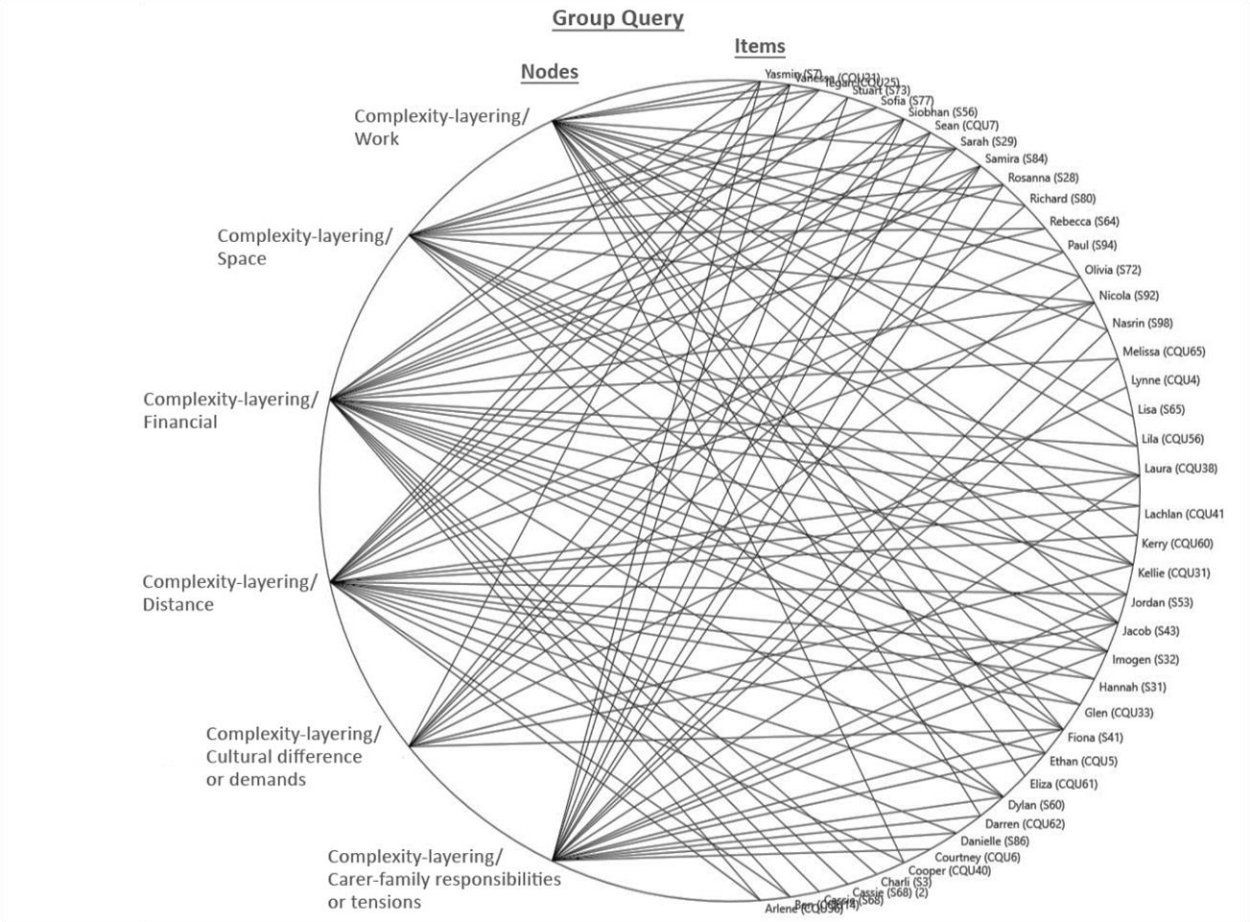

Figure 1. Coding chart of individual case complexity links

Most students interviewed, talked about multiple dimensions that created constraints on their study, though many said their challenges also gave them a motivation to keep on studying as best they could.

not only do I have my challenges, I also have challenges of being I guess a primary carer of four kids with complicated needs … I don't think that many students at all have the complexity that we have in our house. … You know, I'm saying it's hard, we've got four kids with different needs here, plus my own. … There's never going to be ever a good time for me to study. … It's mum life. It's not going to get any easier and you just got to make it work.

– Courtney, health professions, RRR, medical condition and learning disability

I've got other family popping around for coffee, and sometimes I have to send text messages, "I'm having a test today. Can you leave me alone, and not come around?" Because they'll come and interrupt. Just one of the things that I think that every rural student has a bit of struggle with.

– Dylan, arts, RRR and FiF, mental health condition and learning disability

Carer roles frequently impacted on students' availability to complete tasks at particular times or days, and could also be unpredictable and subject to change:

With a disability and being a sole carer, I need to be highly organised to be able to do my academic best. I often need information quite in advance to be able to plan and prepare.

– Rosanna, arts, medical and mental health conditions

I am a sole parent to three children whereby the person I was co-parenting with has recently been diagnosed with a terminal illness therefore I am caring for my children full time.

– Danielle, health sciences, RRR, medical condition

Growing up or living in a regional or remote area often presented students with a difficult choice: to study remotely, or to relocate nearer to a campus, which often came with financial pressures. In Covid-19 times, reliable technology and internet access were also challenges for students living regionally:

Obviously, it's more expensive for country kids to go to university because we don't really have any choice but to live away from home, that's also not excellent. I wasn't able to qualify for the Youth Allowance, despite having an entire working gap year, and making all this money, and being independent for that year. … When we got kicked off campus, I was actually deciding whether to stay in Melbourne, … or go home and I actually decided to stay here because I would have the study space here, whereas, at home, I wouldn't really. … If I was at home, my internet is so shoddy, there's no way I would have been able to be on Blackboard Collaborate or Zoom or anything like that. I think, all in all, it's probably the right choice to stay here for internet connection alone.

– Hannah, law, RRR and FiF, mental health condition

Students also cited financial pressures as a significant impact on their studies, with Covid-19 a common contributing factor. Some students struggled to fit their study around work commitments, while others relied on financial assistance from their institutions to survive.

Jacob, a FiF health sciences student with a mental health condition, was relying on a small annual scholarship from his university after losing his employment due to Covid-19. He explained:

> *I'm waiting for the results of two job interviews. … I have no other way of supporting myself off this because my tutoring finished as everyone's doing exams now. Right after this, I have my last tutoring class of the year. … That's quite nerve-wracking. It has impacted my study life a bit.*

Compounding Jacob's difficulties, he described a complex family situation which had led to him moving out of home; however, he still faced significant cultural obligations to return frequently for visits and "go back to help take care" of his family. Jacob's case encapsulates the many challenging ways in which multiple complexities can intersect to constrain students' studies.

Summary

The findings suggest that many social and material arrangements impact on students' experiences of inclusivity in high-stakes timed assessment. Acceptance of students' access requirements by staff and the implementation of any adjustments, including ensuring appropriate physical spaces, was important for inclusion. Covid-19–related changes to exam spaces and administration were usually perceived positively as many allowances and adjustments were made more available, and students were able to configure their home exam environments without having to rely on others. Students were also critical of task design where there were significant implications for equity, preferring to demonstrate their capabilities through more authentic assessment formats. Beyond the challenges resulting from their membership of specific equity groups—whether conditions requiring an access plan, or disadvantages associated with living in RRR locations, or hardships faced due to low SES or FiF backgrounds—students' unique personal circumstances also contributed to the complexity of their individual situations. In the following section, we focus on a particular case study to illustrate this in more depth.

RQ 2 Within high-stakes timed assessment practices, how does disadvantage for SWD intersect with RRR and/or low SES?

Adopting our theoretical frames of intersectionality and sociomateriality, we present the following case study of Vanessa (a pseudonym), a university student with a diagnosed disability, and hence registered with the university disability support service. Vanessa suffers from chronic inflammatory arthritis, is a carer for her husband, is the primary household income earner, and lives in an Australian regional area. Vanessa was supported with assessment adjustments of attending the exam centre 30 minutes earlier than other students and having a separate room in which to undertake the exam. However, these arrangements interplayed with living in a rural community and her intersecting identities of being a university student and a carer for her husband (who also suffers from a disability), creating myriad logistical issues for herself and her disabled husband. She recounted that other students walking past her in a separated but see-through room were "curious", and she felt "forced" her to tell her story of disability to her peers.

Here, we see the way exclusion and othering is constituted through the arrangement of separate rooms, the ordinarily social nature of exams, and physical exam practices that require invigilation, travel, and accompaniment. Counterintuitively, Vanessa described the different exam arrangements under Covid-19 as a "blessing" as they meant she could do her exams at home without the scrutiny of "curious" other students, simultaneously avoiding the mental and physical toll the logistics of travel to exam centres created for her and her husband.

Vanessa's story

Vanessa is studying undergraduate psychology and wants to become a clinical psychologist. She is engaged in her studies, noting that "if there was no hope of work resulting from this in future, I would want to do it anyway". As part of her medical condition, she gets inflammatory arthritis due to autoimmune responses, giving her "mobility restrictions". She explained that when her arthritis flares up, "I find it really painful to operate the computer because you are hitting the keys and using the mouse"; she does have software allowing her to control the computer by voice (e.g., Dragon), but these operate relatively slowly and can be prone to errors, creating challenges, particularly during timed assessment. She noted that "I'm very, very competitive and I like to compete on the same level as everybody else. I would not ask for any of those accommodations to be implemented unless they were absolutely necessary".

Vanessa has multiple identities which intersect with her disability, relating to her work, home location, and family situation. At present, she needs to "work through the units quite slowly, partly because of illness and partly because of work", as she also has a part-time job. She noted that "I would prefer to be able to work less and do more study, but that's just not an option", noting that in order to get a scholarship, she'd need to stop working to prove financial hardship. She also helps support her husband, who has Parkinson's disease. She noted the uncertain future both of them currently experience, saying:

> *my husband's condition is progressive, and degenerative, and mine may very well be progressive too, we've constantly got this threat of time passing hanging over our heads, because we don't know how long either of us are going to be as physically capable as we are.*

This creates challenges around priorities, as she wants to get her degree completed as quickly as possible but also wants to be able to spend time with her husband before his disease progresses further. She explained that:

> *we're trying to juggle the need to earn an income with my need to study to set us up for the future in a situation in which my disability is not a problem with earning and also balancing time for us together to do the things we want to do.*

When sitting in-person exams, Vanessa's circumstances are further complicated by her geographic location and her husband's health. Unlike the majority of students interviewed, Vanessa reported that "I don't experience any exam stress or exam anxiety". However, the act of physically getting to exams is complicated by her condition, geographic location, and her husband's health. Her home is located in regional Queensland, 130 km from her nearest campus and more than 40 km from the nearest exam centre. When she needs to sit an exam, her husband, who has Parkinson's disease:

> *… would drive me to exams and amuse himself for three hours, the poor thing, and then come catch me again and drive me all the way back. Because that's a bit too far of a distance for me to manage driving because of knee pain.*

This is a major challenge as the majority of units in her program have exams, meaning some terms she has had multiple exams within short periods of time. She finds it necessary to check the physical arrangements prior to the exam:

> *If I go to an exam centre, I have to be absolutely certain that I'm not going to face a mountain of stairs or something when I get there, I've got to make sure that there's an elevator to the second floor of the building and also that when I go into the exam, because that requires sitting in one place for three hours, I can't usually sit that long with my knees bent … I'll jump online and I'll check out photos of the building before I have to go there [chuckles].*

To minimise pain, she brings a small ottoman with her so she can have her legs extended during the exam. She noted that her university had been “fantastic about making sure that these places are, for example, wheelchair accessible ... If you know the building is accessible for a wheelchair user then it's going to be accessible for me”.

While Vanessa’s needs in relation to physical access to the building were supported, she expressed dissatisfaction with unnecessary accommodations she had been given, reporting that these led to negative outcomes for her as a student, physically and socially. For example, according to her plan, she is required to arrive 30 minutes early for an exam, which has impacts not only upon her, but her husband:

> *my husband and I have to be up early to do that drive and I'm told my start time is 8:30 and we get there and I'm sitting around for half an hour doing nothing. And it’s another half an hour which my husband—who's not well himself—has to find a way to make himself comfortable in an environment that's not his home. It just means that he's been waiting for me for three-and-a-half hours instead of three hours. When you have Parkinson's and you are uncomfortable and particularly in summer when the weather is very hot. He has to spend that time in a local shopping centre in the air-conditioning or something until it's time for him to come back and fetch me…. It sounds like complaining about nothing when it’s only 30 minutes. But when neither of you are morning people and you've got a fair way to travel and when you're both unwell – that half an hour can become slightly inconvenient.*

Whilst her language appears to minimise the disturbance (e.g., “slightly inconvenient”), the implication is clear that there is a physical toll on both Vanessa and her husband. She goes on to say:

> *they also segregate students with disability in another way that doesn't really fit with the concept of inclusion. That is that they have often a separate room in the exam centre from everybody else. I can understand that if your disability is ADD or ADHD or if you have social anxiety or some sort of a mental health condition in which your concentration would benefit from you being completely away from other people, but it's not like anybody talks in an exam. Why separate? Why segregate the students with disability from everybody else?*

This segregation created social awkwardness for her, and she noted that other students will:

> *come into my room to introduce themselves. There's always this question like, “why are you here? Why are you sitting separately?” Not all the time, just occasionally. Then I'm put in a position where I have to explain, well, I'm registered as a student with a disability and that's why they've put me here. Not only is there that segregation from the norm rather than inclusion …. but they are setting us up as outsiders … it inevitably ends up with me explaining about the Inclusion and Accessibility service and the fact that I have an Inclusion and Accessibility plan. You've got to be prepared to tell your story whenever you go into an exam centre if they have you set up as different.*

This separation from others impacts on Vanessa, who can be heard struggling with the competing notions of segregation and inclusion that define the exam experience.

She went on to explain that “Covid has been an absolute blessing for us, because now we don't have to go anywhere. We're doing online exams.” Being able to do exams and quizzes at home was seen as a major benefit, with Vanessa explaining:

> *if you're not feeling particularly good that day, you've often got the option to say, okay, I'm not going to sit that timed quiz and then I'll do it tomorrow, within a very short window of time. This is another advantage, to actually going in there and sitting down and doing a physical exam, where you might not be feeling particularly*

well that day, or you might not have had a particularly good night's sleep, that's going to affect your performance, and mean that sitting that physical exam in the exam centre, might not perhaps be a true reflection of the knowledge that you've gained throughout the term. When you're at home and you have the chance to do that under optimal conditions, at a time that suits you, then you're going to get the best possible results, to the limits of how prepared you are of course.

In addition to the value of flexible timing, Vanessa noted that online take-home exams have seemed to focus more on application of knowledge, which she has found to be more authentic. However, online exams are not without the potential for challenges, as Vanessa's home location impacts upon her ability to access the internet reliably; she noted, "I'm just really, really lucky that I never dropped out in the middle of a timed assessment".

Summary

Vanessa's story highlights how the assessment conditions feel outside of her control and the adjustments are imposed on her – we see this when she asks "Why separate? Why segregate the students with disability from everybody else?" The adjustments are thus not dialogic and relational in nature but imposed by the university. When examining this case, the intersection of multiple aspects of Vanessa's personal circumstances clearly converge to amplify disadvantage. For example, her geographic location exacerbates the difficulties associated with getting to and participating in an in-person exam. Attending to sociomaterial aspects of this case, social and physical arrangements form key parts of these intersections. For example, physical arrangements at the exam centre (e.g., layout of the exam centre, need to provide her own ottoman to minimise pain) constitute her challenging assessment experience. Social considerations also impact upon her experience; by receiving adjustments, particularly segregated seating, she is socially set apart from peers and is forced to explain and justify her adjustments to curious others, something that constitutes exclusion and othering. She described her sense of agency in controlling the 'optimal' conditions of her performance when the exam is from home.

Phase 2

In this phase, we designed and delivered a series of workshops at two universities to explore how high-stakes timed assessment was amenable to change.

Workshop design

The workshops provided an opportunity to understand the range of participants' experiences with exams and other timed assessments, as a means of changing the sociomaterial arrangements of such assessments, in a participatory environment. Prior to the workshops, analysis of the 40 interviews and 11 narratives with SWDs conducted across Deakin and CQU provided key topics for discussion: experiences of exams and tensions relating to inclusive exam design; the roles and relationships involved in successful assessment strategies; and exam and assessment design. Embedded in the workshops were the general principles of Universal Learning Design (CAST, 2018), and the Assessment Decisions Framework (Bearman et al., 2016).

The workshops were designed to be iterative and responsive, building from workshop to workshop. Objectives for each workshop were refined accordingly (Figure 2). Pre-workshop readings were hosted on Microsoft Teams, including case studies of interviewees and reflective prompts, and participants were invited to record comments prior to each workshop. Discussions in the workshops referenced those case studies and reflective prompts, with discussion questions provided on PowerPoint slides. Where appropriate, recorded written comments on Teams were referred to in the workshops.

The written prompt materials on Teams were not taken up by all participants across the lifespan of the workshops. For several participants, however, this was a means of providing extended and detailed responses that may not have been possible in the context of the workshop.

Workshop 1

- To build a mutual understanding between participants regarding the project, the ideas within it, and the benefits, challenges and tensions associated within the notion of designing and implementing timed assessments in an inclusive manner.

Workshop 2

- To explore what works to support students and staff in exam-related processes.
- To develop an understanding of the roles and relationships involved in successful exams (from the perspectives of students and staff – UCs, accessibility staff, learning designers, etc.).
- To imagine strategies which might be consistently employed to support these roles and relationships.

Workshop 3

- To identify aspects of assessment which could be improved.
- To develop ways to change assessment design to be more inclusive.
- To consider workload implications for students and staff of assessment design changes.

Workshop 4

- To consider UDL principals in relation to assessment.
- To identify particular aspects of assessment which could be improved.
- To finalise plans for changes to assessment.
- To introduce final task – identifying advice for UCs.

Workshop 5

- To reflect on how proposed changes are progressing in the two units.
- To discuss an early draft framework to help prompt more inclusive exam design.
- To identify system-level changes needed to support inclusive changes (create recommendations for university management).
- To evaluate the extent to which workshops have helped you consider how exams could be re-imagined in more inclusive ways.

Figure 2. Workshop objectives

Workshop participants

The number of participants at each of the five workshops varied according to availability. Two researchers at each university facilitated the workshops; other research team members also attended as peripheral participants. Given the focus of the workshops was on investigating the perspectives of those involved in, influenced by, impacted by, and making decisions about assessment design, we invited stakeholders in that process who played key roles:

- **Students with disabilities:** we invited one student per unit who could contribute as someone with lived experience and as a representative of the diverse cohort of students with disabilities completing exams/timed assessments in higher education. Due to the potential for conflicts of interest in their future studies, while some students had previously completed the unit under consideration, other students had completed related units with similar assessment formats.
- **UCs:** we identified UCs as central to making changes to assessment. UCs provided insights into assessment design and implementation at the unit level. This included insights into the influence of university systems and policy, discipline-specific expectations and understandings in relation to assessment, teaching and learning, and their experiences of interacting with students around assessment. They also

provided insights into the tensions that surround assessment design and delivery at the coalface.

- **Accessibility staff:** we found that accessibility staff were frequently mentioned in the Phase 1 interviews, and in the workshops, they were able to provide insights into the influence of university systems on accessibility arrangements, their experiences with assisting students to navigate systems across diverse faculties, and their broad understanding of assessment practices across the university.

RQ 3 How are the social and material arrangements of high-stakes timed assessment amenable to change?

Shifts in understanding that occurred across the workshops

Through the workshops, we facilitated consideration of how people involved in assessment could change the way that they acted to reshape assessment arrangements and increase inclusivity. To do this, we firstly needed to support workshop participants to re-imagine inclusive high-stakes timed assessment. Conversations moved from the general to the specific over the workshop series. The ultimate focus was on how the exams and timed assessment currently required in the units, headed by participating UCs, could be redesigned to more effectively facilitate the inclusion of students with differing abilities and backgrounds.

As mentioned earlier, the workshop preparation materials drew on the interview data and narratives of SWDs and their experiences with exams and timed assessment tasks. Sharing these different and rich perspectives amongst students, UCs and accessibility staff provoked shifts in understanding across the group, in relation to: the impact of assessment design decisions on students; the possibilities for changes to assessment design and implementation, with a focus on inclusivity; the roles of teaching staff in relation to inclusive assessment practice; and consideration of how staff could navigate system and discipline requirements whilst designing and implementing inclusive assessment tasks in their units.

Student-staff interactions

From the student perspective, relationships with assessment stakeholders within the university were key to an inclusive experience. While the UCs within the workshops were already inclined to "carry out" accommodations as required, the student data highlighted to them the possibilities for impact. At both universities, there was a requirement for students to approach each individual UC to notify them of their adjustment requirements. Streamlining the interactions around these requests by offering immediate acceptance and support was also likely to lead to less work for UCs, since they did not have to re-evaluate each student's condition and access requirements. Beyond the interactions around adjustments, academics also identified scaffolding and explanation of assessment tasks—including video explanations, taking students through salient features in exemplars, and in-class learning activities—as possible sites of change, in alignment with UDL principles around multiple means of representation and engagement.

Existing assessment arrangements

Existing assessment cultures and practices acted to constrain what was considered possible in re-imagining exams. Academics involved in the study flagged the need to put aside existing beliefs to consider alternative assessment types and implementation. There were discipline-specific expectations about the "traditional type" of standard exams, and accompanying concerns about the equivalence of other assessment types for ascertaining student capabilities or their ability to draw on specific content knowledge. External accreditation requirements were also cited as a reason to maintain particular forms of assessment. Beyond this, there were concerns about academic integrity requirements, with a focus on ensuring assessment designs guarded against cheating; however, these

concerns were coupled with the traditional concept of exams. When participants were informed that such exams are particularly prone to third-party cheating (Harper et al., 2021), they were keen to explore alternatives which were better at assuring assessment security. Another motivator for UCs to reconsider the spread and type of assessment was the possibility of enabling early feedback (formative or low-stakes) through multiple or continuous assessment. Concepts of fairness were interrogated when considering changing assessments, alongside equality versus equity. Different assessment arrangements were identified as including some but excluding others, and having multiple options for each assessment was complicated both for students, who would then have to make a decision themselves about format, and for staff, in supporting those formats through learning activities and marking.

University operations: the intricate interrelations of policy, funding, and infrastructure

There was a sense that, for change to occur at the university level, multiple voices with relevant knowledge and skills were needed in policy design and feedback (e.g., diverse student voices, and targeted staff). However, this was seen as a more difficult challenge, since there were many more stakeholders involved, and any changes at this level were likely to have implications for funding and infrastructure.

Governance and policy frameworks were not easily navigated or interpreted by staff or students. This included assessment change policy, where the processes required to significantly change assessment types or weighting were shaped to ensure compliance and ease of committee review. In this configuration, flexibility and creativity were stifled. Within the workshops, participants suggested that these policies could be changed to allow greater flexibility of assessment choice. For example, templates and mandatory information for the assessment review committee could include a greater range of assessment design categories. Formats such as take-home exams, with consideration of additional safeguards for academic integrity (e.g., vivas), and choices within exams (optional questions or choice of questions) were all more inclusive assessment possibilities that could be suggested alongside traditional assessment formats. Inclusive assessment formats might also be facilitated through: professional development; sharing of inclusive exam practice examples; and support navigating the policy frameworks when implementing change at a unit level.

The required scale of university operations was also perceived to impact on making assessment change: both in what types of assessment could be delivered at scale, and also in that exam arrangements were usually centrally determined, so academic staff had little involvement in scheduling or invigilation. Furthermore, scheduling was determined through the university timetabling system, which has relatively rigid parameters. Any shift in assessment design at scale was also a concern for staff workload, including how marking is done, how much feedback is provided, and budgets for sessional staff to take on this work.

Information communication across the university

Siloed university data systems meant that information about student characteristics and diversity were not easily accessed by those who were planning assessments. When provided, it was unlikely to arrive in time to make significant changes due to the aforementioned policy and process. There was also a lack of communication between exam environments and invigilators and UCs. This resulted in a lack of insight into what happens in the exam environment and how accommodations played out in practice. Information systems that support the flow of communication (across students, academic staff, and accessibility staff) were identified as important infrastructure to support inclusive assessment practices.

Logistical arrangements which changed due to Covid-19

Covid-19 prompted rapid changes in exams and timed assessments. Timing shifted largely to “take-home” exams, with varied start times and longer exam periods, usually 24 to 48 hours. Given the increased time limits, students were able to take breaks when it suited them. Conditions were also modified, such as being “open book” or having access to further resources. Additional supports were also provided in relation to these new formats. Additional assessment supports were embedded in units (e.g., multiple exemplars, recordings deconstructing exemplars), and UCs provided online support after exam release and during the exam, which was significantly different to previous practice, when only the invigilator was available in the exam hall. However, it was acknowledged that for some students there were barriers to online exams including home facilities, other home duties, and technology (e.g., internet access, facilities to scan and upload exams). Overall, participants concluded that it was possible for substantial logistical modifications, though it was unclear how many would be retained beyond the pandemic. This more flexible approach to assessment was appreciated by many.

The configuration of inclusive assessment development activities themselves

The workshops demonstrated that it was necessary to involve multiple parties in achieving change around assessment. While designed to provide a collaborative environment, dialogue between the key stakeholders was crucial to developing understanding and creating motivation for change. Direct feedback from students about assessment tasks and existing adjustment arrangements was motivating, since many student suggestions for inclusive assessment design arose from these conversations. The regular workshops also provided time for UCs to reflect on their previous assessment design decisions in a safe environment, where they were able to talk through and try out ideas with students and accessibility staff. Including senior accessibility managers in the workshops provided a collaborative review of existing university processes, with a direct means of feeding discussions up to policy conversations.

Improvements to workshop processes

Through the participatory workshops, we were able to better understand ways in which change could be affected, and which aspects were most amenable to change. In the final workshop participants were asked to provide feedback on the workshop process. Valuable aspects of the workshops included the diverse range of participants (i.e., students, academics, and accessibility staff). Academics valued student perspectives on assessment design and supportive practices, and students valued “having a voice and being heard”, and “helping make a difference”.

In future workshop iterations, it will be important to consider the ways in which participants are asked to engage. To reduce Zoom fatigue, pre-reading and reflection prompts were used since all workshops were planned to be held virtually rather than face-to-face. We found, however, that pre-reading and reflection were not always done consistently, and there was value in encountering some prompts together rather than as individuals. There was also a need to focus on assessment design in general in the workshop content, as frequently discussions became very narrowly focused on a particular unit, meaning the conversation was less relevant for other participants. While our student participants were very engaged, the “academic” terminology was also unfamiliar at times. A more comprehensive student participant orientation might assist with ensuring all participants can engage equally in discussions.

Overall, the key message from participants was the importance of student voice in assessment review and design. This includes the need for direct feedback from students about assessment tasks since student evaluation data through end-of-unit evaluations is currently not specific enough to allow meaningful changes. Additionally, inviting direct

student input into assessment design was seen as an important avenue to explore. This could include feedback from students who have completed assessments, or a type of assessment review forum involving students and UCs having structured discussions.

RQ 4 Can modifying social and material arrangements result in more inclusive assessment design?

Through the Phase 2 workshop series, we set to out to explore what modifications or changes were possible to improve inclusive assessment design in four units across two universities. Due to the constraints of assessment review and change processes as outlined in the previous section, drastic assessment changes requiring review were unable to be made within the project timeline. Furthermore, the scope of the project did not seek to assess the impact of the assessment changes on students' experiences or outcomes. However, as identified above, there were aspects of assessment practice which were modified or refined to be more inclusive. We therefore present each unit as a case study, outlining the context of the unit, the particular assessment addressed in the project, and what changes were considered and implemented for each unit. Each UC contributed to the refinement of their case, including identifying further potential changes.

Case study 1: Business Finance

Context

MAF203 is a second-year Business and Finance unit which focuses on the financial function of a typical business firm and the role of a finance manager in this context.

The unit is designed to develop students' knowledge across the trimester. Each week's topic builds on the topics from previous weeks, linking the topics together in the broader context of a business firm's typical practice. A single business firm is used in examples across the trimester, so that students can relate topics to a single case study with consistent figures.

Unit snapshot

Discipline	Business/Finance
Faculty	Business & Law
Institution	Deakin
Level	Second year
Class size	500-600 students
Contact hours	2-hour lecture and 1-hour seminar

Assessment types

- Two online tests worth 20%
- Group assignment worth 40%
- End-of-trimester exam worth 40%

Assessment under review

During the workshops, the UC chose to focus on the unit's end-of-trimester exam. The exam has historically been a two-hour closed book exam covering content from across the trimester (weeks 1 to 10), with an emphasis on weeks 8 to 10 as this content is not assessed in other assignments. Questions drawn from weeks 1 to 7 are selected to feature important topics and topics students may have had difficulty with, in other assessments.

At the beginning of the pandemic, the format of the end-of-trimester exam was altered to an online three-hour open book exam. Students were provided with an opportunity to undertake a practise exam as a technological test run, due to the novelty of the format and to identify any potential technological challenges, but this had relatively low take-up (around 15%) so the UC questioned its utility.

Weighting of the end-of-trimester exam has historically been 60 per cent. The other assessments, two online tests and a group assignment, were weighted at 10 per cent and 30 per cent respectively. At the onset of the pandemic, weighting was altered to reduce the high-stakes nature of the final exam: the two online tests are now weighted at 20 per cent, the group assignment at 40 per cent, and the exam also at 40 per cent.

The two online tests are each one hour and are comprised of 20 multiple choice questions. The first test covers content from weeks 1 to 4, and the second covers content from weeks 5 to 7. These tests are available for a 48-hour window, to allow students greater flexibility around start times.

The group assessment is the main assignment for the unit, and as such is a large task comprised of four questions. Students are encouraged to work with their group across all four questions, but in practice students often divide the questions amongst group members. Students are able to begin working on the group assessment from week 2, and are advised to work on it throughout the trimester as the unit progresses and each topic is covered.

Potential changes

The group assessment task is an opportunity for students to work in groups and draw on their team's knowledge of business finance concepts to make informed financial decisions. Since students tend to divide the work among themselves it defeats the purpose of peer-to-peer learning. Thus, the UC plans to design the assignment based on three or four businesses, to match the number of students in a group. Students will each be responsible for one business and compare and contrast findings with respect to their business and take an informed financial decision at the end. This design will encourage students to interact once they have completed part of the task, and at the same time each student has the chance to develop their capabilities individually. This is likely to reduce student concerns about individual efforts represented in the group task, and also manage student anxiety around how the group will function and interact.

The end-of-trimester exam is based on a case study of a single business firm. The UC discussed informing students prior to the exam of the business firm that will be used and providing materials (such as an annual report) with which students can familiarise themselves. This would also offer an opportunity to ask students to compare and contrast the exam case study's business practices with the case studies discussed during the term.

The UC also considered adding a component to the end-of-trimester exam that asks students to reflect on what they have learnt in the unit, as a means of gauging their understanding; however, she was unsure how to frame this without overwhelming students or provoking additional anxiety. It was suggested during a workshop that this question could be signalled to students prior to the exam so that students are aware it will be included, to alleviate stress around the question.

Adding the reflection component in the exam has many advantages. Since it is part of the final exam, every student will make an attempt to answer it and, in the process, they will think about the unit and discuss briefly what interests them most. This is an excellent way for the UC to get a sense of whether each student understands business finance concepts. The end-of-trimester survey does not provide any opportunity for students to provide detailed feedback, which is very much essential for the improvement of the unit. By designing the reflection question appropriately, the UC can potentially get feedback on the unit content and assessment from all students. This will help the UC to improve upon the unit in future.

Implemented changes

The UC made a number of changes to the online end-of-trimester exam. The length of the exam increased to its previous two-hour length, and it is still open for 24 hours to compensate for potential technical difficulties, to reduce student anxiety, and to allow students flexibility in choosing when to commence and complete the exam – for instance, in a two-hour block or with short breaks throughout. As the three assignments during the trimester assess content from weeks 1 to 7, the end-of-trimester exam now includes a reduced number of questions relating to weeks 1 to 7, with an increased focus on weeks 8 to 10. It is emphasised to students that an understanding of the topics covered in weeks 1 to 7

is essential to be able to complete the exam. This was possible because of the use of a single business case throughout the trimester. The exam is also open book. It is hoped that reducing the number of topics covered in the end-of-trimester exam, and opening the exam for a 24-hour window, will reduce student anxiety.

Additionally, the opportunity to complete a practice exam was maintained, offering students a chance to familiarise themselves with the technology and get a sense of the format and questions that will be asked. This is also intended to reduce student anxiety.

Exam integrity can be a concern when assessment is open-book and open internet, but this was balanced through scenario-based questions that will be difficult for students to answer if they do not understand the underlying concept. Since the questions are based around scenarios, it is not straightforward to look for the answer on the internet, reducing the chance of plagiarism. The design of the exam is intended to make it easy for students to pass if they do understand the relevant concepts. At the same time, the analytical nature of the questions creates enough variations for the UC to assess student quality.

A change was also made to the first online test. Students were asked to contribute their own questions, and the UC selected five for inclusion in the test, to provide more familiarity for students on what they might be assessed on.

There are a couple of benefits in this approach. Firstly, it is anticipated that students will be able to craft relevant questions if they understand the content well. Secondly, the approach also promotes peer-to-peer learning. However, few students responded, so further strategies are needed to encourage students to contribute questions.

Future changes

Looking forward, the UC hopes to explore replacing the end-of-trimester exam with an individual assignment that asks students to demonstrate their understanding by working with a business case study. It is anticipated that this approach would improve student engagement and more closely reflect authentic workplace practices, where students will be given longer than a two-hour window to complete a task. This will require a redesign of all assessments in the unit, however, so is a longer-term prospect requiring significant planning and coordination with other units.

Additionally, the UC is considering changing the two online test assessments, as she is currently unhappy with the multiple-choice format; possible alternatives include a more interactive task, potentially Excel-based. However, this has implications for marking workload and sessional budgets due to the large cohort size, with automated marking suggested as a possible solution.

Case study 2: Allied health professional practice unit

Context

This subject is the final unit in a combined Bachelors/Master's degree which qualifies graduates for professional practice. It includes an extended clinical placement component to prepare students for practice in community settings.

Prior to this unit, students are off-campus on clinical placements throughout Australia, and the final assessment for this unit functions as a competency assessment.

Unit snapshot

Discipline Allied health
Faculty Health
Institution Deakin
Level Fourth year
Class size 80
Contact hours 16 days of placement over 4 weeks, and supporting online curriculum

Assessment types

- Supervisor assessment of clinical performance worth 15%
- Clinical case communication tasks worth 25%
- Weekly online case-based assessments worth 20%
- Objective Structured Clinical Examinations worth 25%
- Personal Learning plan and logbook entries worth 15%

Assessment under review

The UC and members from the assessment working group (which includes staff who work across several units) chose to focus on the final assessment of the unit, the Objective Structured Clinical Examination (OSCE). The OSCE assesses clinical skills and is the final competency assessment for students, composed of 10 stations, with each station assessing different clinical skills. Students are asked to display complex skills that cover competency standards for a qualified health professional in Australia, including a broad range of clinical reasoning and communication skills.

As the final competency assessment for the course, the OSCE seeks to address knowledge and skills from across the whole course, by assessing the same capabilities that students have been applying in their placements. Case topics selected for stations are typically drawn from common situations which students are likely to encounter in day-to-day practice.

The stations are also peer-reviewed to ensure the content reflects current evidence-based best practice for clinicians.

The OSCE is weighted at 25 per cent; students need to pass at least seven stations, and also pass the average score of students that sit the OSCE, to pass this final assessment.

Due to the high-stakes, face-to-face and timed nature of OSCEs, adjustments or accommodations for this assessment have historically been difficult to implement. Past adjustments have included allowing students to choose their preferred start time and when to take their rest station.

As a result of the pandemic, OSCEs have moved online in the past year, which has provided significant challenges. It was difficult to find a format that best suited the verbal interaction which takes place with each station's examiner, and some additional changes that were made introduced unexpected problems. Providing the topics in advance led to students focusing on specific skills and revising narrowly, which meant that contextual understanding and response to the specific situation was often insufficiently demonstrated.

The switch to a video-conferencing format for the OSCEs also led to the assessment becoming open-book. This change was perceived to hinder student performance, as it seemed that students had prioritised creating reference notes over preparing for the OSCEs

themselves: students were observed checking notes, interfering with effective interactions with patients and examiners. Assessment times were also increased, and a fifteen-minute break introduced; however, limited student feedback was received about this change.

Other assessments in the unit include written case study assessments, which demonstrate clinical reasoning and are based on patients that students have seen on clinical placements; and a weekly quiz based on that week's case study.

Potential changes

In the short term, the unit team considered changes to the OSCE process to improve inclusivity and reduce student anxiety. Students are already provided with written statements or scenarios during each OSCE; however, the unit team also investigated providing the option of audio and/or video statements to students. Audio and video instructions are already used in the unit for a clinical decision-making assessment and work well, but resourcing will be a factor in whether this is a possible adaptation for OSCEs.

The unit team are interested in making OSCEs more concise, ensuring that required content is assessed while reducing repetition. In addition, they are considering adding a reflective component to the OSCEs, to allow students to explain their choices and clinical decision-making processes.

At the suggestion of a student participant in the workshops, the unit team are also considering having the examiner invite students to read the written scenario aloud when they enter each OSCE station. While this is currently not disallowed, many students may not realise this is an option.

Within the context of regular course review, the unit team also considered whether OSCEs are really required at the end of the course, given clinical skills and clinical reasoning are already demonstrated through placement-related activities and assessments, such as case studies and the supervisor report. An alternative could be a portfolio that students would build over the final two units of the course, demonstrating their clinical reasoning based on patients they have had interactions with within the units across the two trimesters, and on their six-month clinical placements. An assessment that allows students to demonstrate their clinical reasoning by interpreting evidence-based practice, and then justifying their interpretation, would be well-suited for a final unit aimed at ensuring students are equipped to practice as qualified health practitioners. The challenge is how to assess this inclusively, as written reflections can still present barriers for some students.

Implemented changes

Short-term changes to OSCEs being implemented include using more accessible language, such as changing phrasing from "justify" to "explain".

An additional two minutes has been added for students to move between each OSCE station. Students are then able to enter each station room during reading time, rather than being required to wait outside in the corridor; they can use this time to get set up and feel more comfortable in the station environment. Additional changes include explicitly permitting students to read aloud each station's scenario text and allowing students to take notes in the OSCEs.

Future changes

Looking forward, the unit team will continue to explore the necessity of OSCEs as the unit's final assessment and will investigate alternative assessment formats such as a portfolio. As this would be a significant long-term change, in the interim the unit team is planning to ensure that any changes to OSCEs for inclusive purposes are implemented for all OSCE assessments, from the first OSCE students encounter to their final OSCE; this will ensure consistency in OSCEs across the course.

Case study 3: Psychology ethics and professional practice unit

Context

This is a compulsory unit in the Bachelor of Psychological Sciences (Hons) degree. This unit is required to be completed before, or at the same time as, the Research Project A unit.

The unit is delivered online, with weekly Zoom tutorials and materials delivered via the learning management system, Moodle. The content from the first half of the unit prepares students to fulfil the ethical requirements around conducting psychological research with humans. The second half of the unit provides direction on how to address and work through ethical issues in a professional practice environment.

The unit is designed to meet the accreditation requirements of the Australian Psychology Accreditation Council (APAC). Universities are required to demonstrate that students meet APAC's standards. Assessment types are not mandated by APAC, so there is some flexibility in assessment design.

Unit snapshot

Discipline Psychology
Faculty Psychology, School of Health, Medical and Applied Sciences
Institution CQU
Level Fourth year
Class size Around 60 students
Contact hours Weekly 1-hour tutorials; two-day residential school
Assessment types

- Group work oral presentation worth 35%
- Written assessment worth 35%
- End of term written exam worth 30%

Assessment under review

The assessment requirements for the unit are: a group oral presentation critiquing a research ethics application using the NHMRC guidelines (35%); written assessment (35%) working through the ethical decision-making model (EDM) in response to a clinical ethical dilemma; and an end-of-term written examination which assesses ethical knowledge around the research process and clinical practice. In the workshops, the UC chose to focus on the unit's final task – the written exam.

This is a timed piece of assessment that includes two parts: Part A (Research Ethics) and Part B (Clinical Ethics), where students respond to an ethical dilemma and are asked to work through the EDM and respond to a series of short questions.

This task occurs in exam week (after the conclusion of a 12-week term). It is designed to demonstrate critical thinking, replicating a professional psychology situation where students are presented with an ethical dilemma that they will need to approach and assess on the spot. The time limitation of Part B was designed to mirror the type of clinical processes that are routine in the practice of professional psychology. According to the UC, a key design influence was the consideration of how to assess critical thinking "on the spot".

A rehearsal opportunity was implemented, in the form of a short essay earlier in the term which requires students to apply the EDM to an ethical dilemma. The aim was to provide an opportunity for students to practise using the EDM without a time limit and, therefore, without stress and pressure.

This test used to be a three-hour in-person examination, but it was moved online due to Covid-19. Students could choose any time within a specified 24-hour period to sit the test. Some adjustments to the test were made initially, such as allowing extra time for the sudden disruption and new mode of assessment. This had an unfortunate side effect, however, as some students with accessibility plans had five or more hours to complete the exam once adjustments were made. In these instances, the extra time encouraged some students with

accessibility plans to work in an intense and highly focused way for a much longer period of time than was physically and/or emotionally appropriate given their circumstances. Hence, the accommodation meant to relieve stress and provide better opportunity for exam completion ended up contributing to elevated stress and physical discomfort for some.

Potential changes

The UC considered the possibility of breaking the EDM assessment into smaller components but acknowledged the difficulty of implementing such a design when a key focus for the assessment is demonstrating a process. Suggestions from the workshop included splitting the assessment into two separate tests, with students choosing the gap between the tests within a 24-hour period. Another consideration was whether to remove some of the exam content and assess it at another time during the term. This approach would also enable the provision of feedback.

The UC is currently considering whether the end-of-term test will be removed altogether but, in the meantime, there are some additional changes being considered, including offering verbal instructions for the test and allowing students to respond to the questions verbally. This change will be implemented for Term 3, with students providing verbal answers to the EDM section of the exam in the form of a recording that will be uploaded to the unit Moodle site.

The current marking rubric does not include references to written skills, so a change in mode is possible using the existing marking rubric. Potential problems caused by technology "glitches", including the need for students with varied internet access to upload large audio recording files to Moodle, were raised. The importance of having other alternatives for submission was identified.

Implemented changes

The exam has been redesigned so that it is now shorter, with short-answer questions instead of essay-type questions. This means that, if standard extra time adjustments are applied, students will not be required to be in the exam for 5 or more hours (as was previously possible). The option of splitting the exam into two parts, so that the students with accessibility plans could have a break in between the two focus areas (research ethics and clinical ethics), will also be provided.

These changes are planned for Term 3; the UC was unable to make changes to assessment types during the period of the workshops, which took place during term time.

Future changes

As mentioned earlier, it is possible that the end-of-term exam will be removed altogether. This will require careful consideration as to whether other assessments will also have to be changed, to address the unit learning outcomes and to fulfil the requirements of the accreditation body. Whatever changes are proposed will be discussed with the accessibility office, and relevant students if they volunteer to participate.

Case study 4: Mathematics for engineering unit

Context

This subject is a first-year mathematics unit which is designed for students in CQU Engineering courses.

The unit is designed to develop students' foundational mathematical abilities in areas necessary for their further studies in Engineering, such as calculus.

Unit snapshot

Discipline Mathematics
Faculty Engineering
Institution CQU
Level First year
Class size 150-180 students
Contact hours 2-hour weekly lecture and 2-hour weekly tutorial
Assessment types

- Two written assignments worth 20%
- One formal invigilated university examination worth 60%

Assessment under review

The UC chose to focus on the overall assessment strategy within the unit, which has always culminated in an invigilated in-person exam. While the UC did think there was a need for an invigilated end-of-term exam, he wanted to explore possibilities leading up to the exam which would provide students with more opportunities to demonstrate knowledge and obtain formative feedback on their developing skills.

At the beginning of the Covid-19 pandemic, the format of the end-of-term exam was altered to a 24-hour online exam; during this window of time, students had to download the exam, answer the posed problems, and then scan/photograph their work and upload it. This exam was not invigilated, but students were told they had to be ready to orally explain their work if asked. Some students who were selected to explain their workings via Zoom video conference were unable to do so, making the UC concerned about academic integrity in this mode.

Potential changes

While the UC acknowledged that online exams were possible (as experienced during the Covid-19 lockdown), he was worried about difficulties authenticating work in an online exam. In the past, he had personally caught many students using online "tutoring" sites to rapidly obtain correct responses to assessments, and he had systematic processes in place to catch cheating. These included identifying consistently right or wrong answers, matching student work to model answers provided by "tutoring" sites, and closely monitoring students already in the program that monitors academic performance.

Given the content learnt in this unit provides a foundation for the Engineering degree—coupled with expectations that Engineers Australia requires assurance that students have reach expected competencies—the UC felt in-person exams needed to continue to form part of the unit's assessment, to both maximise academic integrity and have confidence students progressing in the program had personally mastered necessary skills. The exam was already structured to allow an element of student choice; students select a range of exam questions to respond to rather than having to answer all questions.

However, the UC was very interested in finding new ways of allowing students to access formative feedback, to help promote mastery and lessen incentives to cheat. He believed that developing student confidence in their capabilities via this process would help decrease the student anxiety often described in the project data, and was committed to continuing to offer needed adjustments for those on accessibility plans (e.g., extra time, rest breaks). While desirable, personalised feedback from tutors (written or oral) was generally impractical due to student numbers and the limited time allocated to student marking within budgets.

Instead, the UC was actively investigating different forms of automated marking that could be used to provide students with frequent formative feedback on their work. This approach aligned well with his philosophy of helping students "learn to learn", and he considered that it would better allow him to cater for student diversity as formative problems could target students' areas of need. He was already explicitly teaching students strategies to validate their own work and check for errors.

Implemented changes

During the project, the UC made changes to proactively engage students around the importance of academic integrity during their studies. He was trialling a short task where students drew on appropriate university policies and the student charter to respond to a case study about academic integrity. This approach was implemented to help students better understand issues around academic integrity and identify dishonest behaviours and their consequences.

He also began actively investigating STACK software (a Moodle plugin) which he thought might be useful for generating automated feedback on assessment. He was in the process of testing the software to ascertain if it would be a good fit for the kinds of problems he wishes to pose to students. In the meantime, he has already started encouraging students to cross-validate their work using other algebra software as a way to start helping students gain formative feedback on their working.

Future changes

While the timeline for implementing STACK within the unit has been slowed by the need to wait until after a major Moodle merger, the UC was committed to getting these formative assessment opportunities in place later in the year. Considering student diversity, he saw that provision of these formative assessment opportunities might allow him to change the current assessment structure by breaking assessments into more bite-sized chunks (e.g., replacing longer assignments with short weekly quizzes or small problem sets, or adding short in-class tests or a midterm test), adjusting assessment weightings, and/or changing particular components to pass/fail. He saw smaller assessments as allowing teachers to have better data about common student errors, which could then be used to adapt teaching. He also acknowledged that maths relies on paper-based responses and wanted to explore other assessment modes in the future. He is already planning to do some data collection to allow his team to evaluate if the increased formative assessment improves student learning in the unit.

Discussion

This research project investigated equity group students' experiences of high-stakes timed assessments, and then explored the possibility of improving how inclusive such assessments were through workshops designed to identify and support modifications. In this work, we took a broader perspective both on inclusion, through considering SWDs' intersectionality, and on what constituted assessment, through considering the social and material arrangements that shape assessment practices. This helped us to generate findings which correspond with our four research questions, for which we provide a summary here.

1. What are the social and material arrangements that impact on the inclusivity of high-stakes timed assessments?

Student-staff interactions were a cornerstone of inclusivity. While material aspects such as timing, location, format and content of assessment also impacted on inclusivity, staff attitudes and actions contributed to, and either heightened or diminished, inclusive assessment practices. Thus, while material arrangements ultimately determined inclusivity, social arrangements determined possibilities for access to improved inclusion. These findings align with previous work which highlights that the perceived social stigma attached to requiring adjustments (Grimes et al., 2019a; Lightner et al., 2012) is a significant barrier to access. It may also be that social and material arrangements beyond the university contribute to inclusivity of assessment. Authenticity of assessment appeared to matter significantly to students, and this could be interpreted as how they perceived assessment as aligning with the social world and roles beyond university. While authenticity of assessment is in the eye of the beholder (Gulikers et al., 2004), this also prompts us to consider inclusion not only in terms of students' personal characteristics or backgrounds, but also in terms of the diversity in students' imagined futures.

2. Within high-stakes timed assessment practices, how does disadvantage for SWD intersect with RRR, FiF and/or low SES?

Beyond the clear categorisation of students in the research question, our findings further support the contention that an intersectional approach to considering disadvantage is important to come to grips with the diverse range of individual student experiences. SWDs who also had membership of RRR, FiF and/or low SES groups reported further impact on their assessment experiences. The complexity and combination of circumstances suggest that while some global changes to assessment practices would improve inclusion overall, approaches appropriate to personal and assessment contexts are required. These findings add to previous work on intersectional disadvantage for students in higher education students (Drury & Charles, 2016; Naylor & Mifsud, 2019; Nelson et al., 2017; Walker-Gibbs et al., 2019), in that this study identified similar intersectional disadvantage exists within assessment, and in relation to SWDs.

3. How are the social and material arrangements of high-stakes timed assessment amenable to change?

We demonstrated one possible approach to altering the social and material arrangements of high-stakes timed assessment, via staff participation in a series of online workshops exploring possibilities for re-imagining exams. This approach afforded opportunities for discussion across groups of stakeholders (students, UCs, and accessibility staff), which led to better understanding of perspectives, and the development and implementation of changes.

4. Can modifying social and material arrangements result in more inclusive assessment design?

While it was outside of the project's scope to evaluate the impact of implemented assessment changes, our four case studies suggest that yes, it is possible to make modifications towards more inclusive assessment design. In some cases, significant future material changes such as the replacement of exams with other assessment tasks are being considered. While only smaller "tweaks" were possible during the period of the project, this iterative approach to assessment modification is likely to be more sustainable than a complete redesign, unless there are substantial university-wide initiatives that support holistic changes.

Key messages from the project

In addition to addressing the four research questions posed at the outset of the project, taken together, there are some broader key messages arising from the findings which merit discussion. The following section outlines each of these in turn.

Inclusion is an ongoing process which needs to be continually enacted by all stakeholders

Across the student narratives and the series of workshops, the research team realised that inclusive assessment was not something that could be simply checked off a list as "done". Rather, inclusion was talked of and enacted as an ongoing process, both individually and collectively, across different constellations and according to what was needed in a particular situation. It was clear that, more than just "going through the motions", empathy was needed to achieve inclusion. This was seen both in a few key words in communications, but also the actions that especially accessibility staff took in supporting students throughout their journey.

The importance of creating and maintaining these relationships was significant, and could be viewed similarly to the concept of the educational alliance (Telio et al., 2015) that has been demonstrated to be an effective environment for productive feedback. However, the educational alliance in this scenario extends to more than just an individual educator and the student. How we can facilitate all stakeholders to develop and maintain this alliance—and in actions, more than just words—might be a key question for future work. As external professional bodies often have considerable say in the assessment parameters needed for degrees to gain professional accreditation, stakeholders from these groups must also be part of discussions around how to improve the inclusivity of higher education assessment.

Within the context of online and remote assessment, what inclusion means also needs ongoing consideration. Much that was done out of necessity in relation to Covid-19 requirements for social distancing had unexpected positive impacts for SWDs who were studying in RRR locations. However, there were also ongoing concerns about connectivity for these groups, which aligns with the concerns of many students in relation to the "digital divide" (Hillier, 2018) that is more likely to impact low SES, FiF and RRR students. Changes to assessment design and delivery into the future should also consider the differential impact on students with intersecting identities and the potential for unintended consequences – whether positive or negative. We question the existence of the "archetypal" student and therefore call on all university staff to consider how their attitudes and actions might impact on the diverse range of students now participating in higher education.

Assessment design must balance the ideal and the pragmatic

Perhaps in an ideal world, we might have the time, resources and wherewithal to negotiate the design of assessment for each student: to attend to inclusion at an individual level. However, systems are pushing us to design assessment for scale; to do more with less. Somewhere between these two extremes we have to chart and tread a path which is inclusive, but also efficient (to manage educator workload and ensure students develop their

capabilities in appropriate areas) and effective (both in terms of assuring learning, and promoting learning). Providing choices, in alignment with the principles included in UDL (CAST, 2018), has frequently been suggested as the main way to tackle inclusion in assessment. However, just providing choice alone is, in the Australian vernacular, "a bit of a cop-out". This is not to say that we shouldn't adopt Universal Design practices overall to improve accessibility of assessment. However, providing choice between two equally non-inclusive assessments does not improve inclusion at all, and may exacerbate student anxiety about having to choose between two evils. Instead, we need to delve deeper into what *isn't* inclusive about the assessment design from the start. Practically, we recognise that assessment design is often inherited, modified on the fly, and therefore that deep thinking about inclusivity is likely to also be happening alongside iterative assessment development.

While this project focused on exams and other forms of high-stakes timed assessment, we now argue that we need to reconsider our use of exams, full stop. Exams have been an anchor of university practice for some time, but this does not mean we should keep them for the sake of maintaining tradition, when so much else has changed about what we consider acceptable within society and in higher education participation. Exams can act as barriers to equitable treatment, often more than other forms of assessment (Hanafin et al., 2007). Rationales for using exams often focus on their efficiency, their reputation as being a "fair" or secure form of measurement, and tradition. However, they require access to specific infrastructure, whether they are online or in-person, over a tightly-set period of time. As illustrated in this project, this may have significant equity impacts due to travel, timing and physical conditions under which exams are sat. Even if exams are moved online, removing some of these issues, poor internet connections, limited access to appropriate technology, and disruptions within the home environment can still undermine equity. Moreover, the strict time, place and technology requirements privilege particular types of skills that may bear little relation to the capabilities necessary for meeting the assessment requirements. Additionally, exams—like all forms of assessment—are unable to completely assure assessment security and academic integrity; indeed, there are concerns that exams are particularly prone to third-party cheating (Harper et al., 2021). Therefore, exams can be valuably re-imagined, either as other forms of assessment or, sparingly, as carefully designed to promote inclusive approaches. It also may be useful to draw from disciplines who do not usually use exams, to understand what other forms of assessments could be used.

Based on the project findings and literature, we have developed an **Inclusive assessment design framework** to support those involved in assessment design. The framework can be used to consider the inclusivity of higher education assessment tasks, and to design tasks which allow learning outcomes to be demonstrated in ways which consider diverse student needs. We also present a shorter **Five top tips** one-page resource which communicates some key pragmatic considerations.

There is no silver bullet: we need a coordinated and comprehensive approach

Unsurprisingly, there is no simple way to "fix" assessment to make it inclusive. In the project findings, we encountered many different aspects—at university, course, unit and individual levels—which contributed to how assessment was carried out in practice, much like previous work on assessment design (Bearman et al., 2017). Additionally, the interview data highlighted that assessment designs and adjustments which were reported as very effective by some students did not meet the needs of others, even when both were classified under the same broad disability category. Hence, even when assessments are well-designed, there will always be a need for adjustments to be made in consideration of individual circumstances and needs.

We have focused so far on the very micro-levels of assessment design, and the interactions between students and staff. However, university policy and systems also should not be allowed to get in the way of what is needed to make inclusive assessment possible. Systems to support accessibility need to be sufficiently flexible and friendly, such that students and staff can work together. Students reported that accessibility staff were highly effective in improving inclusivity. This may be because they have a coordinating and connecting role. Such coordination has previously been suggested as more effective for reducing workload and supporting local adaptation of assessment (Bearman et al., 2021). Perhaps this approach could also work for assessment review processes where, instead of focusing reductively on compliance requirements, they might open up new ways of thinking about assessment. Beyond this, we also recognise the need for change at an organisational level; thus, we have developed **guidance for universities to support inclusive assessment**.

We must create opportunities to listen, discuss, and collaboratively problem solve

While the need for clear and empathetic communication arose frequently in the student narratives, the workshops themselves demonstrated how essential it was to make time and space together for discussion. Student voices and student input are essential to inclusive assessments, and yet students are seldom meaningfully included in conversations about assessment design. We cannot make assumptions about what students need, based on a category or label, though as we learn more about the diversity of experiences, it will become easier to predict what is definitely not inclusive, and what might be more inclusive across student equity groups. Since this is the case, we need to include a variety of student voices, and cannot be tokenistic about involvement after assessment design decisions have already been made.

Across the project, within safe spaces, many people were very keen to tell their stories, to have their voices heard, and to make suggestions to improve assessment – not just for themselves, but for other students as well. In our experience, there are few projects involving students where there are more willing volunteers to participate than required. That this project was one of them also serves to indicate the importance of work in this area for students.

Opportunities to contribute to inclusive assessment design need to be well-considered, however. All participants spoke positively about the spacing and time commitment related to the five workshops, feeling that the time spent together was worthwhile to create connections and a sense of safety. We note, though, that since attendance was not compulsory, not all participants attended all sessions, and this may have impacted on their perceptions of how much of a commitment the workshops really were. While each workshop had a specific focus and planned content, the time was also largely spent in discussion. Fewer but longer workshops may also be effective, especially if they are done face-to-face rather than online.

Given our participants came to the project voluntarily, it may be that we had enthusiasts who were already keen to implement assessment to support diversity. However, even within this group, we did see shifts in how participants saw equality, equity, and fairness, away from a straightforward approach where everyone receives the same treatment. This may be a key transformative concept for both staff and students, especially if they have only previously experienced assessment designs which focus on standardisation, reliability and validity.

Strengths and limitations

A significant strength of this work is the way in which stakeholders are represented. In proposing our project, we made cautious estimations of participant numbers. Unexpectedly, many more students responded, and we made an early decision to conduct more interviews (40 rather than 30) and to accept written or recorded responses to the interview prompts.

This is a strength, in that we were able to incorporate a significant number of student perspectives, but also a limitation, since this larger dataset meant that, for the purposes of this report, we were unable to undertake as deep an analysis across all cases as originally planned. Thus, while we did pay attention to sociomaterial circumstances across the data, and particularly within the complexity of student narratives, a more focused analysis may have identified further arrangements which impact on inclusion. What we have found, however, suggests that the entanglements of the sociomaterial in inclusive assessment are significant, and merit further investigation. In the workshop phase, we were able to work with four different units and follow the review and re-imagining of assessments, and present these as part of the report. Using student voice data was something which helped prompt reflection on current practices and allowed staff to better understand the barriers current assessment enactments created. Across both phases, we enjoyed the frankness with which participants contributed. While undoubtedly we encountered enthusiastic members of the university community, this work demonstrates there is substantial appetite to improve inclusion. We have also encountered significant interest in the research to date amongst the broader higher education community, and have already enjoyed several opportunities for early dissemination (see Appendix D).

Our multidisciplinary team, which has deep expertise across inclusion, equity group students and assessment, has been a strength of the work. The project team members were highly optimistic and keen to democratise higher education, and the UCs recruited to the project had a clear interest in improving inclusivity in their assessment practices. Hence, the project shows what can be achieved when people approach this topic with hope, optimism and the spirit of collaboration. While the workshop resources created (see Appendix E) may benefit all educators and assist them in working towards a better understanding of the experiences of SWDs, and what inclusive practice might look like within their own teaching contexts, actual change is highly contingent on the level of commitment from all stakeholders towards increasing inclusivity. Our optimism about what is possible may not extend to others who seek to take up the workshop resources to effect similar work in their own settings. To gain additional feedback on the project and outputs, we convened an advisory group. The advisory group was comprised of university leaders in policy and governance, accessibility unit managers, assessment and inclusion researchers, and a student, and their input helped to refine the workshop program, the inclusive assessment framework, and the guidance for universities.

This project has focused heavily on what the university does, and, by extension, what academics, educators, and equity practitioners do, rather than how we can focus on student engagement and capacity in assessment. This was intentional, since many of the dilemmas previously identified around assessment are not student responsibilities. Students attend universities with some expectation of a guided learning and assessment experience, and they exhibit independence and self-regulation frequently. However, there may also be a place for student assessment and feedback literacy (Molloy et al., 2020) development, particularly for equity students, and also recognising ways to create space for student agency in assessment and feedback (Nieminen et al., 2021). Therefore, future work might also consider what students might be able to do themselves to improve the inclusivity of assessment, including agitating for change, and becoming equal partners in assessment processes.

Conclusion

This research project had two main intentions: to explore the ways in which high-stakes timed assessments impacted inclusion using an intersectional and sociomaterial framing, and also to understand practically what could be done to re-imagine exams. We achieved this through a two-phase design, where we firstly invited SWDs to share their experiences with us, attending to the complexity of their individual circumstances, and subsequently designed and invited participants to a series of workshops where we shared and discussed aspects of assessment design in relation to inclusion. Across the findings from these two phases, and as outlined in our discussion, one thing is clear: assessment is a messy and entangled activity, relying on many people, many processes, and many objects, spaces, and technologies. Changing one aspect of assessment is likely to have ramifications elsewhere; improving inclusivity in one dimension may exclude students in other ways. This brings us to our conclusion: to achieve inclusive assessment, we must continue to engage collaboratively, with many stakeholders, and at many levels, to facilitate positive changes in assessment.

In response to this, we have developed a suite of practical resources which can be widely adopted and used. They are targeted towards different user groups: for those who might prefer key messages about the process of re-imagining exams, a “Top 5 Tips” sheet and exemplar case studies are offered. For those who are planning to spend time considering and reflecting on assessment more broadly with others, we have developed an inclusive assessment framework and a set of workshop materials. Finally, we have also made a series of university-wide recommendations. These are all available via the project website.

As educators, it remains our responsibility to ensure that assessment supports *all* students to achieve and demonstrate capability in accordance with what they have learned and satisfy the requirements of their degree, equipping them for the world beyond university. Such assessment therefore needs to be inclusive. While we started off in this work with the goal of re-imagining exams, since they seemed to be the least inclusive form of assessment, we have realised throughout this project that no exam exists in isolation and, therefore, more broad-reaching improvements to assessment are what is now required. Though these improvements seem daunting, we have demonstrated in this work that with optimism and a willingness to engage, over time, such re-imagining begins to be possible.

References

Ajjawi, R., Dracup, M., Zacharias, N., Bennett, S., & Boud, D. (2020). Persisting students' explanations of and emotional responses to academic failure. *Higher Education Research & Development*, *39*(2), 185–199. https://doi.org/10.1080/07294360.2019.1664999

Bartolic, S. K., Boud, D., Agapito, J., Verpoorten, D., Williams, S., Lutze-Mann, L., Matzat, U., Moreno, M. M., Polly, P., Tai, J., Marsh, H. L., Lin, L., Burgess, J.-L., Habtu, S., Rodrigo, M. M. M., Roth, M., Heap, T., & Guppy, N. (2021). A multi-institutional assessment of changes in higher education teaching and learning in the face of COVID-19. *Educational Review*, 1–17. https://doi.org/10.1080/00131911.2021.1955830

Bearman, M., & Ajjawi, R. (2021). Can a rubric do more than be transparent? Invitation as a new metaphor for assessment criteria. *Studies in Higher Education*, *46*(2), 359–368. https://doi.org/10.1080/03075079.2019.1637842

Bearman, M., Ajjawi, R., Bennett, S., & Boud, D. (2021). The hidden labours of designing the Objective Structured Clinical Examination: a Practice Theory study. *Advances in Health Sciences Education*, *26*(2), 637–651. https://doi.org/10.1007/s10459-020-10015-w

Bearman, M., Dawson, P., Bennett, S., Hall, M., Molloy, E., Boud, D., & Joughin, G. (2017). How university teachers design assessments: a cross-disciplinary study. *Higher Education*, *74*(1), 49–64. https://doi.org/10.1007/s10734-016-0027-7

Bearman, M., Dawson, P., Boud, D., Bennett, S., Hall, M., & Molloy, E. (2016). Support for assessment practice: developing the Assessment Design Decisions Framework. *Teaching in Higher Education*, *21*(5), 545–556. https://doi.org/10.1080/13562517.2016.1160217

Boud, D. (1995). Assessment and Learning: Contradictory or Complementary? In P. Knight (Ed.), *Assessment for Learning in Higher Education* (pp. 35–48). Routledge. https://doi.org/10.4324/9780203062074-8

Boud, D., Dawson, P., Bearman, M., Bennett, S., Joughin, G., & Molloy, E. (2018). Reframing assessment research: through a practice perspective. *Studies in Higher Education*, *43*(7), 1107–1118. https://doi.org/10.1080/03075079.2016.1202913

Brett, M. (2016). Disability and Australian Higher Education: Policy Drivers for Increasing Participation. In *Student Equity in Australian Higher Education* (pp. 87–108). Springer Singapore. https://doi.org/10.1007/978-981-10-0315-8_6

CAST. (2018). *Universal Design for Learning Guidelines version 2.2*. http://udlguidelines.cast.org

Cho, S., Crenshaw, K. W., & McCall, L. (2013). Toward a Field of Intersectionality Studies: Theory, Applications, and Praxis. *Signs: Journal of Women in Culture and Society*, *38*(4), 785–810. https://doi.org/10.1086/669608

Crawford, N. (2021). *"On the Radar": Supporting the mental wellbeing of mature-aged students in regional and remote Australia*. https://www.ncsehe.edu.au/wp-content/uploads/2021/04/Crawford-Equity-Fellowship-Report_FINAL.pdf

Crenshaw, K. (1991). Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color. *Stanford Law Review*, *43*(6), 1241. https://doi.org/10.2307/1229039

Dawson, P., Bearman, M., Boud, D. J., Hall, M., Molloy, E. K., Bennett, S., & Gordon, J. (2013). Assessment Might Dictate the Curriculum, But What Dictates Assessment? *Teaching & Learning Inquiry: The ISSOTL Journal*, *1*(1), 107–111. https://doi.org/10.2979/teachlearninqu.1.1.107

Devlin, M., & O'Shea, H. (2012). Effective university teaching: Views of Australian university students from low socio-economic status backgrounds. *Teaching in Higher Education*, *17*(4), 385–397. https://doi.org/10.1080/13562517.2011.641006

Disability Standards for Education, (2005).

Drury, H., & Charles, C. (2016). Overcoming disadvantage, achieving success: What helps. *Journal of Academic Language & Learning*, *10*(2), 48–69.

Fenwick, T. (2010). Re-thinking the "thing." *Journal of Workplace Learning*, *22*(1/2), 104–116. https://doi.org/10.1108/13665621011012898

Fenwick, T., & Edwards, R. (2013). Performative ontologies: Sociomaterial approaches to researching adult education and lifelong learning. *European Journal for Research on the Education and Learning of Adults*, *4*(1), 49–63. https://doi.org/10.3384/rela.2000-7426.rela0104

Golan, M., Singer, G., Rabin, N., & Kleper, D. (2020). Integrating actual time usage into the assessment of examination time extensions provided to disabled college engineering students. *Assessment and Evaluation in Higher Education*, *45*(7), 988–1000. https://doi.org/10.1080/02602938.2020.1717434

Grimes, S., Scevak, J., Southgate, E., & Buchanan, R. (2017). Non-disclosing students with disabilities or learning challenges: characteristics and size of a hidden population. *Australian Educational Researcher*, *44*(4–5), 425–441. https://doi.org/10.1007/s13384-017-0242-y

Grimes, S., Southgate, E., Scevak, J., & Buchanan, R. (2019a). University student perspectives on institutional non-disclosure of disability and learning challenges: reasons for staying invisible. *International Journal of Inclusive Education*, *23*(6), 639–655. https://doi.org/10.1080/13603116.2018.1442507

Grimes, S., Southgate, E., Scevak, J., & Buchanan, R. (2019b). Learning impacts reported by students living with learning challenges/disability. *Studies in Higher Education*, *0*(0), 1–13. https://doi.org/10.1080/03075079.2019.1661986

Gulikers, J. T. M., Bastiaens, T. J., & Kirschner, P. A. (2004). A five-dimensional framework for authentic assessment. *Educational Technology Research and Development*, *52*(3), 67–86. https://doi.org/10.1007/BF02504676

Hanafin, J., Shevlin, M., Kenny, M., & Neela, E. M. (2007). Including young people with disabilities: Assessment challenges in higher education. *Higher Education*, *54*(3), 435–448. https://doi.org/10.1007/s10734-006-9005-9

Harper, R., Bretag, T., & Rundle, K. (2021). Detecting contract cheating: examining the role of assessment type. *Higher Education Research & Development*, *40*(2), 263–278. https://doi.org/10.1080/07294360.2020.1724899

Hillier, M. (2018). Bridging the digital divide with off-line e-learning. *Distance Education*, *39*(1), 110–121. https://doi.org/10.1080/01587919.2017.1418627

Kilpatrick, S., Johns, S., Barnes, R., Fischer, S., McLennan, D., & Magnussen, K. (2017). Exploring the retention and success of students with disability in Australian higher education. *International Journal of Inclusive Education*, *21*(7), 747–762. https://doi.org/10.1080/13603116.2016.1251980

Kneale, P. E., & Collings, J. (2018). *Towards inclusive assessment: The journey at the University of Plymouth*. 40. https://about.jstor.org/terms

Koshy, P. (2019). *Equity Student Participation in Australian Higher Education: 2013 - 2018* (pp. 1–20). Curtin University. https://www.ncsehe.edu.au/wp-content/uploads/2020/04/NCSEHE-Equity-Student-Briefing-Note_2013-18_Accessible_Final_V2.pdf

Lawrie, G., Marquis, E., Fuller, E., Newman, T., Qiu, M., Nomikoudis, M., Roelofs, F., & Van Dam, L. (2017). Moving towards inclusive learning and teaching: A synthesis of recent literature. *Teaching and Learning Inquiry*, *5*(1). https://doi.org/10.20343/teachlearninqu.5.1.3

Lewandowski, L., Cohen, J., & Lovett, B. J. (2013). Effects of Extended Time Allotments on Reading Comprehension Performance of College Students With and Without Learning Disabilities. *Journal of Psychoeducational Assessment*, *31*(3), 326–336. https://doi.org/10.1177/0734282912462693

Lightner, K. L., Kipps-Vaughan, D., Schulte, T., & Trice, A. D. (2012). Reasons University Students with a Learning Disability Wait to Seek Disability Services. *Journal of Postsecondary Education and Disability*, *25*(2), 145–159.

Lipnevich, A. A., Panadero, E., Gjicali, K., & Fraile, J. (2021). What's on the syllabus? An analysis of assessment criteria in first year courses across US and Spanish universities. *Educational Assessment, Evaluation and Accountability*. https://doi.org/10.1007/s11092-021-09357-9

MacLeod, A., & Ajjawi, R. (2020). Thinking Sociomaterially. *Academic Medicine*, *95*(6), 851–855. https://doi.org/10.1097/ACM.0000000000003143

Madriaga, M., Hanson, K., Heaton, C., Kay, H., Newitt, S., & Walker, A. (2010). Confronting similar challenges? disabled and non-disabled students' learning and assessment experiences. *Studies in Higher Education*, *35*(6), 647–658. https://doi.org/10.1080/03075070903222633

Mayes, E. (2019). Reconceptualizing the presence of students on school governance councils: The a/effects of spatial positioning. *Policy Futures in Education*, *17*(4), 503–519. https://doi.org/10.1177/1478210317739468

Molloy, E., Boud, D., & Henderson, M. (2020). Developing a learning-centred framework for feedback literacy. *Assessment & Evaluation in Higher Education*, *45*(4), 527–540. https://doi.org/10.1080/02602938.2019.1667955

Morris, C., Milton, E., & Goldstone, R. (2019). Case study: suggesting choice: inclusive assessment processes. *Higher Education Pedagogies*, *4*(1), 435–447. https://doi.org/10.1080/23752696.2019.1669479

Naylor, R., & Mifsud, N. (2019). *Structural inequality in higher education: Creating institutional cultures that enable all students*. https://www.ncsehe.edu.au/wp-content/uploads/2019/09/NaylorMifsud-FINAL.pdf

Nelson, K., Picton, C., McMillan, J., Edwards, D., Devlin, M., & Martin, K. (2017). *Understanding the Completion Patterns of Equity Students in Regional Universities*. 1–46. https://www.ncsehe.edu.au/wp-content/uploads/2017/06/Nelson-Completion-patterns.pdf

Nichols, S., & Stahl, G. (2019). Intersectionality in higher education research: a systematic literature review. *Higher Education Research & Development*, *38*(6), 1255–1268. https://doi.org/10.1080/07294360.2019.1638348

Nieminen, J. H., Tai, J., Boud, D., & Henderson, M. (2021). Student agency in feedback: beyond the individual. *Assessment & Evaluation in Higher Education*, 1–14. https://doi.org/10.1080/02602938.2021.1887080

Northway, R., Hurley, K., O'Connor, C., Thomas, H., Howarth, J., Langley, E., & Bale, S. (2014). Deciding what to research: an overview of a participatory workshop. *British Journal of Learning Disabilities*, *42*(4), 323–327. https://doi.org/10.1111/bld.12080

O'Neill, G., & Maguire, T. (2019). Developing assessment and feedback approaches to empower and engage students. *Transforming Higher Education Through Universal Design for Learning*, 277–294. https://doi.org/10.4324/9781351132077-17

O'Shea, S. (2016). First-in-family learners and higher education : Negotiating the ' silences ' of university transition and participation. *HERDSA Review of Higher Education*, *3*, 5–23.

O'Shea, S., Lysaght, P., Roberts, J., & Harwood, V. (2016). Shifting the blame in higher education – social inclusion and deficit discourses. *Higher Education Research and Development*, *35*(2), 322–336. https://doi.org/10.1080/07294360.2015.1087388

Orlikowski, W. J. (2007). Sociomaterial practices: Exploring technology at work. *Organization Studies*, *28*(9), 1435–1448. https://doi.org/10.1177/0170840607081138

Pitman, T. (2017). Acts of equity: four approaches to widening participation in higher education. *Australian Universities' Review*, *59*(1), 37–46.

Stentiford, L., & Koutsouris, G. (2020). What are inclusive pedagogies in higher education? A systematic scoping review. *Studies in Higher Education*, *0*(0), 1–17. https://doi.org/10.1080/03075079.2020.1716322

Telio, S., Ajjawi, R., & Regehr, G. (2015). The "Educational Alliance" as a Framework for Reconceptualizing Feedback in Medical Education. *Academic Medicine*, *90*(5), 609–614. https://doi.org/10.1097/ACM.0000000000000560

Walker-Gibbs, B., Ajjawi, R., Rowe, E., Skourdoumbis, A., Thomas, M., Bennett, S., Fox, B., & Alsen, P. (2019). *Success and Failure in Higher Education on Uneven Playing Fields*. https://www.ncsehe.edu.au/wp-content/uploads/2019/09/WalkerGibbs_FINAL.pdf

Waterfield, J., & West, B. (2006). *Inclusive Assessment in Higher Education: A Resource for Change*. https://doi.org/10.4324/9781315045009

Yin, R. K. (2013). *Case Study Research: Design and Methods* (5th ed.). Sage.

Appendices

Appendix A: Student interview guide

NB: wording of individual questions may be changed but the intent and scope of questions are provided here. Bullet points are to be used as prompts/probes if the previous question is unsuccessful at eliciting information on that point.

Thank you for agreeing to participate. We are interested in "inclusion", where a diversity of people (e.g. backgrounds, ability) feel valued and respected, have access to opportunities and resources, and can contribute their perspectives and talents.

Please remember, in this interview, you are not obliged to share any information that you do not wish to discuss. Some of the questions I will ask may be of a personal and sensitive nature. If you need to stop the interview at any time, please let me know and I will do so straight away. You are also able to withdraw at any time if you wish to.

If via Zoom: Since we are doing this interview through Zoom, we will be recording both the video and the audio. If you're not comfortable with video recording, you're able to turn off your camera – you'll still be able to see me though.

Before we start, do you have any questions for me or anything you'd like to clarify? If not, are you happy to start the interview?

To start, can you tell me a little about yourself?

- As much as you'd like to share about yourself – age, gender, ethnicity
- What do you study at university? (Course, year level, major/units/subjects)
- Why did you decide to study at university? (Goals – future outlook)

Are there any circumstances which you feel have impacted on you studying at uni?

- Does where you live impact on your study? (e.g. rural/remote)
- Did your family expect you to go to uni after you finished school? (e.g. first in family?)
- How supportive are your family and friends of your decision to study at university?
- Are there any financial circumstances which make it difficult to study?
- Any family/carer/work obligations which impact on your ability to study?
- Any health conditions which impact on your ability to study?
- Any other impacts on your study? e.g. Internet?

Can you tell me about your last exam at university?

- When was it?
- Where was it? (how did you get there, location, room description, seating, lighting?)
- What was involved? (paper, pen, computer, chair? special aids?)
- Who was involved? (invigilator, fellow students, family, friends?)
- What interactions did you have?
- While the overall situation was positive/negative, can you tell me if there was anything negative/positive, and how/why it happened?]

- Was there anything that made you feel included?
- Was there anything that made you feel excluded/challenged?

Did you have any special consideration, adjustments, or accommodations for this exam? If so, how did special consideration, adjustments, or accommodations work in relation to this exam?

- How did you access them?
- Who did you have to contact/discuss?
- What timeframe did this occur over? (e.g. at the start of your degree, every study period, just before exams?)
- What happened as a result?
- How did you feel they worked for you? Did you feel it was successful? How did it impact on your learning? What about your marks?

If not, were there any considerations, adjustments, or accommodations that you wished you had during this exam?

How does your last exam compare to previous exams you've done, and/or how you normally experience exams? (How has the Covid-19 situation impacted what happens for you in exams?)

- What was different?
- What was similar?
- Do you normally get adjustments in relation to exams?
    - If so, what? (use same prompts as above)

If this experience was significantly different to normal, can you describe an exam experience that is more typical?

- Use same prompts as for above

Have there been adjustments that you felt you needed but didn't/wasn't able to ask for?

- Any technology, equipment, timing, or environment/setting that you (or someone else) thought was "too hard" to organise?

Thinking more broadly, how do your exam experiences compare with your experiences of other types of assessment at university?

- e.g. written assignments, oral/video presentations, group work, practicals, portfolio

Which of these have you felt best allowed you to demonstrate what you know?

Do you normally receive adjustments for these other types of assessment, or only exams? Why?

Now that we've spent some time discussing exams, what do you think is most important to change about exams?

What would you say to your lecturers about exams?

Is there anything else you'd like to tell us about exams, or about assessment in general?

Thank you for your time today.

Appendix B: Codebook

Name	Files	References
Student details	1	1
Disabilities-conditions	49	164
Accommodations	49	238
Characteristics-history	50	121
Relationships-recognition	0	0
Unit chairs-lecturers	40	119
DRC-Access-Student support staff	43	128
Family	26	45
Friends-colleagues-peers-employers	31	56
Invigilators-exam staff	12	24
Complexity-layering	0	0
Financial	24	39
Distance	21	37
Cultural difference or demands	10	15
Carer-family responsibilities or tensions	20	44
Work	18	26
Space	14	27
What worked well with assessments	0	0
Time factors	44	136
Location	37	88
Assessment design - except exam design	28	52
Support-staff	9	18
Support-peer	5	6
Motivations	12	15
Exam format	13	22
Exam task design and preparation	36	115
Exam implementation	17	28
Technology assists	3	4
Ruptures - what didn't work	0	0
Assessment design - except exam design	22	44
Administration-communication	24	50
Technical difficulties	21	31
Motivation	5	5
Time factors	28	73
Location	24	48
Exam format	15	31
Exam task design and preparation	34	105
Exam implementation	17	31
Academic integrity	14	21
Systemic concerns	12	28
Assessment design	0	0
General assessment design	27	58

Appendix C: Student participant profiles

STUDENT	AGE	DISCIPLINE AREA	STUDY LEVEL	CONDITIONS - LEARNING DISABILITY	CONDITIONS - MENTAL HEALTH	CONDITIONS - PHYSICAL HEALTH	CONDITIONS - DISABILITLY	RRR	SES OR FIF
Alyssa	25-34			ADHD	Multiple conditions	Chronic		-	-
Annette				ADHD	Multiple conditions	-		-	-
Arlene	35+	Health professions	Postgraduate		PTSD	Chronic		Yes	Low or FiF
Ben		IT	Undergraduate	autism spectrum		Chronic		Yes	Low or FiF
Cameron							deaf	-	-
Cassie	25-34	Health professions	Undergraduate		PTSD	Fluctuating		-	-
Chandra		Business and Commerce	Postgraduate		Depression/ anxiety	-		-	-
Charli	18-25	Science	Undergraduate		Depression/ anxiety			-	Low or FiF
Cooper	25-34	Engineering	Undergraduate			Chronic		Yes	Low or FiF
Courtney	25-34	Health professions	Undergraduate	autism spectrum		Fluctuating		Yes	-
Danielle	25-34	Health sciences	Undergraduate			Chronic		Yes	-
Darren	35+	Health professions	Undergraduate	dyslexia		Chronic		-	Med
Dylan	25-34		Postgraduate	dyslexia	Depression/ anxiety	Temporary		Yes	Low or FiF
Eliza	35+	Health professions	Postgraduate	ADHD				Yes	Low or FiF
Ellie	25-34	Health professions	Undergraduate	dyslexia		Chronic		-	High
Ethan		Law	Undergraduate		PTSD	Chronic		Yes	Med
Fiona	25-34	Arts and Humanities	Postgraduate	ADHD	Depression/ anxiety	Chronic		Yes	-
Glen	35+	Health sciences	Undergraduate			Chronic	blind	Yes	Med
Hannah	18-25	Law	Undergraduate		Depression/ anxiety			Yes	High
Hugo	18-25	Science	Undergraduate	autism spectrum				-	-

STUDENT	AGE	DISCIPLINE AREA	STUDY LEVEL	CONDITIONS - LEARNING DISABILITY	CONDITIONS - MENTAL HEALTH	CONDITIONS - PHYSICAL HEALTH	CONDITIONS - DISABILITLY	RRR	SES OR FIF
Imogen	25-34	Health professions	Postgraduate	dyslexia	Depression/ anxiety			Yes	Low or FiF
Jacob	18-25	Health sciences	Undergraduate		PTSD			-	Low or FiF
Jordan	18-25	IT	Undergraduate	ADHD				Yes	Low or FiF
Kellie		Health professions	Postgraduate		Bipolar			Yes	Low or FiF
Kerry	35+	Health professions	Undergraduate			Fluctuating		Yes	-
Lachlan		IT	Undergraduate	autism spectrum	Multiple conditions			-	High
Laura		Health sciences	Undergraduate	dyslexia	Depression/ anxiety	Chronic		Yes	Low or FiF
Leigh	35+	Health professions	-	ADHD				-	-
Leonie	Mature	Business and Commerce	Undergraduate			Chronic		Yes	Low or FiF
Lila	18-25	Engineering	Undergraduate		Other			Yes	Low or FiF
Lisa	Mature	Business and Commerce	Undergraduate			Fluctuating		Yes	-
Lynne	35+	Health professions	Undergraduate		PTSD			Yes	Med
Melissa	25-34	Health sciences	Undergraduate		PTSD			-	Low or FiF
Nasrin	25-34	Health sciences	Undergraduate		Multiple conditions	Temporary		-	-
Nicola	18-25	Health professions	Undergraduate	ADHD	Depression/ anxiety			Yes	-
Olivia	18-25	Arts and Humanities	Undergraduate		Depression/ anxiety			-	-
Paul	35+	Business and Commerce	Postgraduate		Depression/ anxiety	-		-	-
Rebecca	18-25	Law	Undergraduate		Depression/ anxiety	Fluctuating		-	Low or FiF
Richard	25-34	Business and Commerce	Postgraduate		Depression/ anxiety			-	Low or FiF

STUDENT	AGE	DISCIPLINE AREA	STUDY LEVEL	CONDITIONS - LEARNING DISABILITY	CONDITIONS - MENTAL HEALTH	CONDITIONS - PHYSICAL HEALTH	CONDITIONS - DISABILITLY	RRR	SES OR FIF
Riley		IT	Undergraduate			Fluctuating		-	-
Rosanna	35+	Arts and Humanities	Undergraduate		PTSD	Fluctuating		-	-
Samira	18-25	Health professions	Undergraduate	dyslexia	PTSD	Temporary		-	-
Sarah	35+	Business and Commerce	Postgraduate	autism spectrum		Chronic		-	Low or FiF
Sean	35+	Health sciences	Undergraduate	autism spectrum	Depression/ anxiety			Yes	Low or FiF
Siobhan	Mature	Health professions	Undergraduate		PTSD			-	Low or FiF
Sofia	18-25	Health sciences	Undergraduate	ADHD				Yes	Low or FiF
Stuart	35+	Engineering	Undergraduate			Chronic		Yes	-
Tegan	25-34	Health professions	Undergraduate	dyslexia				Yes	Low or FiF
Vanessa	25-34	Health sciences	Undergraduate			Chronic		Yes	Low or FiF
Vicki	35+	Health sciences	Undergraduate		Depression/ anxiety	Fluctuating		-	-
Yasmin	25-34	Science	Undergraduate		Depression/ anxiety			-	Low or FiF

Appendix D: Research dissemination

Aspects of this project have been used to inform research communication and engagement events. This list includes past and planned activities as of 1 September 2021.

Past activities

Assessment for diversity in the post-digital world. Assessment in Higher Education online event, 1 July 2021 (keynote)

How could inclusive assessment design promote success for equity group students? STARS Conference, 6 July 2021 (oral presentation)

Inclusive Education Series: Designing Inclusive Assessment with Neurodiversity in mind. Deakin University, 12 August 2021 (panel)

Inclusive Assessment Hackathon. Deakin University, 20 August 2021 (workshop)

Transformative assessments – the role of technology? HERDSA Assessment Quality SIG Friday Coffee Catchup, 27 August 2021

CRADLE Development Partners 2021: Inclusive Assessment (workshops)

Planned activities

What is assessment for inclusion? Problematising inclusion, equity, and access in higher education assessment. CRADLE Symposium, 25-26 October 2021 (oral presentation)

Digital Equity for online assessment: issues and solutions. Transforming Assessment webinar hosted by the ASCILITE Digital Equity SIG, 3 November 2021 (panel)

Designing Assessment for Inclusion and Diversity. Federation University 2021 Learning & Teaching Showcase, 4 November 2021 (keynote)

What does it mean to put the student at the heart of assessment and feedback? AdvanceHE assessment & feedback conference, 5 November 2021 (keynote)

What are the exam experiences of students with disabilities? Moving towards inclusive assessment design. AARE Conference, 27 November – 1 December 2021 (oral presentation)

Appendix E: Workshop overview

This appendix contains a workshop overview which was used in the project. This means there are localised references which may not be applicable in other settings. Furthermore, student experiences are likely to be influenced significantly by institution-specific processes, and so there may be additional areas for improvement at institutions beyond the two involved in this project.

If readers are planning to run the workshop series, they might consider conducting some student interviews (utilising the student interview guide in Appendix A) at their own institution to include additional local student voices beyond students attending the workshops. A variety of student voices can help participants to understand the breadth of possible situations and how this affects students differentially.

For access to workshop materials which can be adapted for re-use, please visit the project website.

The following are indicative outlines for the content of workshop sessions. The format and timing will be dependent on participant needs as clarified throughout their participation in the project. Workshops will be discussion focused. As a guide, sessions will be 1 to 1.5 hours long via Zoom. Workshops 2, 3 & 4 in particular will be more flexible, taking a format which will be agreed upon with participants.

Participants will include academics (subject/unit chair/co-ordinator), educational designers (including education technology specialists), students, and student equity advocates (e.g. disability liaison officer, language & learning advisors). Student attendees will be paid for their time as is best practice in partnership schemes and curriculum design requests.

Facilitators will be drawn from members of the research team at each institution.

The precise format and content of each workshop was developed in collaboration with participants. Participants were also offered support outside of the workshop setting as required. The total time required for participation varied depending on individuals' engagement with prompts and materials outside of the workshops. As a guide, this might be between 5 and 15 hours of time, which would normally be taken up with curriculum and assessment design. Prior to each workshop, participants were invited to complete short reflective prompts to enable the best use of workshop time.

Re-imagining Exams: Workshop 1

Introductions

Aim

This workshop seeks to build a mutual understanding between participants regarding the project, the ideas within it, and the benefits, challenges and tensions associated within the notion of designing and implementing timed assessments in an inclusive manner.

Participants

Participants include unit teams; students; accessibility staff; and members of the research team.

Running order

- Get to know the group: who is in the room and what are their roles?
- Introduction: brief overview of the project and aims, key terms, consent/research processes, and outline of workshop schedule (for both this workshop and the series more broadly)
- Questions from participants
- Discussion of student vignettes
- Participant perspectives on successes, challenges, and tensions relating to inclusive assessment (from vignettes and participant pre-work)
- Conclusion

About the project

This project is designed to explore how to develop more inclusive assessment, with a particular focus on timed assessments (exams), to better account for diverse students – in particular, students with a disability; from a regional, rural, or remote area; and/or from a low socioeconomic status background. We think this is about more than the assessment itself. Instead, we take a broader view, suggesting that social and physical settings play a key part.

We have interviewed 40 students across Deakin and CQU, asking them to describe their circumstances, their experiences with exams, and any adjustments they have for exams or assessments in general. This often covered both the COVID experience and other assessments. Overall, 24 students were from a rural, regional or remote location, and 24 students were from a low socioeconomic background or were the first in their family to attend university.

We will introduce you to a range of student experiences across the workshop series.

Before each workshop, please read the student experiences, and respond briefly to some questions on the Teams site. You do not have to identify yourself in your responses.

Vignette 1: Dylan

Dylan is a male 33-year-old distance student living in a rural town. He left school at 14, in large part due to difficulty in getting assistance for his dyslexia. He returned to studying at TAFE and worked his way through the certificate and diploma system before enrolling at university. He is the first in his family to attend university. He transferred to a Bachelor of Arts around 16 months ago and is studying history. Dylan is the sole carer for his young son, who has moderate autism and is high care, so Dylan spends a lot of time arranging appointments with specialists. He has had a difficult year including a broken leg, loss of employment, and difficulty finding new employment due to the circumstances around COVID-19. He has been receiving a scholarship from the university and says this is currently supporting him financially. Due to his remote rural location, internet access can be very poor and prone to dropping out. He has an Access Plan due to his dyslexia and dysgraphia, which allows for 50 per cent extra time on timed assessments where writing is necessary, including exams and quizzes, along with allowances for poor spelling.

One of his recent units had a series of five timed online assessments throughout the trimester that, together, were weighted at nearly 50 per cent. Each assignment had around 10-15 questions to be answered within 15 minutes, with each question requiring an answer of up to 100 words. Dylan found that the time allowed for these assessments was far too short for the required task, even with his Access Plan. He implemented workarounds, such as preparing pre-emptive answers and dot points for key study points, which could then be copied and pasted to save time, but still describes the assessments as “arguably the most difficult thing I’ve ever done”. At times, he needed his girlfriend in the room for emotional support. While this was helpful, for Dylan taking timed assessments at home adds additional layers of complexity to preparing for the assessment. He needs to forewarn family members, who may otherwise pop around unannounced, and arrange care for his son, which can be difficult – due to the limited number of childcare centres in the area, and his son’s high-care needs, he often relies on family or friends to take him for a few hours.

Dylan also has depression and anxiety, which is usually well managed; however, it worsens in the context of assessment given the additional pressures and his dyslexia. Dylan finds exams and timed assessments extremely stressful and is often so anxious in the days leading up to these assessments that he cannot sleep. Even with his Access Plan, the foreknowledge of a time limit creates a sense of pressure, particularly for exams that require typing. Due to Dylan’s dyslexia, he has severe difficulty with forming and ordering words. Although he has allowances for markers to overlook poor spelling and focus on content, he acknowledges this is difficult “if my sentences are completely illegible”. This is very frustrating for Dylan, who is one of the top students in his cohort but in timed assessments finds it difficult to convey his understanding of content. For this reason, he prefers assignments such as essays which he feels allow him to better demonstrate his knowledge, as he has longer to work on his writing and to take time out if he is having a bad day. While at TAFE, he was offered verbal exams – where he was taken aside and asked questions from the exams – as an alternative to a written format, and he wishes this option were available to him at university.

Vignette 2: Lila

I'm finishing my first year in a Bachelor of Engineering. I'm the first one of my immediate family [who's gone to uni]. I have a diagnosed mental health illness that impacts a lot on study. My partner moved away so that also impacts. I didn't expect, I knew there would be something for more physical disabilities and that sort of thing, but I didn't think you guys would cater towards mental health. You can't, I guess, prove it in a way without a doctor. You can say, "I've got a broken leg," and show them next an X-ray, but you can't go, "I've got depression," it's not really something you can show.

I reached out to the counselling team and asked for a bit of support and mentioned that I did have a diagnosis and they pointed me to the accessibility team to find out how they can help me. I thought it would be like, "oh, it's not a problem you've got to worry about", but they were super easy going and knew exactly what I would have needed based on what I had, and just said, "Look, fill this out, send it back to us," and they got it back to me in a couple of days. Then just were super helpful and told me what to do and that sort of thing which was great.

With anxiety, I physically can't do my assignments until I get the adrenaline rush right before it's due just because I'm worried that I won't be able to do it properly. I avoid doing it and then I go, "Oh my gosh, it's due tomorrow," and then I have to do it, but [Accessibility] has given me the ability to work around that, so that's really good. Because of the leaving assignments till the last minute kind of thing that I can get extensions if I need them and also I have additional time on some exams.

I did have a couple of exams. The first one, it was scheduled as a three-hour exam, but they gave us two hours extra. Really it was like a four and a half hour exam, with 30 minutes to upload. That went pretty all right. The only thing was is that there was technical difficulties. It was right before I went to submit which was very stressful and almost made me submit my assignment late. That was one thing that wasn't great.

My second exam was a 24-hour exam. I didn't like that at all. At 9:00 AM, they'd release it and then we printed it out. They gave us extra questions to accommodate for us having 24 hours as opposed to three hours. It was basically like doing an assignment in 24 hours. That's the best way to put it. It was good to have all of my resources with me but it was difficult in the fact that it took up a lot of time. I was doing the exam for 24 hours and didn't sleep properly that night.

I think, based on what I've done at high school, I think I would much rather be in a lecture hall just because I get distracted really easily at home. I have my phone and I have the fridge. Whereas in a hall, I'm not sure but my brain just goes, "This is study time. You've got to do this now." I'm very excited to go back on campus. I thought I would like studying at home more and doing exams at home more. It is an added bonus that you can wear whatever, you can be as comfortable as you like but distractions are always there. They are longer exams and when the buzzer goes off, it's done, whereas you have to plan, how long it's going to take to scan and hope that your technology doesn't glitch out and hope you can get it in time.

I guess my ideal exam would probably be a three-hour exam, preferably on campus, in normal exam situation, but maybe a break in the middle or something like that. A 10-minutes, stretch your legs, have a drink of water and de-stress and then get back into it. Because if I had a big break, I would probably get distracted and lose motivation. Something like 5 or 10 minutes would be good just to pause the time and rest for a second. I'm just guessing because I don't think I've done a three-hour exam yet, but based on work, if that anxiety dump at the end happens with exams, then I think that might be a little bit helpful to relax, and then dive back into it. That would be the ideal exam for me.

To do before the workshop

We'd like you to think about a few things beforehand and collectively record your thoughts:

- From your perspective, what have been the successes with respect to inclusive assessment?
- From your perspective, what are the 'pain points' or challenges with respect to inclusive assessment? What about inclusive exams and adjustments in particular?
- From your perspective, what are the tensions with respect to inclusive assessment (e.g., the tension between adjustments and the need to standardise)?

For staff: describe any regulatory conditions you have experienced in changing your assessment (e.g., university committee reviews; accreditation requirements)

Re-imagining Exams: Workshop 2

Supporting students and staff: interactions and relationships

Aims

- To explore what works to support students and staff in exam-related processes;
- To develop an understanding of the roles and relationships involved in successful exams (from the perspectives of students and staff – unit chairs, DLOs, learning designers, etc.); and
- To imagine strategies which might be consistently employed to support these roles and relationships.

Running order

- Welcome and reminders
- Purposes of assessment
- Reflections on student stories (see following pages)
- Identifying tensions
- Brainstorming strategies – consider who might benefit (and who might be disadvantaged)?
- Plan for next workshop

Reflective prompts

Please respond to these before the workshop.

- What might these stories look like from other perspectives (e.g., an academic, student support, administrator, accessibility office)?
- What types of actions supported students? Are they similar or different to your own experiences of supporting students successfully?
- Who was responsible for those actions? Where and when was the workload situated in relation to the exam?

Student stories

> *Tegan is studying paramedicine/nursing full time, lives remotely and does shift work full-time. She has severe dyslexia, and has adjustments for extra time and a reader in exams. She also has anxiety but hasn't requested accommodations for this.*

You can really see the teachers that go that extra mile and don't want to see the students fail, but you can also see the lecturers and the teachers that are just overloaded and just let the students slip through the cracks. I don't know what they can do to help us with exams….

Each term I have to notify all the lecturers and teachers so that they can put all the controls in place. … It's still been the same, like it gets re-evaluated every year but it never changes.

I actually had one lecturer where in one unit she knew about it and it was all fine and everything was put in place. Then the next term I had her for a different unit and I had to go in for assessments on campus, the residential school. I walked in assuming that everything had been put in place when I hadn't and I didn't get extra time or a reader and I failed it. I pretty much got a, "Too bad we can't change it. You should have told us before you came," but I assumed because I'd have had her before, she would have known. … it was pretty much told me that it was my responsibility to have all that in place before I got there. They pretty much said, "No." I failed and that's the end. Pretty much got told to try again next term. … That pretty much knocked like the last bit of my confidence. Just because of that whole experience with that unit, I shut off with my other two units and stopped talking to my lecturers. I couldn't even get out the words to talk to my lecturers and ask for help just because of like anxiety and fear of that rejection again. … I've been going to counselling outside of the university just because that experience has triggered my anxiety that bad that it's affecting my work. … I feel bad because it reflects on my grade and my GPA. It never looks good when you have to repeat a class.

> *Cassie is studying science part time due to her health issues. She has chronic fatigue syndrome, which impacts on her energy and cognition, and PTSD. Her access plan provides her with extra time on assessments.*

At one point I messaged the unit chair, "This is my access plan. Do I need more time?" He says, "Oh, no. You've got plenty of time. It goes for an hour and a half," but the day after he had already added extra time to my exam which, thank goodness, because that really assisted me… I did feel a little bit triggered probably, … being told oh no, it wasn't necessary, I didn't need all that time. I feel like there's still not a lot of understanding when it comes to things like, you know … At the end of the day, the thing that I've noticed is you can do as much study as you like but unless you've experienced it, you just will never have any idea of what it can be like. That's what I reminded myself is, don't take it personally. At the end of the day, I was just really lucky that they had automatically added extra time and I just said to myself, "Oh, just let it go." …

The only thing I usually have to chase up is the weekly, if it's fortnightly quizzes, or weekly quizzes, I usually have to email them to let them know. With one of the units, that I ended up dropping-- Before every quiz, I had to go and send them my Access Plan and remind them which-- It's fine but you do feel like a nuisance to them a little bit. They took it really well and they changed-- It wasn't an issue.

It wasn't until I had some really big challenges when I first started my studies, I booked in with one of the psychologists, because obviously I wanted to speak to someone that was within the university and she's the one that referred me on to Accessibility Service. … Oh, [it was] so helpful … I'd ended up taking some time off and had been made a plan and connected with-- I don't know. I'm not sure what you call them, a support worker or? She said to me, whenever I'm ready to return to get in touch with her and we can re-look at what my needs are and take it from there. Even prior to starting, I was able to get a bit of support.

I probably would've just dropped my, or pulled out of the Bachelor's had the Accessibility Service not been as supportive or even existed so definitely that's helped me. That it's just a matter of getting through whatever testing conditions there are and I'm sure there's many exams to come.

> *Glen is studying psychological science. He has a medical condition leading to problems with temperature regulation, and more recently he has developed cataracts which make it difficult for him to see and read materials. During COVID-19 he has benefited from his home set-up with multiple screens where he can read enlarged text. His access plan also provides him extra time on assessment tasks.*

[My accessibility plan] was largely driven by me. To access the service in the first place, I had to get a letter from my GP. Once I had that, then I had to explain the things that I felt were difficult for solving. For example, I have really extreme heat intolerance. In my accessibility plan, it says that the university was to provide an individual fan for me, I gave that to the relevant departments of the university, at four different places, it never happened. Even for the exams, I did an exam in a basketball stadium? [It was] not air-conditioned. In March I think it was, hot and humid. Even though my exam plan, which I'd submitted to the university and it said it on my-- when you get the exam slip saying where it's due and what time it is, it said that on there, that I need to have these provisions, nothing was done. And they - the system, I imagine, has let people down far worse than that.

I was lucky that it wasn't a horrible day in terms of the temperature. Also, the room I was in had some breeze air vents, so they could just shove my desk over next to one of the vents. They were able to do that physically. The plan was for me to be in a separate room and to have air-conditioner and to have a fan. That was what the slip said, but no one knew what to do about it, so I just-- And they couldn't do that at the time. The people in the exam room couldn't say, "Yes, you can go off and be in this room," because they didn't have any provision for supervision or anything else. The people there were extremely caring and helpful within the limits of what they had about.

I think, maybe there's a balance between my desire not to be a burden because I don't want to be imposing on people. I don't want people just to go out of their way to help me, even though that's their job. Because, really, it's weird but it feels like I'm imposing on them. I ended up probably not utilizing the service as well as I could have. I could've asked them for more help. I could have said to them that I was supposed to have a fan and I've sent these emails out to various departments.

> *Lynne is studying nursing, has previously completed a Bachelor of Education, and works casually as a teacher. She is Indigenous. She has a range of current mental health conditions including depression, anxiety and PTSD. Her access plan provides her with extra time on her exams.*

At the start of each term I email my plan to the unit coordinators and just let them know for their information if they need to know any more, just contact me. No one ever has, they've all said, "Thank you so much for that. If there's anything we can do, let us know." They've all been perfect like that. I actually had a [hospital] admission this term. A friend had mentioned to one of the lecturers that I was in hospital and the lecturer got straight on to the student support officer and she actually got in contact with me. The lecturer had rung her and said, "I'm just a bit concerned, one of my students is in hospital and I don't know what's happening but could you check up on her?"

So she did, that was fantastic and I've been in touch with [the support officer] ever since. She's contacted me at random to see how I'm going, and she's contacted me on behalf of the Uni as well, if they've had concerns or anything like that. She's been awesome and the lecturers have been awesome, so yes. [The support officer] is not based in Rockhampton but she does come to Rockhampton, I've actually met her the last time she's come for work.

I've actually met up with her face to face and had a chat to her about my plan and everything changing and that kind of thing.

Usually, the accessibility team contact me and say, "Now we know exams are coming up, you've got this exam we're in the process of sorting out, timing and all that kind of thing." I don't have actually to go in to speak to anyone, they just contact me and say, "This is your new accessibility plan for the term. If there's any changes you'd like made please contact us."

Knowing I've got that support has been a big help too. If I know I am struggling, I know I can contact someone for that support and for the help instead of me going, "Oh, that's it, I've given up, not doing it anymore." I know there are people I can talk to, I know that I can call my accessibility officer, I can call counselling service, I can access all those things that have been put in place.

I think it does impact on my learning but for the better. Knowing I've got that support is what keeps me going, is what I'm trying to say. The lecturers and whoever else, coordinators have been fantastic. They've always been really, really good. I even had, again, at the end of term one, I had the Anatomy and Physiology lecturer ring me and congratulate me for getting a credit. Sometimes I find [phone contact] a bit stressful. Like when I was heavily medicated, I was more stressed about getting a phone call. I wouldn't answer the phone. I'd just wait and see what the message said. If I didn't want to talk to that person, I'd email them back. Whereas now, yes, if they call, I'll answer the phone. It is nice to hear that, and just to think that they do care and they are supporting you as best they can. It does count, and it does matter. It's nice to hear that, to know that. In fact, an acknowledgment of, "We know you've been doing it tough, but you've done a great job," it's nice to hear that.

Re-imagining Exams: Workshop 3

Exam (and assessment) design

Aims

- To identify aspects of assessment which could be improved;
- To develop ways to change assessment design to be more inclusive; and
- To consider workload implications for students and staff of assessment design changes

Running order

- Welcome & reminders
- An overview of the Assessment Design Decisions Framework
- Brief summary from each unit team about the assessment they are considering
- In-depth discussion for each unit
- Plan for next workshop

Pre-workshop task

Before the workshop we would like each team to decide on an exam (or other timed assessment), reflect on the assessment design, and **answer the questions in bold**. These questions are about re-imagining and being creative. There is no expectation that unit chairs/co-ordinators will adopt these specific measures! There are some additional prompts which may be helpful to reflect on assessment design.

Questions to respond to

Please share your responses on the Teams site.

- **What implications would there be for you, and others:**
- **If students had advance notice of the questions/prompts/topics?**
- **If the assessment had a 15-minute comfort break in the middle?**
- **If this assessment was open book?**
- **If the timeframe for the assessment task was extended?**
- **If the assessment task content was reduced by 50%?**

AND

- **If you didn't *have* this timed assessment, what learning activity would you replace it with?**

Assessment design reflection

These prompts are included to help you think about the task.

- How does assessment align with, and promote, desired student outcomes, including:
    - unit/module learning outcomes
    - overall program learning outcomes
    - professional requirements
    - students' general professional or intellectual development
- What is the rationale for the assessment task?
    - Are there specific Unit, Course, or Graduate Learning Outcomes that are only assessed in this task? If so, what are they?
- What does the task specifically require students to do?
    - Where? (on campus, online)

    - When? (timeframe for completion – hours, days, are students allowed breaks?)
    - For how long? (what is the estimated time to complete)
    - What equipment is required? (computer, video camera, audio recorder, pen, paper, other?)
- What does successful completion of the task look like? Are there alternate formats that could evidence the same knowledge/capability?
- How does this task fit/link with other tasks, including with feedback? Would an extension have any impact on the overall assessment timeline?
- When is information about the task communicated, and how? E.g.
    - Posted directly on the Cloud site – written, audio, video
    - In a Word document or PDF
    - In class discussions

Questions derived from students' stories of what worked well, and what didn't work well in their experiences of assessment.

Assessment design prompts adapted from Assessment Design Framework | Assessment Design Decisions (assessmentdecisions.org)

Re-imagining Exams: Workshop 4

Exam (and assessment) design – thinking holistically

Aims

- To consider Universal Design for Learning principals in relation to assessment;
- To identify particular aspects of assessment which could be improved;
- To finalise plans for changes to assessment; and
- To introduce final task – identifying advice for unit coordinators.

Running order

- Welcome & reminders
- An overview of the Universal Design for Learning principals
- Brief reminder from unit coordinators about the assessment they are considering
- In-depth discussion for each unit around conditions, formatting, mode of tasks
- Further develop concrete plans for changes
- Flag task for next workshop - identifying key advice for unit co-ordinators.

Pre-workshop task

Before the workshop we would like you to turn your attention again to the assessment task you are working on.

Please **answer the questions in bold**. These questions are about re-imagining and being creative and extend on some of the discussion from last workshop, with a focus on these specific tasks. Once again, there is no expectation that unit chairs/coordinators will adopt these specific measures.

Questions to respond to

Please share your thoughts on the Teams site.

- Does the task measure the intended learning goals, or are there additional components also being measured?
- Is there anything preventing learners from showing what they know in this assessment?
- What aspects of the task could be changed to provide choice for students?
- What task conditions could be changed (including mode, timing, etc.)?
- What specific scaffolding would be needed to support students to complete this task?
- What other tasks or scaffolding could be introduced to better help students prepare for this task (e.g., formative assessment)?

Reflections on Universal Design for Learning in Assessment

These are thinking points as you consider the questions above in relation to a particular assessment task. A key consideration is when each might happen (e.g., through materials provided in the unit, through explicit teaching, through the 'doing' of the task itself).

Provide multiple means of representation (the 'what' of learning)

- Will the assessment task include options for perception (visual and auditory information; alternatives for visual and auditory information)? Multimodal information?
- How will the wording of the instructions clearly express what must be done? Have the tasks been clearly explained?

Provide multiple means of action and expression (the 'how' of learning)

- Are there alternative ways students could respond? (mode, rate, timing, volume)
- What opportunities are there for student choice (task, mode)?
- How does this task encourage students to engage in learning across the unit?
- What course design decisions could mitigate student anxiety regarding the assessment?

Provide multiple means of Engagement (the 'why' of learning)

- Is there variety within the task itself (different types of questions, topics to choose from)?
- What materials will be necessary to support students to complete the assessment?
- How does the assessment in the unit encourage student self-regulation?

Please have a look at the Universal Design for Learning (UDL) in Higher Ed site: http://udloncampus.cast.org/page/udl_about

On this site you will find interesting short videos and other resources to explain and provide examples of UDL.

Re-imagining Exams: Workshop 5

Reflection and evaluation

Aims & Running order

- Reflect on how proposed changes are progressing in the two units;
- Identify system-level changes needed to support inclusive changes (create recommendations for university management); and
- Evaluate the extent to which workshops have helped you consider how exams could be reimagined in more inclusive ways.

Pre-workshop tasks

Unit changes

Unit chairs: please consider the following questions and respond via the Teams site.

- How are the exam changes you have identified progressing?
- Are there any other changes to the task and/or its conditions you are also contemplating because of these workshops? What might you attempt in the short term, and what changes are you considering for the longer term?
- What is currently helping/hindering you in relation to making identified changes?

Recommendations to stakeholders

All workshop participants to respond via the Teams site.

Drawing on your experiences in the workshops:

- What university-wide changes would be ideal to better support inclusive assessment? What recommendations would you make to university management?
- How could we empower students? What advice would you give to students regarding accessing assistance, and navigating the university system?

Evaluation

All workshop participants to respond via the Teams site.

Please consider the extent to which workshops have helped you consider how exams could be reimagined in more inclusive ways.

- What aspects of the workshops really inspired change to your thinking or practice?
- What aspects of the workshops didn't work or weren't necessary?
- Was there anything else you would like to have done during the workshops? Or… that could have supported your thinking about inclusion?