



Open textbooks and social justice: A national scoping study

Sarah Lambert and Habiba Fadel

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Abbreviations

Deakin	Deakin University
La Trobe	La Trobe University
QUT	Queensland University of Technology
RMIT	RMIT University
CDU	Charles Darwin University
OER	Open Educational Resources
OEP	Open Education Practice
OEP-SIG	Australasian Society for Computers in Learning in Tertiary Education (ACSILITE) Special Interest Group in Open Education Practice
ACODE	Australasian Council for Open and Distance and E-learning
ACSILITE	Australasian Society for Computers in Learning in Tertiary Education
CAUL	Council of Australian University Librarians
HEPPP	Higher Education Participation and Partnerships Program
SES	socioeconomic status

Executive summary

This report details the findings and recommendations from the 12-month NCSEHE-funded project “Open Textbooks as Social Justice” led by researchers at the Centre for Research in Assessment and Digital Learning (CRADLE) at Deakin University. The study investigated the potential for open textbooks to assist with improving the experience and outcomes of under-represented higher education students in the Australian context.

Open textbooks are a recent innovation in free, digital texts that can be: distributed at no cost; printed at cost price; and modified for local needs, such as to respond to gender, socio-cultural and Indigenous underrepresentations in the curriculum. They are an alternative to commercially produced textbooks and a form of Open Educational Resources (OER).

This project builds on international research showing that while all students can benefit, underrepresented students benefit the most from having access to unrestricted copies of course materials from the first day of semester. The benefits reported from research conducted overseas include improving grades, retention, and course progress rates. This study replicates aspects of a UK national scoping study with equity-focussed additions. It uses a social justice framework to test the potential within the Australian context of achieving redistributive justice (costs to access), recognitive and representational justice (fair representation within the textbook contents).

Forty-three staff from a broad range of areas and disciplines from five universities were interviewed as part of the research: Deakin, La Trobe, RMIT, Charles Darwin and QUT. Nineteen students were also interviewed; they were enrolled in either a post-graduate business program or an undergraduate arts and education foundation unit. In addition, 131 participants completed an online survey open to any Australian university staff member with teaching responsibilities.

Key findings

Similar to research findings from the USA and UK, commercial textbook sales have declined and costs have increased, with many students unwilling and/or unable to purchase. However, in Australia (as in the UK) there is less reliance on a single specified textbook for a unit. Weekly or topic-based online reading lists are common which may include a number of textbook chapters. While Australia’s unique legislative context has ensured a strong role for university libraries to provide no-cost loans of reading materials, this is challenged by the rise in complex digital textbook and online platform licencing deals. New publisher arrangements tend to target individual students and can deny library access. Australian students are increasingly impacted by restrictive and/or costly access to digital readings.

Social justice principles relating to the cost and contents of textbooks and readings matter to Australian students and staff. OER texts can be a transformative strategy to address digital access, learning material costs and inclusive experiences for higher education students. Australian staff are beginning to use OER and open access reading lists to address the injustices of uneven resourcing and negative racial, gender and disability stereotyping in the curriculum. Staff utilise institutional support and services to adopt and author OER. Common motivations include offering students free e-texts that are more up to date than commercial offerings. Students who have experienced diversified reading lists with multiple knowledge perspectives believe that they are better prepared for their intended future professions. Similarly, staff consider more representative curricula can enhance graduate outcomes for all students.

Redistributive justice or economic dimension: justice for students in the Australian context relies on sustainable funding of university libraries and increased bargaining power

of libraries to negotiate digital access contracts with publishers that reasonably meet their needs. Expanding the adoption of OER texts is increasingly being identified by university libraries as a strategy to mitigate the cost and digital access risks associated with commercial textbook provision in the digital age. Institutional support is recommended for increasing authorship of new, local OER texts and for improved searching and adoption of existing OER texts.

Recognitive justice dimension: this dimension provides the most opportunity for individual academic involvement through the diversification of readings and curriculum. Many Australian Universities have policies or strategies to indigenise curriculum and increase female participation in STEMM courses. Justice for students can be served by intentionally highlighting women's, First Nations' and multi-cultural leadership and expertise in each field through provision of positive examples and case studies in lectures and learning materials. OER texts provide opportunities for Australian academics to modify or create more socio-culturally inclusive texts including texts which better represent women in the professions. While such inclusive texts are important for under-represented students to develop a sense of belonging to the profession and the course, this study finds that incorporating diverse cultural viewpoints and knowledges into the curriculum benefits all students by ensuring their knowledge base is up to date and they are prepared for contemporary workplaces and roles.

- Interviewee and survey data suggest academic awareness and motivation is low but on the rise for implementing recognitive justice through diversification of reading lists and authoring diversified open textbooks. Numerous curriculum examples are provided in this report and Appendix B.
- Surface approaches to recognition were identified as common practice in evaluating and selecting textbooks (e.g. seeking gender and socio-cultural balance in the pictures and names used), which is a useful first step to avoid obvious exclusion of students. However, a lack of damaging exclusion does not amount to a positive inclusion in the curriculum. Consultation phase and staff interviews found that staff will need support and time to move from a surface to a deeper approach to authorship of learning materials that recognise the expertise and contribution to knowledge made by women and culturally diverse people in the fields.
- The research also found that there is a degree of anxiety from non-Indigenous academics who do not feel equipped to write about Indigenous knowledges in any way, let alone in a respectful and positive way. Institutions could develop professional development programs based on amplification or allyship strategies to encourage non-Indigenous academics to locate and amplify the voices of Indigenous experts as a first step. These strategies would also assist in helping heterosexual and non-disabled academics to recognise LGBTQI+ and disability expertise in their curriculum and learning materials.

Representational dimension: Many staff and student interviewees saw a strong link between recognitive and representational justice strategies and used the term representation to talk about both. Participants felt that improving representational justice (of who gets to author learning materials) can increase and improve recognition of under-represented learners and communities. The research finds three important ways to improve positive representation of diverse points of view in the curriculum in reading lists.

- Firstly, to encourage and support citation of diverse sources and authors.
- Secondly to encourage, fund and support Indigenous, female and non-white staff to author open texts including re-purposing open access research outputs.
- Thirdly, students as partners is a trend that could incorporate representational justice dimensions by giving socio-culturally diverse students a voice and role in authoring learning materials through assessment design or extra-curricular projects.

Recommendations: Ameliorative and transformational strategies

This report offers both **ameliorative and transformational strategies** as recommendations for institutions, libraries and individual academics.

Ameliorative social justice strategies help reduce the impact of the inequalities on students in the short term, whereas transformational justice strategies are longer term commitments that seek to address the root cause of the injustice. The recommendations for Institutions are summarised in brief below. The body of the report includes recommendations for libraries and university staff.

Table 1. Summary of recommendations to Institutions

	Ameliorative strategy	Transformational strategy
For Institutions	<p>Bursaries for disadvantaged students to purchase commercial readings and learning materials.</p> <p>Workshops to raise awareness and uptake of OER by interested academics.</p> <p>Additional OER text: Encourage academics to specify an OER text as well as continuing with the current commercial text.</p> <p>Sector collaboration by libraries/CAUL to negotiate better digital access deals for students and staff.</p>	<p>Zero cost units and degrees: OER texts specified for whole units, year levels or courses. Parallel investment in OER authoring support services.</p> <p>Grant funding for OER for strategic courses with diversity grant requirements</p> <p>OER first approach to new courses/units</p> <p>OER alternatives for open book exams and expensive books (i.e. over \$100)</p> <p>Restrict/ban setting commercial texts without digital library access</p> <p>Reframe OER projects as social justice projects not just technology projects.</p> <p>OER as policy connector and enactor. Use OER as “lighthouse” projects to connect and enact diversity and technology policies to positively shift organisational culture.</p> <p>Peer review of OER and acknowledgement as workload/output for staff</p> <p>Sector collaboration for; collaborative authoring of 100 level OER texts; collaboration on drag and drop discipline based OER online platforms and SIG; collaboration on Transitions/FYE based online platforms and SIG</p>

Introduction

This report details the findings and recommendations from the 12 month NCSEHE funded project “Open Textbooks as Social Justice” led by researchers at the Centre for Research in Assessment and Digital Learning (CRADLE) at Deakin University. The study investigated the potential for open textbooks to assist with improving the experience and outcomes of under-represented higher education students in the Australian context.

Open textbooks are a promising, cost-effective, interdisciplinary approach to addressing the need for high-quality, digitally-inclusive higher-education experiences.

Open textbooks are a form of open educational resources (OER) that are free for people everywhere to use and repurpose (SPARC, 2021). OER including open textbooks are typically licenced using the International Creative Commons licencing system making it legal to modify for different national and local contexts as well copy and distribute freely (Wiley et al., 2014). This means that OER are free to students – they can be used and shared without paying royalties or licence fees. OER can be small like a single image, PowerPoint, recorded lecture, or lesson plan. OER can also be large like a whole online course or a textbook.

Open textbooks, also sometimes known as OER textbooks, are increasingly developed in digital formats, with versions that can be printed on demand. This can make them seem more like a website or an online course. Matkin (2009) suggests that open textbooks exist in a continuum of formats between the traditional static book that has been digitised, to a rich online interactive resource. While some academics embrace digital transformation of learning materials, sometimes familiar textbook formats make open textbooks more acceptable to peer academics (Algers, 2020). Open textbooks are different to websites and similar to traditional textbooks in that they are “written by academics and disciplinary experts, and are subject to a range of quality assurance methods.” (Cox et al., 2020, p. 2). The combination of multiple expert authors, peer review and other quality control methods are integral to judgements academics make about their quality (Pitt, 2015) and, we suggest, are also what can separate open textbooks from resource-based interactive websites.

Research showing positive student performance when using open textbooks has helped to overcome earlier concerns some academics have had about the quality of open textbooks. For example, using a variety of student success metrics including exam results and surveys of attitudes to science, numerous studies have found that students perform the same or even better when using an open textbook (Allen & Cuzman-Alvarev, 2015; Hendricks et al., 2017; J. Hilton, 2016; J. L. Hilton et al., 2013; J. Hilton & Laman, 2012; R. S. Jhangiani et al., 2018). Hilton and Laman’s (2012) study also concluded that student withdrawal rate had dropped significantly when using open textbooks while their performance in exams had improved.

Open textbooks are an alternative to commercially produced textbooks. They emerged as a popular form of OER in North America in response to the increasingly unaffordable college and university textbooks (SPARC, 2021). More recently open textbooks have been used to address sexist stereotypes and racist absences from within the narrative of the textbook (OpenStax, n.d.). Low-cost textbook modification to Indigenise, localise, diversify and/or remedy the gender balance of what is inside the textbook is possible because of low-cost online editing systems. These systems allow groups of staff and/or students to collaborate on identifying required changes, making those changes, and outputting the new book to a range of mobile friendly unrestricted access formats (Cox et al., 2020).

Our focus in this research is the potential that open textbooks have to positively impact the experiences, success and retention of under-represented students in the Australian context, since all categories of non-traditional students still experience lesser outcomes (Bennett et al., 2016). The dimensions on which we propose open textbooks can support student

success and retention relate to the reduction of financial pressures and reduction in negative and exclusionary experiences associated with students socio-cultural, linguistic or gender differences and identities. These themes are explored in the literature review section.

An interdisciplinary educational-technology-meets-sociology approach has been taken utilising conceptual approaches and definitions of open education aligned to social justice principles (Bali et al., 2020; Cox et al., 2020; Lambert, 2018).

This project aimed to support and influence a range of higher education policies important to student equity: indigenisation, gender equity and inclusive and accessible online education. The key activities undertaken were: an Australian-wide survey of higher education teaching staff; online interviews of staff at five participating universities; and student interviews with students at two of the five participating universities. The staff and student interviews explored the economic and access benefits of free digital texts (redistributive justice); the recognitive justice potential of modifying OER texts; and the representational justice potential of involving under-represented staff, students and community members in the development of open textbooks to make them more inclusive of diverse forms of leadership and knowledge. Progress reports have been shared throughout the project via the [project website](#).

The research question guiding this project is: *to what extent do open textbooks have the potential to act as social justice initiatives in the Australian context as they do overseas?*

Five different Universities were involved in the research, based on their willingness to participate and their experience with OER, open textbooks and curriculum diversification. La Trobe University (La Trobe) provided experience of authoring open textbooks through their institutionally supported open textbook publishing service located in the library. Queensland University of Technology (QUT) provided experience of running an open textbook pilot in the emerging standard software “PressBooks” as a partnership between the library and the Teaching and Learning Centre. Deakin University provided experience in inclusive digital design and equity policies relating to curriculum diversification. RMIT University provided expertise in open textbook advocacy and related policy-making. Charles Darwin University provided expertise in collaborating with students to co-author an open textbook as part of the assessment program, as well as expertise in embedding Indigenous knowledges into curriculum.

As Figure 1 shows, a Conceptual Framework and Key Terms section follows prior to the Literature review, Methods, Findings and Discussion sections. The report ends with Recommendations to Institutions, Libraries, Academics and Support staff. Research instruments and more detailed findings are included in the Appendices.

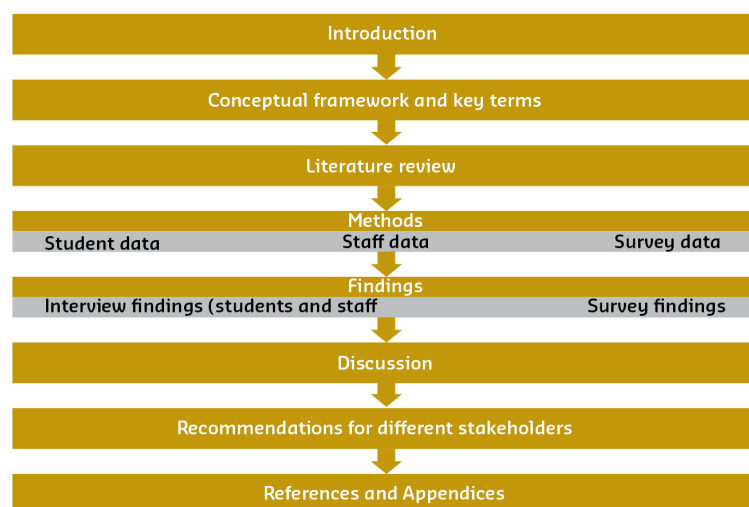


Figure 1. The structure of the report

Conceptual framework and key terms

Because the literature suggests that both financial and socio-cultural or identity inequalities might impact sense of belonging and retention of under-represented students, a social justice conceptual framework has been used to underpin the research.

Drawing heavily on the work of Nancy Fraser, contemporary definitions of social justice are based on three specific dimensions or principles - redistribution, recognition, and representation - which have been useful historically to explain the complexities of educational injustice over time (Fraser et al., 2004; Hodgkinson-Williams & Trotter, 2018; Leibowitz & Bozalek, 2016). Social justice frameworks have also been found useful for contemporary higher education research into equitable digital provision (Lambert & Czerniewicz, 2020).

Redistributive justice addresses economic inequality through “the distribution of resources towards individuals who by circumstances have less” (Lambert, 2018, p. 227). Within higher education, a range of scholarships and bursaries for under-represented students are commonly used redistributive justice strategies underpinning our ‘widening participation’ policies. In the context of this study redistributive justice refers to the way open textbooks might remediate economic injustice relating to the cost and unequal access to resources such as textbooks and learning materials.

While redistributive justice is the longest standing social justice principle, ideas of **recognitive and representational justice** are also important. They were developed through the civil rights movement and feminism to counter oppressive racism and sexism in the mid-20th century. **Recognitive justice** involves positive recognition and respect for cultural, racial and gender difference, and **representational justice** extends this idea to promote equitable “voice” or representation in politics, education and social spheres (Fraser, 1995; Keddie, 2012; Young, 1997). In the context of this study, we think of **recognitive justice** as ensuring you can **see** diversity in textbooks and **representative justice** as ensuring you can **hear** diverse points of view and knowledges in textbooks. In the current context of higher education, recognitive and representation justice are also afforded to LGBTQI+ students and those with disabilities whose identities may be less visible than women and learners of colour on campus and online.

The term “content diversification” has also been used in research to mean that diverse communities and knowledges are included in the text. Examples are provided in the following literature review section. From a social justice perspective, content diversification is a practical example of **recognitive justice** for under-represented students. Promoting and supporting authorship of texts (including text segments) by people from diverse communities is an example of **representational justice**, and is a useful way to increase the likelihood that diverse knowledges are presented positively. Content diversification can therefore overcome under-representation of diverse people in classes and in readings, as well as misrepresentation. Under-representation is when diversity is absent. Mis-representation is when student difference is represented in negative or stereotyped ways (Burke, 2012).

A social justice conceptual framework therefore “offers the opportunity for new empirical research to measure the social justice impact of initiatives in terms of the way that learners who, by circumstance, have less are able to be provided with more resources, recognition or representation” (Lambert, 2018, p. 241). It also offers a way to distinguish between surface and deep, short and long-term approaches to educational justice for students. Ameliorative social justice strategies reduce the impact of the problem without changing the root cause. Transformational strategies change systems and therefore change the root cause (Hodgkinson-Williams & Trotter, 2018). Both ameliorative and transformational strategies can be used in combination for best immediate results while working towards longer term more equitable changes to educational systems.

Literature review: The potential of open textbooks for social justice

The popularity of Open Textbooks has grown over the last decade, particularly in North America where textbook costs have grown exponentially and students struggle with living expenses (Goldrick-Rab et al., 2018). Reports from Australia show similar financial pressure on students – low incomes are not keeping up with the cost of living, leading to housing and food insecurity and an inability to purchase study materials such as laptops and textbooks (Arkoudis et al., 2018). The non-purchase of key learning resources has a range of negative impacts such as increasing unit failure, reducing grades, dropping out of units, reducing the number of units studied and slowing progress towards graduation (Paul & Drive, 2012). These effects are thought to disproportionately impact disadvantaged students who are financially under more duress and need to undertake paid work while they study (Colvard et al., 2018).

A recent Australian report shows students who come from low socioeconomic (SES) and Indigenous backgrounds have lower incomes but also higher expenses for reasons including the need to financially support children and family members while they study (Arkoudis et al., 2018). Australian students on Centrelink benefits are increasingly struggling to pay for study materials which include laptops, internet access, textbooks and special equipment for practical units and work placements. This can be evidenced in a recent study of 853 students on Centrelink benefits, which found that 80.1 per cent struggled with the cost of essential study items and fees, 62 per cent lived on less than \$15 per day and almost 30 per cent said they skipped six or more meals every week. The report also noted that 35.2 per cent of respondents had to withdraw from studies due to the cost of them, and another 36.8 per cent said they had considered dropping out (ACOSS, 2019).

While early Open Textbook research has focussed on the economic savings dimension for all students (J. Hilton, 2016), researchers interested in widening participation in higher education have more recently begun to investigate the additional benefits for minority or under-represented students.

Colvard et al.'s influential 2018 large-scale longitudinal study addressed the question of performance by under-represented students as an impact of course-level adoption of OER texts. The results of that study indicated that OER adoption did more than save students money and address student debt concerns, although those benefits were important. The study found that OER improved course grades and decreased failure and withdrawal rates for all students. The reduction in fail and withdrawal rates were even greater for “part-time students, and populations historically underserved by higher education” including those on government benefits and study bursaries (Colvard et al., 2018).

The impact of OER and textbook pricing among has also been explored for racial/ethnic minority students, low-income students, and first-generation college students at a four-year Hispanic Serving Institution (HSI) in Southern California (Jenkins et al., 2020). Students reported that high textbook prices created stress, increased the chance of not having a textbook at the start of semester, and led to failure of courses. Students also decided to avoid particular courses with high textbook costs. The study also showed that these negative impacts “were even more significant among historically underserved college students; thus, confirming textbook affordability as a redistributive justice issue, and positing OER as a potential avenue for realizing a more socially just college experience” (Jenkins et al., 2020).

Content diversification for a sense of belonging

Recent UK and South African research has also found that beyond cost savings, the ability to modify textbooks' content by individuals and groups is also promising in terms of

improving the quality and equity of educational outcomes in Higher Education and K-12 settings (Cox et al., 2020; Lambert, 2019; Pitt et al., 2019).

The process of writing and modifying OER texts provides opportunities for academics to make their curriculum more relevant and inclusive by diversifying the names, images, examples and case studies used. Content diversification is thought to be important in textbooks as it allows under-represented students to feel a sense of belonging to the materials, to the course, and to their future profession (Nusbaum, 2020). Nusbaum explains, “In many academic fields Western/white/male/cishetero/abled perspectives are often centered, while other perspectives are presented as “other.” Implicitly, this sends messages to students that success looks like one type of person, knowledge is generated in one kind of way, and their background is not worth being centered” (Nusbaum, 2020, p. 1).

Nusbaum (2020) tested the proposition that one way to increase students’ sense of belonging (and thus their educational attainment) is to diversify the educational materials used in the classroom. The research asked contributors to review a psychology textbook and make suggestions for diversifying its content. The comments were collated and a new modified chapter was written. Students who read either the original or modified text answered a questionnaire about belongingness in their higher education institution. The results showed that the diversified text mattered to equity students. “Overall, first-generation students had a reduced sense of belonging related to their financial circumstances. However, this effect was ameliorated for first-generation students who read the diversified chapter, compared to those who read the original chapter” (Nusbaum, 2020, p. 1).

OpenStax (a major provider of open textbooks) have recently recognised the need to diversify the contents of their catalogue of open textbooks. Their Diversity and Inclusion statement discusses how they are prioritising this (OpenStax, n.d.). One important strategy is the development of a Diversity, Equity and Inclusion (DEI) framework for writing and peer review of their texts. As their website notes, the framework “is designed to account for areas where diversity and representation challenges commonly arise, such as in terminology, image selection, historical figures, references, and more” (Palmiotto & Swift, 2019).

Research into sense of belonging was developed to try and further understand the variables leading to persistence and retention of all students (Hoffman et al., 2002). It has also been used to investigate persistence and retention of minority or under-represented students, particularly in the light of racial issues on campus (Maestas et al., 2007).

Research into sense of belonging builds on Tinto’s important work in the American college sector on retention and departure (Tinto, 1993) to examine the effect of academic, social and structural differences on student persistence and success in higher education (Tovar & Simon, 2010). Sense of belonging within a university setting can be defined as “a student’s sense of identification or positioning in relation to a group or to the college (i.e. university) community, which may yield an affective response” (Tovar & Simon, 2010, p. 200). It has been suggested that a sense of belonging represents an intermediate variable of the college experience that mediates between a student’s status at college and retention or degree completion (Hurtado & Carter, 1997). For example, first semester sense of belonging has been found to be predictive of second semester grades for students of colour (Murphy & Zirkel, 2015).

Having a sense of belonging to the university community has been identified as a key factor in student retention for under-represented students in the Australian context (Devlin, 2013, 2018; Stone & O’Shea, 2019; L. Thomas et al., 2014). UK studies have also found that having a sense of belonging (or not) can be one of the reasons that equity group students have lower levels of educational attainment (Mountford-Zimdars et al., 2015). Student interview data on the cause of difference for black students noted the curriculum itself being ‘white’, ‘Euro-centric’ and ‘White, Anglo-Saxon... very middle class’ which were felt to be not reflecting or not meaningful to all students’ lives (Mountford--Zimdars et al., 2015).

The idea that a lack of belonging is damaging for student success has also recently been affirmed in an Australian study which found that a lack of belonging was one of the most important predictors of poor student mental health such as anxiety and depression which impacted students' ability to study (Larcombe et al., 2021). Diversity and inclusion scholar Sara Ahmed writes about the increased time and emotional effort required to fit in to organizations such as universities, if you are seen as different (Ahmed, 2012, 2017). Following Ahmed's logic, we suggest that the diversified text might make study both easier and fairer because it ameliorates the effort and energy required by international students and other under-represented students to constantly fit in and not be seen as different.

To summarise, the literature suggests that including scholars and experts who are Asian, Middle Eastern, gay or disabled, and seeing women positioned as leaders in their fields inside a university textbook, could increase belonging and reduce mental health problems for under-represented students, and sends a positive message about what is normal and who belongs in the field. Because textbooks are generally held to be authoritative texts on a topic of study, if the textbook presents diverse students, communities and experts positively, then this validates the contribution of diversity in classes and helps to counter racist and sexist views. We suggest this is beneficial for all staff, students and the culture of the university, not just for under-represented students.

The implication is that educators need to develop their curriculum to be more inclusive of a diverse range of perspectives and, at a minimum, women, learners of colour, LGBTQI+ students and those with disabilities should be recognised positively, with the avoidance of damaging stereotypes in classroom conversations and in learning materials.

Drivers of open access learning materials in the Australian context

Textbooks are but one part of the teaching and learning landscape, but nevertheless they are defined as standard and authoritative resources to explain a field of study (Textbook, 2021). Textbooks define key ideas to be learned through reading, particularly in foundational topics and are often used to structure the curriculum of higher education (Clump et al., 2004; Palmer et al., 2013). They are assigned to learners as part of their coursework and unlike textbooks used in compulsory schooling, higher education textbooks are written by experts focussing on comprehensiveness of the topic rather than writing succinct texts and activities for classroom engagement (Kimmons, 2015). However, in contemporary Australian and UK higher education practice, there is less reliance on a single required textbook as in the case in the USA. Instead, textbooks are typically integrated into reading lists that may incorporate multiple chapters from various books and numerous other reading and viewing materials in text and audio-visual format (Pitt et al., 2019). There is also a wide spectrum of use from highly aligned to the assessment and activity schedule, including requirements for open-book exams, right through to highly optional use as reading where individual students need more details on particular topics.

Australia's Higher Education Act is a unique piece of legislation which protects students from being forced to pay additional costs of study above the costs of tuition. This has meant that since the 1970s, Australian university libraries have been instrumental in providing multiple copies of required textbooks for loan to students. In recent years they have also been involved in negotiating various forms of digital access from commercial textbook providers.

Part of the challenge for students and libraries is that commercial publishers are introducing new, complex and often restrictive forms of access to digital materials. For example, commercial publishers are moving away from licencing individual titles requested by lecturers. Instead, they are offering costly package deals containing access to hundreds of titles which may or may not be selected by teaching staff for use. Some commercial publishers are also requiring students to access their materials through their own online platforms. In a recent statement on fair digital access to learning materials, the International Federation of Library Associations (IFLA, n.d.) said that "Too often...the market fails to

provide access to works in digital form on a consistently fair basis. In too many cases, libraries face the non-existence of digital works, or the refusal of publishers to allow libraries to buy their works” (IFLA, 2021). If Libraries cannot purchase licences to textbooks, then students are faced with the option of purchasing the textbook or going without. Libraries and Library Associations in the UK and internationally are responding by lobbying for legislative support and/or market regulation to ensure reasonable electronic licencing to fulfil their mandates for community access to learning resources (UK Academic Book Investigation, 2021).

These access challenges are also driving interest in new models of digital access to course materials, including use of OER texts. However, Australia is coming off a low base of OER awareness and use. Australian educational institutions have, in the past, been slow to adopt and invest in OER and other open educational practices, despite the alignment with our equity policies (Bossu et al., 2012; Willems & Bossu, 2012). Early government funding between 2014–16 for projects to advance understanding of open licencing (see <https://www.oel.edu.au/>) and to develop a National Open Education Strategy to (see <https://openedoz.org/>) were unfortunately not provided with follow-up funding needed to enact recommendations for expansion (Sadler et al., 2016).

Despite this, some institutions with missions to open access to education and build capacity for digital learning have continued to advance OER related programs. For example, the University of Southern Queensland (USQ) was an early adopter and local leader of open textbooks. They have been steadily working on the development of new open textbooks using the PressBooks platform (<https://usq.pressbooks.pub/>), which is currently becoming the sector standard for open textbook authoring. PressBooks has the benefit of outputting digital texts in a range of accessible formats. USQ were also early adopters of a social justice approach due to strategic alignment with institutional objectives and policies (Udas et al., 2016). USQ staff recently published the first Australian version of the OpenStax Anatomy and Physiology text which fills a significant local need (Chruścik et al., 2021). The book on which it is based is very comprehensive and therefore applicable to a wide range of medical education uses, and medical texts are renowned for being very expensive.

Other traditional presses, notably the Australian National University (ANU) Press are investing in publishing open access books. ANU Press was Australia’s first open access press, which had over 921 titles on their catalogue at the end of 2020 (Australian National University Press, n.d.). In recent years, ANU Press expanded their traditional academic monographs to include a range of textbooks designed with teaching particular classes in mind. Their website also lists a series of open access books (including some textbooks) devoted to Australian Indigenous knowledge topics.

In 2019 the University of Sydney Press launched Sydney Open Library as an avenue to publish both monographs and textbooks (Sydney University Press, n.d.). They put out 40 titles in 2019 including a foundations legal text entitled “Australian Politics and Policy” suitable for both [junior](#) and [senior level](#) study (Chen et al., 2019). These are all promising signs that open access publishing of textbooks specific to the Australian context is on the rise.

Methods

A national survey of a broad range of teaching staff was conducted to investigate the current baseline practice of textbook usage in Australian higher education as well as staff awareness and interest in OER texts and the social justice aspects of diversifying the content of their texts.

Interviews with students were carried out to understand more about their experiences with textbook use, access, costs and diversity of content and if these matters were important to them.

Interviews with key staff in library, e-learning, academic, management, and support roles were undertaken at five different institutions to investigate how OERs and OER texts were being adopted and supported. The interviews were designed to dig deeper into the motivations, potentials, opportunities and barriers of OER usage at an institutional level and develop recommendations that could be applied to a broad range of Australian Universities.

The project unfolded over four stages, outlined below. However, the phases were overlapping, and analysis and reflection occurred throughout. Emergent findings were tested by later participants, and there was a re-interrogation of data across the different data sets as writing proceeded.

Phase 1: Consultation to develop local understanding of issues

Consultation was undertaken from October 2019 to develop local understanding of the issues and to locate OER text adopters and other possible research participants, starting with Deakin and RMIT who were known advocates. The consultation phase was also important to gain an early understanding of the similarities and differences between Australian and overseas drivers of open textbook practice.

Wider sector consultation was undertaken through the OEP-SIG – an OER special interest group (SIG) of the Australasian Society for Computers in Learning in Tertiary Education (ascilite). Bi-monthly OEP-SIG meetings helped to facilitate strong engagement from institutions with experience of open textbooks including RMIT University, USQ, CDU and La Trobe University.

The project launch held at Deakin Downtown on 26th February 2020 was well attended by local academic staff from five Victorian universities, senior library staff and management, Council of Australian University Librarians (CAUL) representatives and two visiting scholars from overseas. The project launch was an important part of the consultation phase, featuring a discussion of issues and a sharing of exemplary practice. The launch helped to identify additional Australian open textbook publishers as well as clarify the extent to which libraries are impacted by challenges and changes in digital licencing practices.

Consultation was also sought via the Steering Group including with Dr. Beck Pitt in the UK who led the UK National scoping study published in May 2019. The researchers also spoke with some of the active OER academics and staff in Canada, including Arley Cruthers (KPU) and Amanda Coolidge (BCCampus), in December 2019 in order to understand how their major institutionally supported projects got off the ground.

Phase 2: Ethics

A Deakin University ethics application HAE-20-040 was submitted on 26th March 2020 and approval was granted on 6th May 2020 until 6th May 2024. Approval was granted for interviewing staff and students at three to six institutions. Students were approved to be recruited through interested teaching staff who consented to participate in an interview. Students' data would be aggregated and anonymous in terms of names and enrolling institutions. Staff data would be kept anonymous to allow staff to speak freely about the

opportunities and challenges of developing or supporting OER at their institution. The only exception was that teaching staff with experience authoring or integrating OER into their curricula were given the option to be named in the development of mini-cases or exemplars. These are presented in Appendix C, and include links through to the open textbooks that the academics wrote or used. Approval was also granted for an online staff survey open to any staff (including casuals) with teaching responsibilities at any Australian university.

Phase 3: Data collection and inter-institutional ethics approval

Deakin participants were recruited from June 2020 and interviews began soon after.

During this phase the researchers also commenced seeking inter-institutional ethical consent and approval to recruit staff and students at other universities who had expressed interest during the consultation phase. Ethical approval at the other research sites was gained between 21st May and 25th August 2020.

The same instrument verified as useful in the UK national scoping study was used for the online survey to determine baseline levels of academic awareness and use of open textbooks (Pitt et al., 2019). This gave confidence in robust results and also provided data to allow a comparison to be undertaken with the UK results. However, the UK study was not underpinned by the social justice framework, so two additional responses to the last Likert-scale question were added to the Australian survey to capture interest in the social justice dimensions (interest in adapting a text for Australian context, and interest in content diversification). See Appendix E for the questionnaire. Due to undertaking the research during COVID related lockdowns, a question was also added to capture the difference between pre and post COVID practice. This was to avoid the data being skewed towards acceptance of digital texts and practices which may have occurred due to the emergency remote teaching in 2020, but which may not reflect intentions pre and post COVID.

Phase 4: Data analysis and final data collection cycle

The data from student and staff was analysed for common and uncommon themes. The staff interviews in this phase began to reach saturation on some issues (their motivations and priorities for engaging in open textbooks, OER and content diversification), as well as agreement with and differences with the student perspectives (lack of diversity in textbooks, restrictions to digital access of reading). During this phase of staff interviewees, data collection focussed on questions to draw forth data where to clarify gaps. The research team also additionally targeted interviewees in particular roles to clarify emerging themes (disparate and unconnected institutional policy drivers, impact of platformisation of commercial textbook provision).

For example, early findings from the consultation phase indicated that the Australian context was very different to the USA and that the economic dimension should be less of a problem here. Consulted academic staff felt that our legislation and the subsequent efforts of our university libraries would reduce the need for open textbooks. While library staff reported stress in dealing with digital licencing restrictions there was also a belief that the situation overseas regarding textbook costs was worse. However, later in the project, these early/preliminary findings were found to be particular to those consulted earlier in the project. By the time we had completed student interview analysis, a greater problem with textbook costs and digital access had emerged and we probed the issue with staff in Phase 4 across the other institutional participants.

The interview schedule for both staff and students had asked them to comment on ideas for recommendations for how OER texts could be better supported and encouraged. Sector collaboration and the further involvement of CAUL were key to many recommendations that had emerged during Phase 3. In Phase 4 some of these developing recommendations were tested and refined with input from the staff interviewed in Phase 4. For this reason,

interviewing senior and policy related staff at each institution was left until the final phase to allow them to comment on and help the researchers refine the developing recommendations.

Networking and dissemination

In addition to the project launch in February 2020, multiple events were held to help disseminate project issues and progress. There was an international expert keynote on 13 March 2020 by Dr. Rajiv Jhanghani who is the Associate Vice Provost, Open Education at Kwantlen Polytechnic University (Canada). On the 9th July, a virtual seminar was held with RMIT University's Anne Lennox who is leading policy work on Open Educational practices. The events attracted people within Australia and abroad.

Throughout the various phases of the research, blog posts were published through the project website (<https://australianopentextbooks.edu.au/>). The mailing list at the end of the project was 224 and the registrants received monthly updates. The blog posts helped disseminate events organised for the project, facilitate feedback on preliminary findings, as well as calls for participation and updates about our research.

Student interviewees

19 students were interviewed from two participating Universities. A semi-structured interview was undertaken guided by the questions that asked about: their course context and use of textbooks in their course so far; cost and access dimensions of textbook use; content diversification and representation aspects of their textbooks and importance of each dimension. The guiding interview questions are listed in Appendix D.

As Table 1 below shows, the 19 students interviewed were from two very different cohorts with different cohort characteristics, online/campus delivery patterns, and exposure to OER and diversity issues.

Table 2. Student interviewee characteristics

Characteristic	Cohort 1 (University 1)	Cohort 2 (University 2)
Number and codes:	9 (3 male, 6 female) S01-S09	10 female S10-S19
Age range:	Between 19 to 31 years old	Between 25 to 59 years old
Course profile:	2 undergraduates. 7 Masters level students from a Business program, with a high percentage of international ESL students.	Undergraduates enrolled in nursing, education, counselling or psychology courses.
Delivery:	Enrolled in on-campus programs supported by online learning with substantial week-by-week online resources.	Most students were studying externally i.e. fully online and most lived thousands of kilometres away from campus.
Library access and COVID:	Students had adjusted to COVID19 related emergency remote learning to differing degrees. Some noted they missed going to the library and studying socially.	Students were already used to learning remotely and so the lack of access to the campus library was the normal situation for them, rather than a change due to COVID19.
Exposure to OER and content diversity:	No exposure to OER. With the exception of one student who had studied a diversity elective, no explicit teaching of cultural-representation issues in the course.	Students were all undertaking a core unit required for a range of programs which had developed an open access reading list including an open access textbook and other resources. The authors on the reading list represented diverse genders, cultures and points of view.

The students from Cohort 2 had experience of both OER and learning from culturally diverse readings and perspectives. They were able to discuss and answer the questions quite readily.

The students from Cohort 1 had no experience of OER and also had no opportunity to learn from culturally diverse readings and perspectives. Questions about whose voices or views were missing from their textbooks often came as a bolt from the blue, and we needed to provide some concrete examples of open textbooks and diversified contents so they could grasp what we were talking about and continue with the interview. Because the students from Cohort 1 were enrolled in a Business course we showed them an OpenStax business textbook and used the example of women leading business or Indigenous business owners as the kind of examples they might see in a book with diverse contents. The exception to this was the mature age women in Cohort 1 who had lived experience of gendered racism (about a quarter of the students) who could more readily provide examples of under and misrepresentation of women and people of colour in their textbook without needing an example.

A summary of students' views including some typical quotes are provided in Appendix A.

Staff interviews and contexts

Each of the research sites had different contexts, strategic priorities, structures and history with OER which affected what staff spoke about. Appendix B provides a brief overview of each institution's background and some detail on current programs in support of OER.

In summary, OER projects were initiated for different reasons at participating Institutions, including:

- early interest in OER;
- a culture of Open Access and investment in Open Access publishing;
- negative impacts of increasing study material costs on students;
- concern with recent commercial publisher strategies to control and restrict digital provision;
- strategic moves to expand online learning and digital media content; and
- research grants with requirements for open access research-dissemination strategies.

La Trobe University participants were involved between 2018-2020 with an institution-wide OER publishing service which in 2020 was provided with additional strategic planning support by an OER committee. Deakin staff had strengths in inclusive online education, policy support for Indigenising curriculum and were beginning to experiment with OER textbooks. Staff at Charles Darwin University had experience with online delivery to remote students, commitment to Indigenous knowledge sovereignty and experience in involving students in OER creation. RMIT staff had experience in sector OER advocacy and events with a particular focus on enabling policy. QUT had a long term commitment to open access policy and practice, and staff were engaged in an open textbook pilot with PressBooks.

We spoke to 43 staff at the five participating institutions. Staff were selected for interview based on their experience with OER and/or student equity including diversifying the curriculum. Some staff interviewed had expertise over multiple domains.

We asked staff about their OER text and open publishing practice, their motivations, views and experience on diversifying the curriculum, and the kinds of institutional supports, policies and resources that would enable (or constrain) OER practice.

The breakdown of staff interviewed is shown in Table 2. Each staff member interviewed has been coded numerically and with a prefix identifying the university e.g. CD1.

Table 3. Staff interviewees, their roles and expertise

Roles and expertise of the staff interviewees (NB: staff with multiple forms of expertise pertaining to this study could be listed in more than one column)					
	Authors (OER and commercial texts)	Curators of reading lists (includes OER adopters)	Library and Learning or support staff	Senior management	Diversity experts (including those actively diversifying curriculum)
Charles Darwin University (Total= 2 staff)	1 (CD1)	1 (CD1)	0	1 (CD2)	1 (CD1)
Deakin University (Total= 20 staff)	2 (D04, D10)	7 (D02, D03, D05, D06, D07, D09 D20)	4 (D12, D15, D16 D19)	3 (D13, D17, D18)	8 (D05, D09, D10, D11, D12, D13, D14, D17)
La Trobe University (Total= 6 staff)	5 (LT1, LT3, LT4, LT5, LT6)	0	1 (LT2)	0	1 (LT5)
Queensland University of Technology (Total= 9 staff)	2 (QT1, QT5)	0	6 (QT2, QT3, QT4, QT6, QT7, QT9)	1 (QT8)	1 (QT2)
RMIT University (Total= 6 staff)	2 (RM3, RM4)	2 (RM1, RM2)	1 (RM5)	1 (RM6)	2 (RM4, RM5)
Total: 43 staff interviewed					

The participants were teaching across a diverse range of topics and levels. The interviewees turned out to be a mix of OER adopters and authors. While a few teams of staff teaching 100 level classes had adopted OpenStax i.e. American texts, many of the interviewees were focussed on adopting OER in more advanced topics taught in smaller classes including D03 and D20 who were adopting existing books for post-graduate classes. These academics seemed to have more say over the textbook and less work to adopt them.

OER authors interviewed were writing and producing books on a mix of foundational and advanced topics.

Staff survey respondents

The purpose of the online survey was to understand staff sentiments and practices around textbook use from a wide variety of staff, including those with no prior knowledge or interest in OER. The staff survey data was important to gain a balanced and unbiased sense of the potential and interest in OER from staff. In some cases, positive bias of staff who opted-in to the interviews was evident.

Based on an instrument from the UK Textbook project, the survey featured sections focussed on the extent that textbooks (open or commercial) are integrated into teaching, preferences for digital provision, OER texts and content diversification. The survey had 25

multiple choice questions, some with sub-questions and five open-text questions. See Appendix E for the list of survey questions.

A total number of 131 academic teaching staff completed the survey. Respondents taught across a range of discipline areas as shown in Figure 2. Eighty five per cent were based in the state of Victoria.

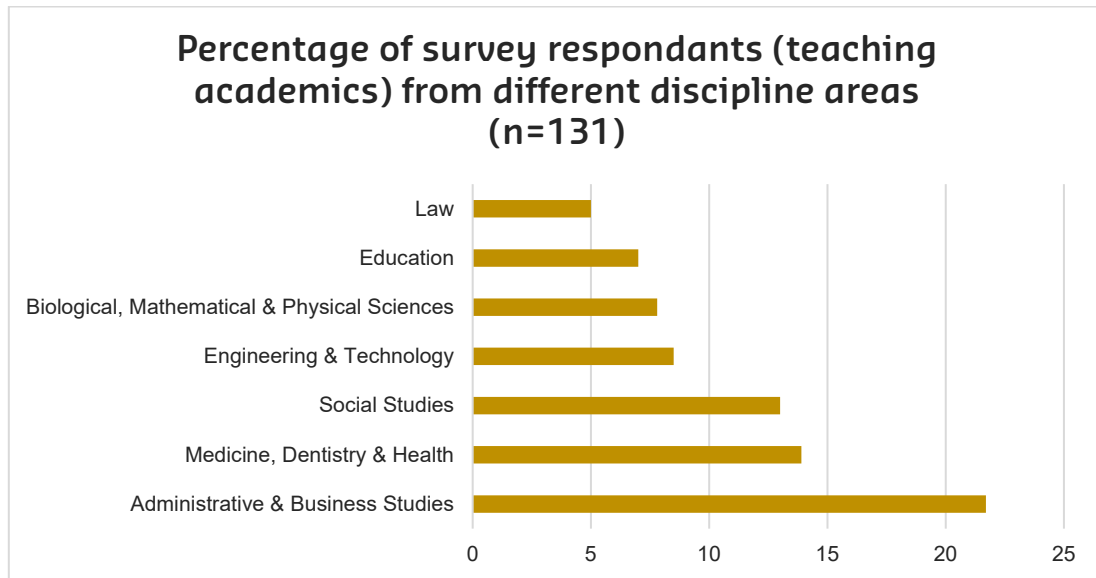


Figure 2. Percentage of survey respondents (teaching academics) from the different discipline areas

Almost 83 per cent of respondents work in the higher education sector. Within this 83 per cent, the majority was working full-time (76%), while others worked part-time (12%) and as casuals (12%). Thirty-five per cent of the academic teaching staff who completed the survey were between the ages of 35-44 and 30 per cent were in the age group between 45-55. Twenty-five per cent indicated that they had 10 to 15 years of teaching experience, while 22 per cent had more than 20 years of experience. We feel that this is a fairly reasonable sample of the larger higher education staff population.

In terms of their role, 30 per cent of the participants were primarily teaching, 30 per cent were teachers and leaders of a multiple of units within a program or course, and 24 per cent were teachers and leaders of a single unit within a program.

Thirty-eight of survey participants were teaching at Deakin University, and 36 per cent at La Trobe University. Academic teaching staff from 13 other Australian universities also participated in the survey: RMIT University, Swinburne University of Technology, Charles Darwin University, Melbourne University, Monash University, Charles Stuart University, The University of Queensland, University of Southern Queensland, CQUniversity, University of South Australia, University of Technology Sydney, Western Sydney University, and University of the Sunshine Coast.

Prior to COVID19, the majority of respondents were teaching face-to-face (39%). 26 per cent were teaching Blended/Hybrid courses and only nine per cent were teaching in online (distance) mode.

Methodological limitations

This is the first known national study of OER use in Australia, and as such it is exploratory and not definitive. Although we would have liked to study the comparative success and retention rates of students before and after OER adoption in a number of units, we were unable to identify any eligible units to study. Following Colvard and colleague's method, we needed to include only units from our research sites that had swapped a commercial textbook with an open textbook, without also changing teachers or assessments (Colvard et al., 2018). However, Australian practice in our research sites were still undertaking OER pilots and the open textbooks were still in development. Australian practices with embedding OER into higher education curriculum was at a very early stage. The small number of units we found that had taught students with OER in the last few years had done so in the context of a major curriculum overhaul, which made them ineligible for study.

Therefore, we investigated the potential of open texts to support social justice outcomes for students, focussing on the intermediary factors of costs, access, and sense of belonging which according to the literature have an impact on student success and retention. OER future research should be able to be undertake quantitative investigations into various student success metrics at the unit level within the next two to three years at which time there should be sufficient units which meet the criteria.

This was a large project to undertake within 12 months and it was undertaken during the emergence of COVID19, the first lockdowns and the rapid transition of teaching to emergency remote instruction. It was not appropriate or practical to be doing too much cold messaging for research participants when the whole sector was under strain. For these reasons we needed to draw on our existing physical and virtual networks to recruit institutions. Fortunately, we had more institutions express interest in participating than we had capacity to include, so we were able to recruit institutions based on their ability to offer unique experiences and perspectives to the data collected. While three out of five institutions we recruited were in Victoria, to work towards broad applicability of the research findings we ensured we recruited different types of institutions (dual sector, regional, strengths in online delivery) with different experiences (OER policy, open textbook pilots or institution-wide supports, new to OER, experience in digital accessibility). Through wide digital dissemination of the online survey, we were also able to canvass the opinion of part-time and casual teaching staff across the country from a wider range of disciplines than interviewed, which gave us more confidence of the applicability of the findings across the sector.

Regardless of the disciplinary, full-time/part-time, structural and experience differences of the participants, staff from Victoria accounted for 74 per cent of the staff interviewees and a similar percent of the online survey data. It is hard to say if this might influence applicability and we encourage readers to keep it in mind when reading the report.

In terms of our student data, we were able to speak to a good mixture of undergraduate and post-graduate, international and local students. We note however that the number of students (n=19) is still relatively small and about half of the students were from the Business disciplines, with the remainder studying predominantly Education, Nursing and the Arts. We note that what the students reported to be normal or exceptional in terms of diversity of textbooks may vary in future research if interviewing students from a wider array of course topics, as we were only able to talk to students from two different courses.

While the study findings are useful as a baseline for future study and recommendations for the sector, additional studies into student and staff experiences of teaching and learning with open texts across multiple disciplines and year levels will need to be undertaken to fully investigate the impact of open textbooks and readings on student success and retention.

Interview and survey open text findings

We return to the research question guiding this project: to what extent do open textbooks have the potential to act as social justice initiatives in the Australian context as they do overseas?

To address this question, the staff and student interview schedule had similar questions about the extent to which they were satisfied with current commercial textbooks and reading list practices, and the importance they placed on the cost saving and content diversification aspects of open textbooks and OER. Staff were also asked questions about the policy and support climate for OER at their institution, and their motivation for OER engagement and adoption. The open text questions in the online staff survey covered similar ground.

This section presents the findings from **the staff and student interview data sets together**, along with the **open text commentary** provided by some staff in the online survey. The multiple choice survey questions are reported separately in the next section as the questions were more detailed and specific about current textbook practices and awareness of OER. Findings are divided into the following sections:

- Social justice potential of open textbooks
 - Economic justice and fair access to learning materials
 - Recognitive and representation justice and content diversification
- Institutional opportunities, challenges and support needed to realise the potential

Economic justice and fair access to learning materials

Matters of cost and fair access were very important to the students interviewed. Similar to previous studies overseas (Nagle & Vitez, 2020), the students were generally quite sensitive to the price of textbooks and often thought the level of usage did not justify a decision to purchase the texts.

Approximately half the students interviewed were quite shocked, or like S17 “seriously shocked” at the prices of their textbooks. Many students said they couldn’t afford them and S14 said she might need to use the “Afterpay” financial loan system to pay for textbooks in the future. S18 noted how this could be a barrier to university:

A lot of people can't study ... because ... you have all these peripheral costs of textbooks and you're already paying for equipment, you know, you've got to have an up-to-date computer (S18 undergrad nursing student).

Many students elected to buy cheaper electronic versions and some still preferred paper copies, which they would often purchase second-hand if possible. Students who were able to access all their required readings through the library with no restrictions considered this “a blessing” and were very grateful.

Most staff interviewed also thought one of the big benefits of OER texts was the lack of cost to students for digital access, as well as the low cost to print. Staff interviewed acknowledged the financial strain all students were under. Some were also aware that reducing costs of learning materials was particularly important as social justice strategies for under-resourced or under-represented students. Some staff expressed concerns about the costs of learning materials impacting failure and drop-out rates. A survey respondent noted that casual staff were affected as well as students:

Prescribing a costly textbook that isn't available as e-book nor in library is a severe disservice to students and teaching assistants as well (anonymous survey respondent).

Similar to the student perspectives, staff regularly commented that textbooks were not worth the cost if they were not very well used and integrated into the subject and assignments. Staff interviewee LT4 spoke about the lack of use of purchased books in ways that paraphrased many student interviewees:

I'm not a big fan of asking students to buy textbooks, because from my experience as a student, you end up buying a whole lot of books that you might use for even half a semester and then sell for a loss (LT4).

RM3 said that one of the flow-on benefits of setting a no-cost OER text is, "it does give you the freedom to set a book, but without the obligation to feel as if you're making full use of it." OERs therefore worked well as part of a diverse reading list, as well as a core or set text.

Compromises and workarounds for digital access restrictions

What was surprising and not reported in previous literature, was that students were impacted more than expected by the various kinds of digital licencing restrictions placed on e-books they accessed electronically through the library. A data summary table with quotes is provided as Appendix A which shows that there was a need to find workarounds to be able to get semester-long unlimited access to all chapters of some required texts. For some students, the digital licencing restrictions such as not being sure if enough copies would be available online was an accepted part of study, whereas for others there was an increasing irritation. Some students found the time or number of chapter restrictions unacceptable to the extent they had made decisions to purchase books or PDFs so they could have an unencumbered copy:

So I don't prefer reading at the library because of so many copyright issues and stuff like that ...it's not all user friendly, so I do refer to two other sources where I can get the easy access... because it's more user friendly to me in a PDF format rather than sticking it online because of copyright issues (S01 postgrad international student).

Some students spent a lot of time at the start of semester on Facebook Marketplace and similar websites sourcing second-hand paper versions or cheap PDF versions. Where electronic copies were not available through the library, more extreme workarounds or compromises were made such as only reading the abstract or sharing a resource through a Facebook group. While student advocacy groups in the USA have been seeking lower textbook costs for years, including rental and second-hand markets, they are currently focussed on raising awareness of the problems in the use of digital access codes for homework, revision and practice materials – which many students cannot afford to purchase (Nagle & Vitez, 2020). None of the students interviewed in our study had any experience with renting textbooks and some had used access codes. One student interviewee lowered their textbook costs by sharing the cost of an access code for full digital access to their materials between a group of six or seven students.

Of great concern was the fact that many students could not get electronic access to one or more texts - and for those who lived great distances from the library and could not borrow hard copies, the pressure to purchase was very high. Some students in this circumstance could not afford all the texts and sometimes did without. One student interviewed had deferred from her course for a year because she could not afford all the materials including textbooks:

I didn't have the finances and I wasn't able to purchase the textbooks that they required ... (and work placement costs) and the University ... said to me that I wasn't committed enough to my studies ... so I ended up taking leave from them (S14 mature age Nursing student).

Some more experienced students made quite strategic decisions to purchase the text if it was used regularly for classes and tasks, if they could get more than one semester's use or if they felt they were weak in a particular subject. In this regard, texts that academics thought of as essential or required were often considered more of a recommendation by these students who evaluated their need to use texts based on whether they had a strength, background or experience with the subject matter.

Another important finding about textbook purchase decisions is that some students also considered if they were happy to pass the course or hoped for a higher grade. Similarly, some of the Business students interviewed stated that they relied very heavily on the PowerPoint presentations provided by the lecturers to the point that the textbook was not necessary for them to pass the course. S1 said that "I think that for passing it's okay (i.e. relying on lecture PowerPoints), but if you want to score even distinction or HD ... you need to have the book."

Academic and support staff were also motivated to engage with OER as a way of overcoming the increasing range of digital licencing restrictions and limitations on e-text access that students face when trying to access via university libraries. D02 noted that "We regularly hear that students can't or don't buy the textbook and we know that the library's copies are consistently hired out." The frustrations of licences with limited concurrent users were regularly raised. QT4 noted that "We try and get access to an e-book with unlimited users. There's just so many constraints..." In addition QT3 noted the concurrent users' issue creates problems when students are required to sit an open-book exam. They cited an instance where "a lot of students thought they could rely on the library's copies for the open textbook exam", but there were not enough licenses to go around during the exam.

Tension points: open-book exams, large class access, 'custom' texts and commercial platforms

The matter of open textbook exams privileging those students who could afford the text noted by QT3 in the above section was also raised in the consultation period of the project. Some consulted staff were able to provide copies for these students, noting that the publishers would give them some free 'desk copies' for this purpose. However, another staff-member said that they advised students who could not afford to buy the textbook to take "copious notes" so they were prepared for the exam, which seemed to place quite a burden of extra work on disadvantaged students. Setting of an alternative OER text (or set of open access texts) instead of or in addition to the commercial text could be a fairer way to ensure all students had fair access to reference material during open-book exams.

D15 said that large enrolment classes can pose a problem, noting that around 1650 students or one third of the 5000 enrolled students in a range of units requiring a "custom text" could not get an e-book through the library. Students often talked of digital versions of texts not being available or not available to them due to limits in licence numbers. S19 said "every time that I've gone to have a look at it, there's never been any available..." Some library staff noted that the costs for digital licences for e-texts in large enrolment classes, or for all enrolled students to access new online platforms, could be in the tens of thousands of dollars. Custom texts as expensive duplicates of that which libraries already had digital rights to share with students was also raised as a problem. DK15 discussed the common occurrence of publishers pressuring staff to select a custom text compiled of chapters from various books from their catalogue, which typically costs students as much as a standard text even when the library already had paid for licences to share the components with students.

Staff noted that commercial publishers' online platforms were increasingly looking like alternative Learning Management Systems (LMS). In the past, it was a given that the library would pay for print copies of textbooks to ensure student access, but in the current climate the question of who should pay for these new and expensive licencing arrangements

including digital platform access is becoming a matter of negotiation and “piloting” between Libraries and Faculties. There was frustration with the rising costs for access and concerns that like all “pilots” funded in a year, funding might not be forthcoming in the following year. Within this context, investment in the development of OERs was seen as an increasingly attractive option to be able to control the costs and ensure equitable access for all students through the university’s LMS into the future.

QT8 noted a sense of *déjà vu* around the challenges library staff currently face by being cut out of negotiations between publishers and academics regarding online platform access or the “platformisation” of e-texts. He noted that in previous years when publishers pursued a strategy of e-book plugins to universities’ LMSs as a value added proposition, “publishers would pursue individual academics as opposed to coming to an institution and having an institution level conversation about integration with the learning management system” noting that questions about how staff and students could get support when they had technical difficulties or outages were never satisfactorily answered.

Many staff thought that the use of OER texts accessible through the university’s LMS was a superior model in terms of student experience. LT5 who was supported to author an OER text was particularly impressed with the seamless digital experience. “What was striking about it was that it was very much at peace with the fact that we’re delivering our content through the learning management system, like it’s a much better sort of... to integrate better into the rest of the students’ learning experience.”

For similar reasons, one of the most promising non-commercial textbook platform models discussed by an academic interviewee (RM6) was a discipline-based open access textbook platform called “Noba.” Noba has been developed by a not-for-profit foundation to meet the needs of the community of Psychology academics. Noba allows academics to customise open textbooks made from a selection of a large menu of chapters which can be linked to the LMS and/or downloaded as a PDF. RM6 noted that “all of the chapters are written by leading experts in the field...So I think that also really increases the credibility. And they’re constantly updating those chapters as well.” If Australian academics and discipline-based associations could collaborate on similar platforms, perhaps with university technical staff support, a more sustainable model might be able to be developed to serve whole discipline communities.

Positive views related to OER experience

Another similarity between staff and students’ interview findings was that opinions on the importance of OER varied significantly depending on if the participant had an opportunity to teach or learn with them. Staff who had success in finding good quality OER and were teaching with them were very positive about their potential to remove cost and digital access barriers for all students. However, staff who had searched and found OER for their subject area but found it to be of lower quality or learning level could be quite scathing about using free/open textbooks.

Students generally had a low awareness of OER. While many students used freely accessible websites such as YouTube, Khan Academy or Duolingo for self-study, most had never heard of open textbooks. Some thought that a free textbook would be low quality and were very surprised at the quality and comprehensiveness of the examples provided at the end of the interview. Many stated they’d be happy to use these kinds of resources in the future as supplementary as needed, some said they would certainly share the URL with their friends. Other students were less interested in such resources unless ‘the professor’ recommended or used them.

Staff who were authors of a textbook (commercial or OER) were very likely to be able to articulate a wide range of benefits of OER texts for learners and teachers. Those who were aware of them but were yet to experience them in practical use held both positive and

negative views. Some had aspirations to use them (if suitable supports and time could be found), and others were not interested or even suspicious of them and the quality.

However, similar to the response from students, staff with no awareness or quality concerns often changed their views when presented with a high-quality peer reviewed OER text on a topic close to their subject matter. The difference between what they thought an open textbook would be like, and what it could be in reality, was often quite marked.

One staff member (D6) who had searched for an open access Chemistry textbook in the previous year and found nothing suitable was quite stunned to be shown the OpenStax Chemistry volume which had very comprehensive coverage of the required topics. The level of surprise was often greater if the example OER text had any kind of supplementary quizzes or other material. D20 was also surprised to find a high-quality Australian text from a set of Australian experts. He was also surprised that he had not met the authors at conferences and had only heard of the publications of one of the authoring team. However, he had reviewed the text and found it be highly credible and was planning to adopt it for the upcoming 2021 teaching year.

LT4 was similarly not attached to known authors, noting that “It’s about giving students the most relevant most useful material. It doesn’t need to come from any particular author or be written by me or come from a publishing house or anything like that.” Two survey respondents, both non OER users, offered counter views “I think experience and reputation are critical in textbook writing, and I can’t see how if something can be editing (sic) by anyone it could be authoritative or reputable”, and “The credibility and reputation of the authors is an issue with open textbooks.”

Survey comments from those who had not used OER also tended to query the quality and availability for their discipline, or clarify that they didn’t use textbooks generally or always used e-books. One survey respondent (non OER user) commented that they preferred to pay for textbooks to ensure that writers would be paid, noting they were part of the creative writing sector and author payment was required for their livelihood. This suggests a misconception that OER authors are unpaid or unwaged. However, the reality is that OER authors usually undertake the work as part of their paid teaching work or grants, or (in the USA and Canada at least) are paid through philanthropic funding.

Recognition and representation dimensions: the potential of content diversification

When students were asked to reflect retrospectively on their textbooks used to date, most said that many or most of their textbooks lacked diversity of authors, views and perspectives. Some had textbooks at hand on their desk and flipped through one or two to have another look. When asked to consider who was represented and who was missing, most students provided examples of under-representation of women and Indigenous people as both authors and topics for the textbook. Some provided detailed examples of under-representation of Asian and non-white people, and of Euro-centrism. Some also provided examples of positive representation, however these were expressed as exceptions in particular books or topics. Details and quotes are provided in Appendix A.

The staff interview data tended to support the student findings that under-representation and mis-representation were still issues in many curriculum areas as the following quote shows.

Yeah, it's a very white reading list by and large. Obviously that changes depending on exactly what we're talking about. So, when I teach Asian [field/topic], the reading list has scholars from Thailand or wherever we happen to be studying. But there is still a significant number of European and American [professionals], like myself, working in those regions...(in terms of gender balance)... we're not that bad, but we're not great (LT4).

LT6 had authored OER texts and included lots of examples of how women had made careers in her field, noting “but that’s, again, that’s a fairly unusual thing.” Previously LT6 had been a casual teacher using a textbook in a class where most of the class were women, “and it was really quite misogynistic the examples that we used, it was not even representative in terms of gender, let alone any other ways.”

There were many examples provided by interviewees of their work to diversify learning materials across a wide range of curriculum areas. Some staff hadn’t considered content diversification but when presented with examples grasped the potential quickly. Some staff already addressed a lack of diversity in texts within their lectures but were generally unaware of the potential of addressing it through open textbooks. Others like LT6 took an inclusive approach to the whole reading list in a systematic way as part of their pre-semester teaching preparation. As shown in the quote below, LT6 also used videos of Indigenous experts, to let them speak for themselves while using their position of power as a teacher to amplify Indigenous voices.

I am careful to select images and examples in the content I produce, that represents different people with different cultural, religious and gender/sexual identities. Where possible, I also make sure the readings I curate for a subject are written by diverse groups of people - not all white men. I actively exclude learning materials if they are not appropriately representative of differences in the population... I tend to rely on scholarship written by Indigenous experts as readings when it is required. I have also drawn on multimedia resources where Indigenous people speak about an issue relevant to them (LT6).

Students affirmed the value and importance on diversifying the textbook as a crucial component of curriculum, as S18 said “because the texts are the primary way in which we kind of get the information, having the different voices in there is going to be exceedingly important.”

In terms of increasing **representational justice** of curriculum, some staff were already on the lookout for citing Indigenous and multi-cultural scholars as well as inviting them to provide guest lectures. It was only a small conceptual leap for them to consider asking students, scholars and community members from diverse cultural groups to contribute cases, examples and sections of learning materials. When provided with Canadian examples of OER texts co-authored by First Nations experts as an example, staff were impressed with the quality of the outcome. Some staff with pedagogical interest in **students-as-partners** approaches were particularly interested in collaborating with diverse student groups on the creation of OER and could see how that might work as assessment options or as paid co-curricular opportunity.

Life experiences and diversity training influences views

The extent to which students noticed a lack of diversity in their texts and readings seemed to relate quite strongly to their own experiences of racism or gender/role stereotyping, or if they had undertaken a cultural studies/diversity unit of study. For example, for female international students with life experiences of gendered racism, the question of who was not recognised and represented in their textbooks was much more front of mind. These students were able to provide very specific examples. S07 noted with a degree of irritation, that “barely women are mentioned. It’s all about the men. Even the textbook for retail management, which is a female dominated workforce, did not have women visible in it.” S12 working in a female dominated field of nursing also said that “we’re constantly told ... that the males are highly underrepresented in the workforce for nursing. So it’s interesting that a lot of the kind of readings come from a male perspective.”

S02 also noted the under-representation of women in her Business texts generally, particularly in Finance and pointed out that while there wasn't an active exclusion of women, nor was there equal recognition for their achievements.

I do feel that business is kind of a male-dominated field...they don't want to exclude females. But they do not recognize them as well, kind of like that (S02 mature age international Business student.)

S08 noted a lack of LGBTQI+ representation and made the distinction between recognising others from different backgrounds, and actually hearing from them.

There's been talk of people from diverse backgrounds, but very little input from people from diverse backgrounds. I'm a part of the LGBTQI+ community as well and there's definitely been no mention of that at any point, which is somewhat disappointing but not exactly surprising (S08 female science undergraduate).

Similarly, S19 (female nursing undergraduate) pointed out that surface approaches to recognition and representation didn't really help, noting "I've had pictures and stuff, but they don't really represent the cultural side or different views and stuff."

A survey respondent also felt that open textbooks could assist in helping LGBTQI+ feel more included.

I think Open Textbooks are a great idea, especially for disciplines which use textbooks a lot and where those books may be written using a white, cisgender male lens (anonymous survey respondent).

Cisgender is the opposite of transgender and here refers to a kind of generally unspoken privilege held by people who identify as men and were assigned "male" sex at birth, or identify as women and were assigned "female" sex at birth (Australian Human Rights Commission, n.d.). Contemporary understandings of gender is that it is part of individual's identity as they mature, which is separate from and sometimes different to the sex assigned by medical professionals at birth.

When diversity is/is not front of mind

Other students needed to be provided with an example before they could consider the diversity of perspectives presented in their texts. They had not considered this question before and had to cast their minds back and re-evaluate their texts retrospectively. The three male international student interviewees did not identify a lack of gender or racial diversity in the textbooks as some of the female students studying the same courses did. When asked to consider an example, such as whether the text would be improved with the inclusion of female or Indigenous leaders in the field, the narratives of two of the three male students changed. One talked about how overjoyed they had been the first time they read a paper by a Vietnamese professor, a second reflected on their discomfort around a lack of inclusion and understanding of Indigenous communities in Australia.

S06 (female, MBA international student) when asked whose views were missing, said "I don't know... black people, or different religions people are for example (missing) in business communication (unit of study). I think the significant person that the textbook needs is Nelson Mandela." Later in the interview when asked if the textbook would be improved by the inclusion of Asian women business leaders as examples, she replied energetically with a burst of emotion.

Yes, I think it will be like the better part of the textbook because in the previous is already have men, men, and men again. So, we're familiar with this and we have like no challenge... (female, MBA international student).

S03 had also not seen any Indigenous examples in his texts and put that down to the fact that he considered Indigenous views and knowledges a recent 'trend'.

I believe like there is no specific things of such kind so I don't think so because like this textbooks were written a couple of years ago ... They haven't introduced the latest trends or such thing (male MBA international student).

Students who had undertaken a cultural studies unit (cohort 2 n=10) were often able to quickly provide a comparative analysis of the level of diversity of readings in the cultural studies unit versus the other units they had taken. The cultural studies unit had a key learning outcome to be able to think critically and to negotiate and evaluate diverse points of views. Reading Indigenous, black and female authors was part of an open access reading list and classes modelled and practised how these points of view contrasted and supplemented the kinds of knowledges coming from more traditional and indeed often older sources. The students preferred the diverse reading list to the readings in their other units and could see that the points of view presented would assist them to be better teachers, nurses and counsellors. They were also very appreciative of the open access reading list which featured no materials that needed to be paid for. Everything was available online with no licencing restrictions. The students highly valued both the "openness" of the access (no cost) and the "openness" of the knowledge presented (recognition of diverse sources and points of view.)

There were some students who did not care very much about the lack of diversity in their texts. S16 (Nursing under-grad, international student) says there is not cultural diversity representation in textbooks, but it is not a concern for her: "I don't know because I think ... this content it will not influence my learning outcome. I think it should be fine." Similarly, S03 (post-grad Business, international student) said that if it was important for him to know, the professor would tell him (i.e. the class) about it.

Up-to-date-ness, fairness and offshore campus cultures: motivations for content diversification

We found examples of academics working individually and others working in teams to develop and improve curriculum including the textbooks and reading lists. For some this was often a moral decision, just a matter of the right thing to do. Others felt that increasing student sense of belonging was important. The phrase "you have to see one to be one" was mentioned by staff multiple times. First Nations' knowledges were increasingly considered as important to embed in the learning materials although there was quite a degree of anxiety from non-Indigenous staff on how to go about it. Fair gender representation was often noted as a given, without requiring particular justification, and described as "a no-brainer" by one interviewee. For staff working in off-shore campuses or international locations, there was a particular need to ensure that the curriculum in these locations was not too heavily Australian but instead drew on locally relevant cases and examples and were not racist or colonial in tone.

It's been a bugbear of mine ever since I've been in education, there's been the western centric curriculum that doesn't take account of people's cultures I'm here in Vietnam ... they find it very difficult to be heard and to have their work recognised ...and one of the things that I really want to do before I leave is to get a really decent textbook about Vietnamese [academic's area of expertise] and the history of [topic] here... there's nothing...absolutely nothing... (RM4).

However, the most common narrative used by academics to explain the importance of content diversification was about keeping their curriculum "up to date" and relevant to contemporary challenges. Many staff interviewed were interested in using OER texts to improve the currency (up-to-date-ness) of their curriculum, and for some staff this explicitly included the notion that a more diverse textbook with multiple knowledge perspectives would

be a better and more up to date textbook. Staff felt that texts needed to be updated to be relevant for current professional contexts and that students needed to know about working with and for diverse clients and colleagues. This was often framed as a graduate outcome for when students need to apply their learning in workplaces.

D20 was motivated to adopt an OER so as to bring the textbook up to date noting that their field “is a fast-moving area”, but they were “using a commercial textbook published in 2012. It’s out of date.” D20 said that the commercial text lacked a number of elements including Indigenous education and a focus on curriculum. D20 was adopting a suitable replacement from an OER repository noting that “there is a great opportunity with OER texts to pick up a resource that grows with the knowledge of the field.”

D12 was part of a team that had written an online Graduate Certificate unit which had “quite a lot of Indigenous knowledge and perspectives content in that.” D12 was used to drawing on Deakin’s Inclusive Education Principles, and noted that “to represent diversity positively in the curriculum is really one of the more forward-thinking aspects of the principles...It’s sort of preparing students for a diverse world where they have to interact comfortably with a wide range of people ...”

D13 felt that diversifying the curriculum was critical to advance Indigenous knowledge and engender greater understanding and respect for Indigenous students and staff on campus. However, D13 did not want generic Indigenous cultural information courses about making damper or dot painting. Instead, he advocated for embedding discipline-specific knowledge to enhance graduate outcomes and employability, noting that Elders’ different knowledges relates to particular professions. D13 said that the addition of Aboriginal perspectives as an example of a different worldview was important training for the next generations who would need “the ability to deal with competing worldviews, and anchor themselves in it.”

RM5 suggested that embedding Indigenous knowledges into OER textbooks would also help overcome the awkwardness and pressure that Indigenous-identifying students often felt in classrooms to be the expert on all things Indigenous.

If the teachers know of your Aboriginality or if you're loud and proud and then ... a lot of the times you become a teacher or you know, the guru... and it's very frustrating and I was like that when I was at Uni. You're expected to become the teacher, you know, you just want to be the student (RM5).

Different topics do/don't lend themselves to diversification

While there was a lot of support for content diversification, one of the major findings of this study is that both students and staff felt that the context/opportunity for content diversification is dependent on the discipline and topic to be taught. While the previous OER literature tends to suggest that the ability to modify OER texts is a freedom or benefit for all staff, this study found that discipline and topic differences matter a great deal.

Students felt that foundations topics were less of an issue (“maths is just maths”) while for social sciences and “applied” topics such as health or environmental management, a diversity of authors, cultural examples and points of view was thought to be very important.

Staff interviewees agreed with students in that foundational/theoretical topics were often not about nor dependant on people e.g. physics, geology, maths. Although many interviewees thought it was important that students could see themselves in the curriculum, there was a prevailing view that this need not occur in every text or unit, but in those like the arts, law, business, social science or health disciplines or the more later or applied topics in the sciences such as environmental science.

For example, LT4 (Archaeology) had a nuanced understanding of the need for both local, Indigenous and global examples in their curriculum and already included a lot of Indigenous

content because graduates would most likely be working in that area. The Archaeology course that LT4 co-ordinated was not focussed on European antiquities but instead on Australian, Asian and global south archaeological sites influenced by the expertise of the teaching team. In contrast, as a teacher of Western history LT5 had not thought about whether learning materials were representative of the students at the university: “I haven't thought about it myself so much from that perspective ... in the area of Classics and ancient history. It's not so much that students become represented in the material as the way that the material is available to them is more accessible.”

Some academics felt that some topics they were teaching were neutral or objective. For example, D11 who teaches academic writing said the texts and assignments were not well suited to socio-cultural inclusiveness and enhancing belonging by the students seeing themselves in the activities: “In the foundation unit units ...for the most part I'd say no, we're trying to teach them academic voice. And so the place of the personal within academic voice is less.” However, D11 also taught units about the social context of the profession where there was more opportunity to ensure the content represented a diverse range of perspectives.

Other academics contested the idea of foundations topics as neutral, noting for example that maths foundation curriculum tended to focus exclusively on the contribution of European mathematicians and mathematical innovations whereas the Middle Eastern tradition of mathematics and astronomy was vast, but largely ignored in Western textbooks. A biologist noted how a Japanese microbiologist who made a huge contribution tended to be allocated a few sentences in the textbook, which would give half a page of detail on European innovations.

Institutional opportunities, challenges and support

Library staff interviewed were aware of a general low awareness of OER and had strategies in place to increase OER awareness. Most of the participating institutions had a library Guide (“LibGuide”) to help staff understand and find OER and some pointed to OER repositories suitable for particular to the different Faculty, School/College or discipline areas. Faculty specific Liaison Librarians play a role in supporting OER discovery as part of finding suitable learning materials and alternatives during academic consultations. Libraries also run OER workshops and are involved in Open Access Week and other awareness raising events. However, these were seen as helpful to assist interested academics, but not sufficient to make a major impact in the strategic uptake of OER. Nevertheless, a review of the OER website hits from the participating universities suggest that the longer the OER Guide has been around, the greater the number of people are using it.

Part of the reason that adopting existing OER texts is challenging is that the majority of existing OER stock are North American or Canadian resources which were not always translatable to the Australian context. Some OER topics such as academic writing and information technology (IT) related courses translate relatively well across international contexts. For example, RM1 teaching IT foundations to vocational or certificate level students had no trouble sourcing suitable multiple North American authored OER texts which came complete with a vast array of practical coding examples and exercises. However, other disciplines often have more specific curricula that are mandated by local accreditation. In addition, many of the major philanthropic OER programs in North America are undertaken by the Community College sector whose academic programs are somewhere above Year 12 but below a Bachelor level of learning outcomes. This means that some OER texts are written at the wrong level of learning/complexity for Australian award courses. Therefore, a lack of Australian-authored OER was seen to be an inhibitor for larger scale uptake, leading some institutions to invest in OER authoring programs.

Opportunities

The academic interviewee data suggested many opportunities exist for integrating open texts and OER in the curriculum. Staff discussed five different models for the way they were integrating or planning to integrate OER, listed from easier to harder to implement order:

1. Provide a choice of commercial or OER major/required text.
2. Multiple OERs as a part of a diverse weekly or topic-based reading list (including academics who were dropping requirements for any one text).
3. Adopt OER text as the major resource for a unit, with no or few additional readings.
4. Develop OER collaboratively with students as an assessment option.
5. Small number of core OER texts across a whole degree program.

Options 1-4 were more able to be implemented by individual academics and Option 5 would require co-ordination and collaboration across multiple units.

Options 1-2 were most frequently discussed as they required the least amount of change and support beyond help from library staff and/or colleagues to locate suitable alternative OER text options. Option 3 might require a review and matching of open textbook options to find sufficient support for the learning outcomes and assessments required. Option 3 might also require substantial support to re-tool existing websites if the current textbook content and activities were deeply linked to various sections, weeks and modules of the LMS as discussed by DK01 at length in their interview.

As an example of option 4, CD2 collaborated with students on an open textbook giving them the choice to publish their case study assignment as a textbook chapter. The project was motivated by many reasons, one being to develop “authentic and non-disposable” assignments. These are assignments that meet a need larger than passing a course, and often have a public audience. They are the opposite of an essay read by only the lecturer then not looked at and ‘disposed of’ afterwards (R. Jhangiani, 2017).

Regarding course-wide OER embedding, LT4 noted that colleagues in the program were planning to set four textbooks to be used in multiple subjects throughout the degree and also “having some usefulness afterwards, after graduation.” They hoped for funding and sustained support to produce all four books as OER. However, following the “z-degree” program model used overseas, after four years of modest institutional investment of one book a year for four years, the whole program would have zero costs to students for textbooks and readings (J. Hilton et al., 2016). So, while this model requires co-ordination, collaboration and sustained but modest investment, it may also produce a larger impact and benefit to students.

The ephemeral challenges of funding and academics’ time were regularly noted by interviewees as an issue. LT 1 made the point that “whether they’re going to use something like e-bureau to produce their own, or whether they’re going to search and find something that’s already out there and adapt that. Just that element of time at the moment... That’s a real challenge.”

Institutional support in the form of project funding was thought by some an important way to hire tutors or PhD students to co-ordinate or write sections of OER texts. Others felt that the work to adopt or adapt an OER text was the role of the teaching team. For example, D01 who taught a large 100 level unit liked the idea of a free, quality text but had a large teaching team to negotiate with. The course website had a complex weekly structure with hundreds of deep links to the commercial textbook resources. D01 assessed the risk of OER adoption on par with major course website changes – they thought that it might be possible to pilot the

digital integration of a new OER text in the third semester where student numbers were smaller and the potential negative impact of the changes to the course website would be less.

Many interviewees felt that access to skilled support staff rather than funding would be key to engage in open textbook authoring. D07 “I guess funding yes, but more in terms of people with the sort of technical expertise to sort of find those resources and ... to sort of modify them or produce resources and things like that.” Similarly, LT5 thought that getting help sourcing images that were not under copyright to be able to turn lecture notes into publishable textbook forms would be very helpful.

Staff who were writing large textbooks of 10-15 chapters certainly needed substantial teaching relief. LT1 was writing a major OER textbook which started off with a grant team across two universities to collaborate on the curriculum, but LT1 (funded by the grant, and the only staff with no teaching load) ended up writing the whole book. “So the plan for the textbook was that we will all write a chapter or a couple of chapters and we'll kind of divvy it up, but you're right about the time and just I think the capacity of people to expect them to write it. We had to kind of change tack. So now I'm writing it all.”

Similarly, LT5 thought that getting some workload relief in the same semester as you are teaching a subject is the ideal time to write a textbook on the same topic. “The ideal time is while you're writing the lectures...I have no desire to buy-out my teaching but I am entirely supportive of buying out of marking.” This certainly worked for QT1 who wrote a complete text over two months while teaching the same topic and used it as the trimester progressed along.

However, others found there was an opportunity to publish OER without additional grants, workload relief or funding by keeping OER textbook developments smaller in scope. LT1 noted that “some of those (OER) are quite short because there's no limit - unlike a normal book where you sort of need a certain size for it to be (commercially) viable.” CD2 who collaborated with students produced a new OER of Australian case studies with six chapters. There was an introductory chapter defining the key terms and a final chapter of all the references, and the four middle chapters were the students' assessed case studies. While there certainly was additional workload co-ordinating the project, proof-reading and checking the final product in PressBooks, the chapter drafts were undertaken over the course of a teaching semester as part of the coursework. With OER it is possible to start small and make additions as time permits.

A number of staff also felt that when they were doing the important work of undertaking a major revision to a unit, whether it be for accreditation or conversion to online delivery, there was an opportunity to prioritise finding OER and also developing more diversified content. D07 was going to be having some institutional support to put a unit online in the coming trimester, and felt that, “this might be a good time to try and bring in some of that diversity examples ... while they're helping me with that... I can do those two things together.”

Accreditation requirements can also encourage content diversification as noted by RM2 who said “I think we canvassed a pretty good balance of readings that are authored by people from quite diverse backgrounds, but also that's becoming more of a requirement for accreditation.”

Leadership and intention can also make a difference. When implementing digital learning projects, leadership at the Faculty, College or School level can make OER texts part of the scope and take an OER first approach. RM2 noted that their “College has put a lot of time and resources into a major blended learning project and as part of that have really prioritised open access digital resources, rather than going down commercial publishing routes (taken by other Colleges).”

There was also a sense that OER is an idea whose time has come, academics are ready for an alternative to commercial publishing as an outlet for their work. Many interviewees discussed their increasing dissatisfaction with the commercial publishing model, and how this creates a preference for open access and OER publishing for both research outputs and textbooks. There was particular frustration that academics gave voluntary labour so companies could make money, while charging institutions for knowledge that had been paid for with public money.

QT9 pointed out that the moment when academics realise they cannot use even a tiny part of their research publications in their teaching materials is often the moment they understand the full potential of open access publishing. What some interviewees call a publishing “ecosystem” to describe the relationship between journal publishing of research rankings and teaching materials, others described as a corrupt or “broken” system.

Experienced text-book authors were often the most vocal in their criticisms of commercial textbook publishing. LT3 who had written an OER text found commercial textbooks annoying. “They go out of date so quickly or you know, publishers keep trying to get students to buy them by giving them free online activities that just require a lot of effort and no one ever uses them.”

RM4 would not sign with a commercial publisher again as they wouldn’t market the book properly, declined to update it to a second edition, but would also not give the manuscript/copyright back to be updated and released by the author. LT5 also regretted signing a contract to write a textbook for a high-status university press because of their attitudes towards digital access. LT5 wrote the introductory text with one other colleague, “it’s in the second edition now, it’s up to 220 thousand words plus another 120 thousand words of online supports, ... quite a significant investment of our time and effort. Yeah, and they’ve just locked it down. So at the moment my colleague actually can’t even get online access to it for her students ...I’m kicking myself now, I’m thinking I wish I could go back to 2012 when we first started discussing the idea and decided to sign up.” There was a similar open text comment made by a staff member in the online staff survey.

Lastly, a commonly expressed barrier to OER take-up was that many academics were doubtful that writing an OER text would count towards their workload, research outputs or promotion. Despite wanting to write with collaborators LT5 feels that it would be hard to get others to contribute because of the way that universities don’t count publishing textbooks as research output. “Because of the way that our research outputs are counted... it certainly makes it harder to, you know, get the collaborators...If there was some way of giving a greater workload recognition to open publishing that would be helpful.”

There was also a lack of clarity about whether authoring OER texts would count for probation or promotion, with some staff suggesting that it definitely would not be supported and other staff suggesting it could be included as evidence of teaching excellence and meeting inclusive education and/or diversity and inclusion priorities.

Academics were also unclear if university management would see OER authoring as a good use of an academic’s time compared to producing a top journal article instead.

Many academics interviewed thought that the work of authoring OER texts was a legitimate form of learning and teaching innovation which helped expand the reach of university research. They felt it needed to be more highly regarded by Universities. RM3 said that “Open Access should be afforded the appropriate cachet.”

Universities needed to make clearer statements about how they would support, recognise, judge and reward the development of OER texts. Formal peer review of OER texts could also be pursued, in which case perhaps some OER texts would count as research output.

Supporting authors: OER text publishing service

A variety of institutional supports were provided to authors to create open textbooks. Staff at La Trobe and QUT had the benefits of an institutionally supported open textbook publishing service. La Trobe's eBureau service was managed by staff in the library, and QUT's PressBooks pilot was managed through the Learning and Teaching centre. Some staff just needed access to the platform and some basic introductory online resources while other staff needed workshops and one-on-one or "shoulder support". CDU academic staff interviewed made use of a PressBooks installation which was managed by the Marketing department and used as a University branded publishing platform.

Staff involved in the open textbook publishing service felt that the call for expressions of interest (EOIs) to participate raised the profile of OER and OER texts more broadly across academic units. They also felt that OER awareness might broaden to disciplinary networks as each university's catalogue of OER texts grows leading to more Australian academics searching and adopting a local OER. Similar to the recent USA report, this study suggests that no matter what kind of institution-wide service is provided, all institution-wide initiatives do fairly well to promote the uptake of OER and OER texts more broadly (Spilovoy et al., 2020).

This study found that two interviewees who were authors of an OER text – whom one might assume were general OER advocates – had still never searched an existing OER repository for other OER texts to adopt for their teaching. This suggests that there is more work to be done by universities to raise awareness and support for OER discovery by teaching academics including cross promoting services to OER authors or incorporating OER discovery into workshops that plan for OER authoring.

While the lack of suitable OER might hamper adoption in the Australian context, we wonder if it may also encourage authoring. We also wonder if the inverse might be true i.e. will institutional OER authoring services hamper the interest in searching and adopting existing OER texts? For libraries and institutions to gain the most financial benefit from OER they need to balance support for training and support for staff to search for OER first and ensure there is nothing worthwhile to adopt or adapt prior to committing to investing in authoring projects, particularly large-scale projects requiring grants.

Lastly, there was some tension or mis-match of expectations noted by some interviewees about how the final product was branded and licenced. Some potential authors needed greater clarity around if the text was branded as an output of the institution versus a piece of work of a particular academic or collaboration between authors. Some interviewees also wanted some say in which of the suite of Creative Commons licences would be applied.

Strategy or common sense practice, but rarely OER policy

With the exception of QUT, the participating institutions did not have any kind of OER policy. There were also no particular funded strategies, although there were some funded projects. There were numerous related funded strategies that interviewees felt would provide an umbrella for OER texts to find a place, typically within curriculum and eLearning renewal including Indigenising the curriculum.

There were numerous staff members just getting on with OER or free digital texts as part of what they considered to be common-sense and values-aligned digital practice. LT2 said:

I guess what we're looking towards is principles of Universal Design, which really sort of concentrates on removing barriers. So for things to be accessible by the majority of people it might be around representation. So Indigenous people, sort of other minority groups ... It's definitely something we bring up and we're

mindful of. But there's not a policy or a strong etched-in marble sort of approach. It's really just a common sense approach is what we apply most of the time."

Numerous interviewees spoke of their cynicism with too great a focus on policy. The gaps between policies and practice were debated in interviews. Most felt that there must be a sweet-spot of ground-up practice and momentum as well as some high-level policy statements to provide an overriding narrative of what the particular institution wanted to do with OER texts.

Staff survey findings

The survey of teaching staff did not target or require respondents to have any knowledge of OER and was promoted broadly to any Australian university teaching staff. As the methods section outlined, a representative sample of full-time, part-time and casual staff across a wide range of disciplines was recruited.

The survey results supported the assumption that textbooks and textbook sections were still well used in the Australian higher education context. A substantial majority (81%) of academics used them in teaching as a part of a reading list on par with the 80 per cent of academics reported in the UK study results (Pitt et al., 2019). These results echo the usage patterns of staff interviewed and during the consultation phase, where we found that while textbooks and textbook chapters were still used most of the time, some staff were abandoning textbooks altogether in favour of a reading list of diverse texts, videos and/or journal articles available at no cost online.

Survey results indicate there are good opportunities for OER texts to be taken-up as a support for social justice in Australia. Although respondents' awareness and use of open texts was moderate – 14 per cent some awareness and a further 10 per cent very aware and using in teaching – when a definition was provided, academics generally were interested in the free access and content modification and diversification potential of OER texts.

Economic dimension findings

As Figure 3 shows, 38 per cent of survey respondents indicated that they expected students to purchase a textbook. While this figure was less than the 52 per cent reported in UK survey result (Pitt et al., 2019) it was still somewhat greater than the impression created from staff interviews. It may be that the survey data reflects discipline differences, as there was a greater proportion of survey respondents teaching Business and Health topics.

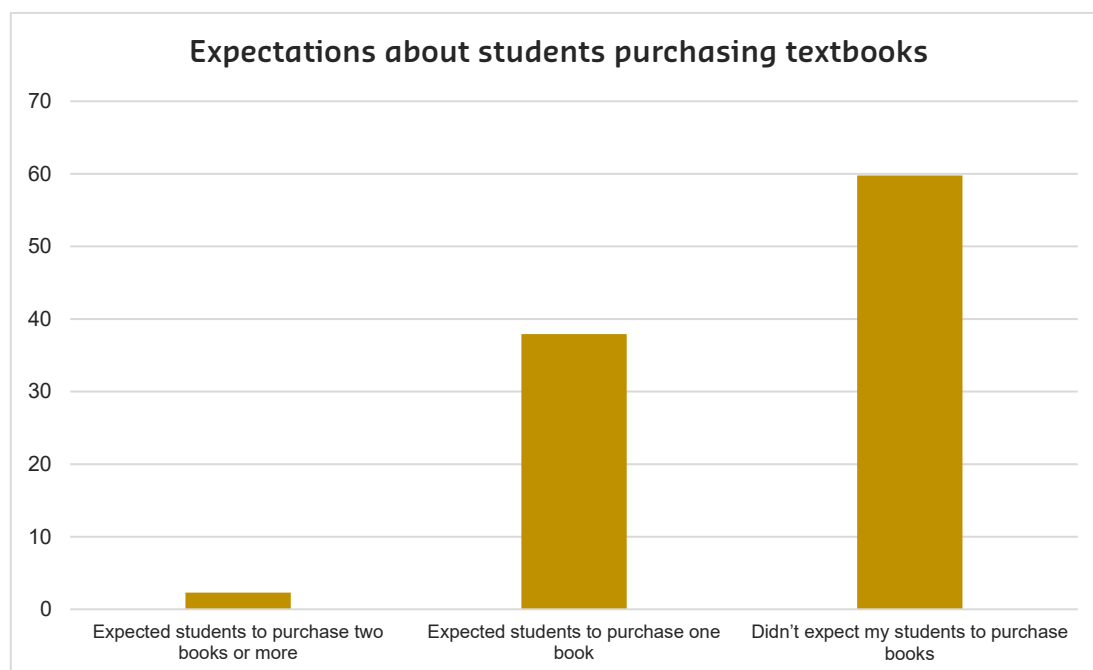


Figure 3. Academics' expectations of students to purchase textbooks

In terms of the factors influencing textbook selection, the top five reasons were:

- Library access: 83 per cent rated as very important.
- Availability of e-textbook format: 76 per cent rated as very important.
- Accessible formats: 68 per cent rated as very important.
- Comprehensive content and activities (e.g. PowerPoints and quizzes): 67 per cent rated as very important (See Figure 4 for full break-down of responses).
- Affordability: 61 per cent rated as very important.

Less important factors included:

- Support from library staff: 28 per cent rated as very important.
- Reputation of author: 20 per cent rated as very important.
- Works with LMS: 19 per cent rated as very important.
- Recommendations from peers: 15 per cent rated as very important.
- Relationships with textbook vendors: three per cent rated as very important.

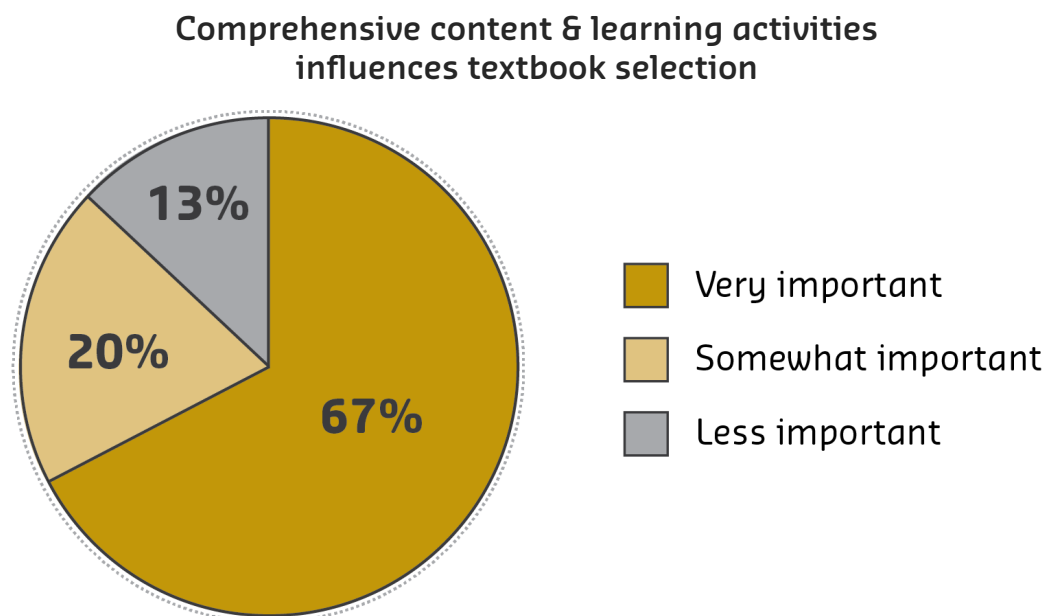


Figure 4. The extent that comprehensive content and learning activities influence textbook selection

Recognition and representation dimensions: content diversification findings

Around two-thirds of the academic teaching staff who participated in the survey indicate they were open to diversification of content. As Figure 5 shows, 73 per cent (29% strongly agree and 44% agree) of teaching academics indicated that they are interested to modify an open textbook to make it more relevant to the Australian context.

Interested to modify an open textbook to make it more relevant to the Australian context

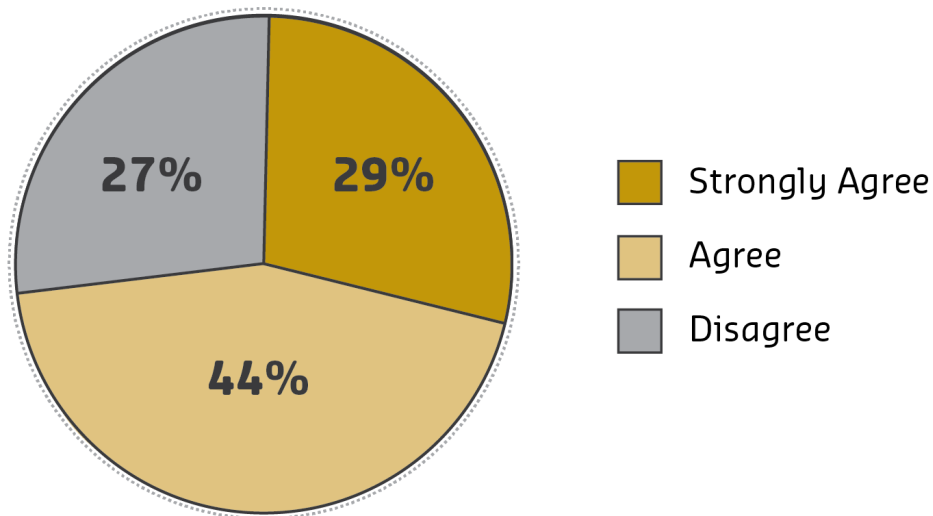


Figure 5. Interest in modifying open textbooks for increasing relevance to the Australian context

Figure 6 shows that 67 per cent (31% strongly agree and 36% agree) of teaching academics indicated that they are interested to modify an open textbook to make it more representative of the women, LGBTIQ, Indigenous people and other marginalised groups who tend to be absent from textbooks.

Interested to modify an open textbook to make it more diverse

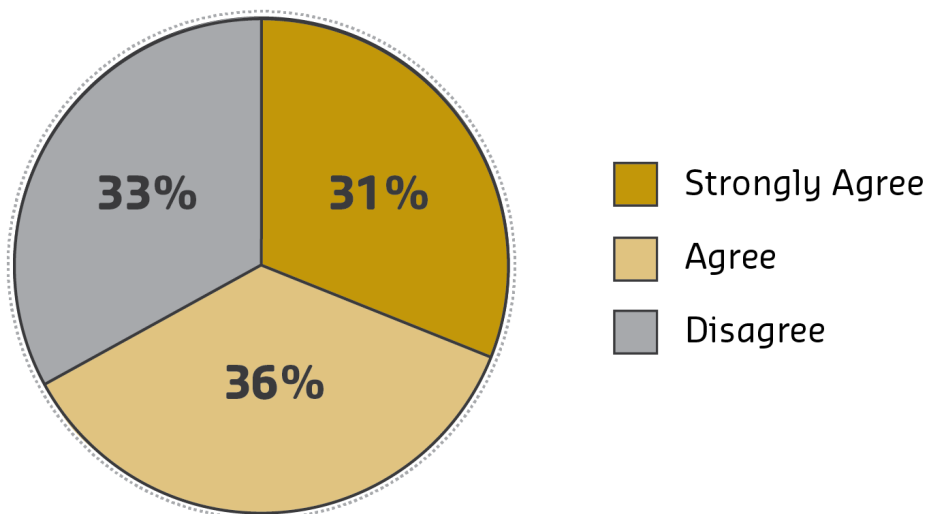


Figure 6. Interest in modifying open textbooks for diversifying their curriculum

Institutional challenges, support and motivation findings

The survey results indicate a number of challenges with OER awareness within the institutional context.

Figure 7 shows that 20 per cent of respondents were not aware of publisher's licences which restrict use (i.e. time or per cent content restrictions). This result contrasted with the student data which suggests that restrictions to digital access were front of mind for many students. The survey also found moderate awareness and understanding of copyright (57% very aware) and creative commons licencing (37% very aware) of learning materials.

Aware of Publishers' contractual licences which restrict use

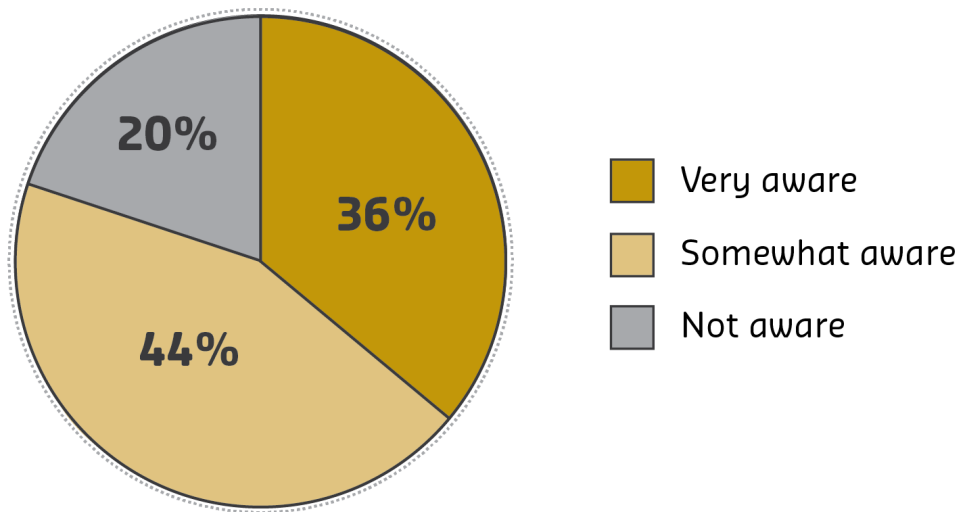


Figure 7. Academic awareness of commercial publisher's contractual licences which restrict library and student use

As seen in Figure 8, results indicate that about half of Australian academics have sole decision for the selection of the textbook and 40 per cent either lead or are part of a group that makes the decision. This represents less individual agency to make decisions about OER adoption than in the UK where 72.7 per cent of staff had autonomy over textbook selection (Pitt et al., 2020). This aligns with the consultation phase findings, where we found that 100-level class sizes are so large in Australia, subject co-ordination roles can be shared across the teaching year, the teaching teams are correspondingly large, and therefore a decision to change textbook adoption is often a team decision.

As Figure 9 shows, when asked if they would consider using open textbooks in the future, there was very strong support of between 80-90 per cent for using open textbooks if institutions provided support, including making them easier to find. Figure 10 shows that around two thirds of respondents said they would write or modify open textbooks if they were linked to promotion or financial support was provided. Figure 11 shows that two thirds of respondents said they would like to be part of a community of practice producing open textbooks. We cannot assume from this data that it is the same two-thirds of respondents answering in the affirmative to both questions. Further analysis would be required to determine the degree of overlap between the two groups of respondents. While it is likely there is a good degree of overlap, there may be some staff only or primarily motivated to write or modify open textbooks by financial support or promotion and not by the presence of a community or practice. Similarly, there may be some staff only or primarily motivated to write or modify open textbooks by the presence of a community or practice rather than financial or promotion.

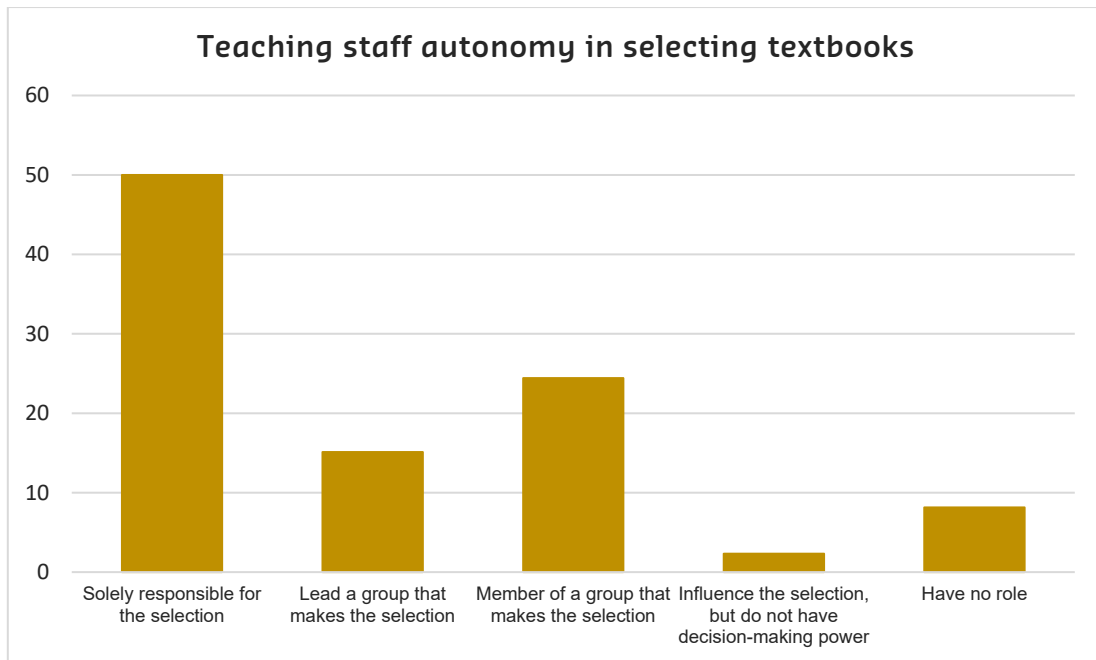


Figure 8. Teaching staff autonomy in selecting textbooks

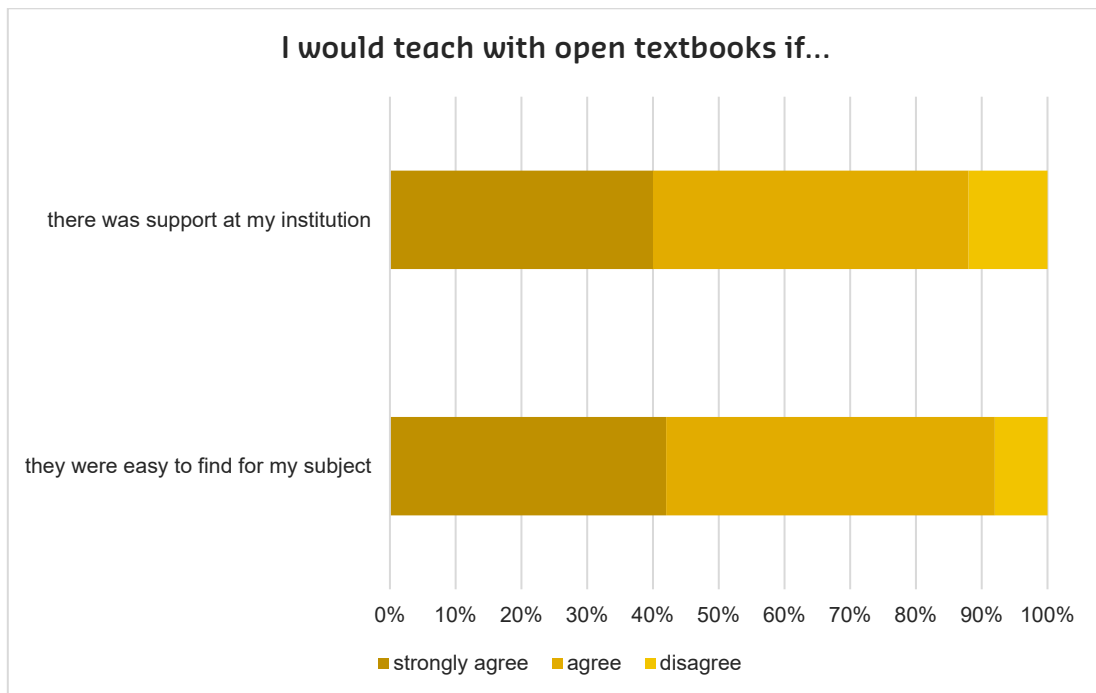


Figure 9. Potential of adopting open textbooks with institutional support

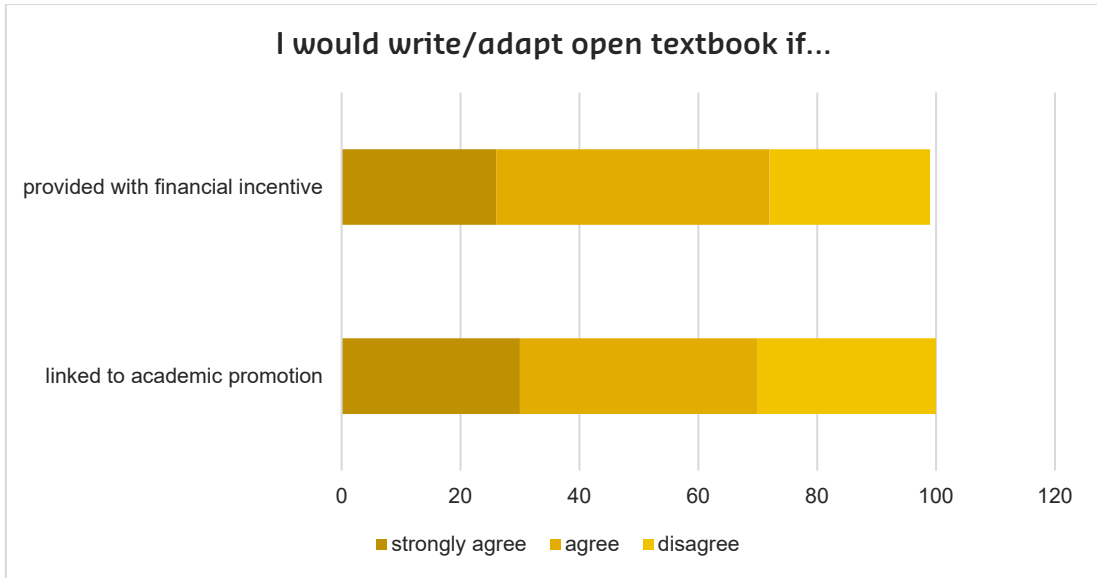


Figure 10. Potential of writing/adapting open textbooks with institutional support

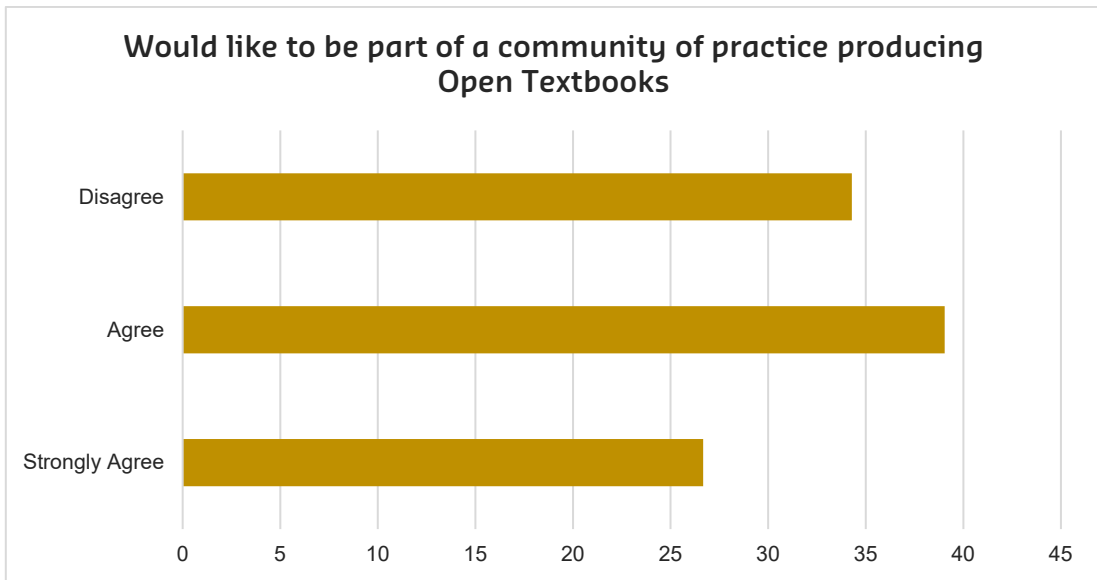


Figure 11. Interest in producing open textbooks as part of a community of practice

Discussion

This section discusses the implications of the findings locally in the context of comparable international literature.

The data from this study provides the first snapshot of Australian textbook practices and challenges which is not currently available within existing literature. The interview data provides evidence to support anecdotal claims about Australian use of texts within readings lists embedded within the LMS, the importance of PowerPoints and other supplementary resources and activities, concerns with lack of curriculum diversity as well as differences in practice norms between disciplines. The survey data provides statistical baseline information useful for policy makers and future researchers about expectations that students purchase textbooks, factors influencing textbook selection, awareness of OER and the kinds of institutional supports needed for using open texts.

As the following section discusses in detail, the findings affirm and extend international scholarship about negative student impacts from expensive texts and restrictive digital access to learning materials in Australia as overseas. Secondly, the findings extend the international literature by highlighting a legacy of sexist, racist and out of date textbooks and distinguishing between different impacts these can have on all students as compared to under-represented students. The findings extend the international inclusive education literature by providing new insights into how staff can contribute to a more equitable and updated curriculum. Findings also extend the body of international open education policy which is targeted more at institutions in Australia that towards state and provincial legislature as is the case in the USA and Canada.

Finally, the findings also extend research methods into open textbooks and affirm the utility of the social justice conceptual framework for multi-dimensional educational investigations. Our results support recently published social justice OER frameworks that suggest that the economic or cost savings dimensions are not the only benefit of OER. OER projects attuned to the potential of socio-cultural and gender diversification can be deployed to provide the maximum social justice benefits for students by addressing the “economic inequalities, cultural inequities and political exclusions in education” (Hodgkinson-Williams & Trotter, 2018, p. 204). While this research has looked at the content diversification benefits of open textbooks as a social justice strategy, there are similarities with other approaches. For example, it could also be considered as an inclusive education strategy focussing on design for under-represented students and those with disabilities from which all students subsequently benefit (Barrett et al., 2015; Florian & Black-Hawkins, 2011). The cognitive and representational justice dimensions of open textbooks focussed on content diversification might also be a strategy of cultural safety i.e. making education and workplaces safe for Indigenous people (Hunt, 2013; Simpson & Alley, 2021).

The social justice framework is different however in the way it allows for an investigation into multiple types of inequalities evident in contemporary reading materials provision as well as the different ways staff can ameliorate and transform exclusionary experiences for students. The use of the social justice framework helps to unpick intermediary reasons why outdated textbooks and curriculum could negatively impact students experiences and outcomes of higher education, such as lack of a sense of belonging and stereotype threats. The social justice framework also allows for analysis to differentiate between surface and deeper approaches to justice as staff and institutional recommended actions are developed, known as ameliorative or transformational approaches (Bali et al., 2020).

Student impact of textbook costs and access difficulties

Similar to the international literature, expensive textbooks and participation costs are stressful for Australian students. Our results extend the literature by highlighting the degree

to which students make strategic choices about when and what to buy and borrow and their increasing irritation, workarounds and compromises due to restricted digital library access. Some distance students often went without substantial components of their readings because of a lack of digital versions available through the library.

Like the situation in the UK (Pitt et al., 2020), the costs and pressure to purchase may not be as great as in the USA, but nevertheless Australian students said costs, access workarounds and doing without still had a significant impact. Students made decisions to purchase or not purchase textbooks on many factors including strength/weakness on the topic and their grade aspirations suggesting that students see a link between lack of textbook and lower grade outcomes. Lower grades and higher incidence of fail rates are significant features of the open textbook impact literature from the USA. So too are lower course progress rates due to student actions to mitigate textbook costs such as taking fewer subjects or taking subjects which use OER rather than commercial texts (Colvard et al., 2018; Jenkins et al., 2020; Pitt, 2015). While the Australian students interviewed did not talk about reducing the number of subjects, or selecting subjects based on textbook costs as is the case for about half the surveyed students in the USA (Senack, 2014), nor did our questions specifically probe for these issues. Nevertheless, one student had taken leave from study due to the cost and pressure to purchase learning materials thus slowing her progress towards graduation. Further research is required with larger samples of students to clarify the extent that textbook costs influence slower course progress rates.

Our findings also show that staff are often aware and also unhappy with the impact on students. The situation overseas is similar, where staff frustration and solidarity with students is perhaps even higher, leading to a number of concrete actions. In some regions of both the USA and the UK there have been strong Institutional push-backs and campaigns on textbook prices and restrictions to digital licences which have hit the mainstream media (SPARC, 2020) including a call for an inquiry into e-text costs in the UK (Hotten, 2020). Student lobby groups are also very active in the USA pushing for open texts as a transformational strategy to address current problems with textbook costs and access (Nagle & Vitez, 2020), but we are yet to see this in Australia.

OER were seen as a system-wide improvement for all students who increasingly struggle with the costs of higher education. This seems to be a better way of dealing with textbook costs than continuing to subsidise the rising costs of textbook purchase via bursaries or financial support for the most cash-strapped students. Bursaries are an ameliorative social justice strategy, something of a band-aid for a bigger problem. Institutionally supported OER programs which invest in large-scale adoption and/or authoring of OER for whole programs are able to reduce study costs for whole cohorts, and therefore are seen as transformational social justice strategies (J. Hilton et al., 2016).

Both of these strategies are also in the tradition of inclusive education which benefits all students rather than singling out disadvantaged students (May & Bridger, 2010). Therefore, this study supports the recent broadening of scope of the literature of inclusive education beyond technical accessibility for students with disabilities to a wider notion of access and accessibility of under-represented students of all abilities, cultures, genders, and identities (Lambert, 2020).

A legacy of sexist and racist textbooks and readings

Our findings extend the international literature by highlighting a legacy of sexist, racist and out of date textbooks which have the potential to negatively impact under-represented students in terms of inequitable experiences and outcomes. Interviewees also felt that sexist, racist and out of date textbooks negatively impact all students in terms of diminished graduate skills and knowledge outcomes.

Although there is not a great deal of literature on textbook use in higher education, earlier studies suggest that textbooks have been sexist for some time. Various studies from the 1990s onwards reported on the problems of under and mis-representation of women in textbooks, including in the fields of English Language and Psychology (Hogben & Waterman, 1997; Lee & Collins, 2010). Critical scholar Michael Apple (1990) also discussed how class, gender, and race bias had been widespread in school classroom learning materials. This echoes the data from academics interviewed in this study who acknowledged that under- and mis-representations in current textbooks and readings were linked to the history and development of their disciplines in earlier decades where women and people of colour were excluded from many aspects of society.

Many staff interviewed felt that their fields were undergoing a fruitful expansion and conversation to incorporate Indigenous and non-white or western cultural knowledges into the stock of knowledge, thus improving and enriching the field. These efforts address a historical legacy of textbooks as signifying cultural domination of one group over another, as Michael Apple put it succinctly in the following quote.

Textbooks signify particular ways of selecting and organizing that vast universe of possible knowledge. They embody what Raymond Williams called the selective tradition — someone's selection, someone's vision of legitimate knowledge and culture, one that in the process of enfranchising one group's cultural capital disenfranchises another's (Apple, 1990, p. 20).

Eastern and Indigenous knowledges were seen by both staff and students to provide new solutions to old, common problems and therefore important to be included in curriculum. Attempts to diversify the curriculum were also concrete expressions of removing racist views and assumptions from teaching experiences, as a matter of principle and to reduce students' feelings of marginalisation. These can be considered transformational approaches to curriculum justice, going beyond the ameliorative approach of making sure there is more than "straight white men," as one student put it, visible in learning materials to making sure the ideas and innovations of others are valued as expertise.

One major international example of large-scale curriculum diversification is the recent open textbook initiative at the University of Cape Town (UCT) which embedded all three social justice principles into its operations. UCT ensured that the textbooks written by academics embraced diverse topics, authors, contents and examples relevant to contemporary South African society. The initiative was a response to "financial exclusion as well as epistemic marginalisation ... embodied in the predominance of expensive text-books which are authored in the Global North, meaning that they are unaffordable for many students and do not represent local realities" (Cox et al., 2020, p. 1). While Australia has prided itself on being a cohesive and welcoming multi-cultural country, this vision has been tested over the last decade and critiques suggest society including higher education is still a polite but subtly exclusionary and sometimes outright racist experience for international students as well as our local Indigenous staff and students (Blum, 2019; Graycar, 2010). Therefore, the matter of how under-represented students feel represented in the classroom, in learning materials and in the curriculum is becoming an area of research interest.

The important question to ask is how does this legacy of racist and sexist texts impact student performance? As the methods section outlined, we were unable to directly investigate a link between adoption of OER and improvement in student grades and success measures. However, current literature suggests two reasons why a lack of diversity of reading materials can reduce the academic performance of under-represented students: a lack of a sense of belonging, and gender/race stereotype threat. Some recent literature shows a link between damaging stereotypes and reduction in student performance. Building on multiple studies proposing "stereotype threat" as the underlying mechanism impeding female performance, students of both genders were tested after reading a chemistry

textbook lesson with either all male, all female or a mix of male and female images of scientists.

Results indicate that female students had higher comprehension after viewing counter-stereotypic images (female scientists) than after viewing stereotypic images (male scientists). Male students had higher comprehension after viewing stereotypic images than after viewing counter-stereotypic images (Good et al., 2010, p. 132).

Yet the current small corpus of literature on textbook stereotype threat effect is focused on the easier and more ameliorative strategy of replacing pictures with more diverse imagery. There is much future research to be done to investigate how student experience and success is affected by deeper and transformative curriculum work that integrates Indigenous and other cultural knowledges in different disciplines.

Sense of belonging – or lack of it – is also proposed as a mechanism that impedes under-represented students. In our study, when gay-identifying and international students provided positive instances of recognition or representation in a text, students demeanour changed, with visible positive emotional reactions and narratives. This emotional response is part of some current definitions of what makes a ‘sense of belonging’ at university. For instance, Tovar and Simon (2010, p. 200) define sense of belonging as “an individual’s sense of identification or positioning in relation to a group or to the college community, which may yield an affective response.”

Students in our study noted that instances of seeing themselves in readings and learning materials made them feel more positive about what they could achieve. This suggests that learning materials (both hardcopy and digital) as representative of curriculum and course values need to be considered on top of teacher presence and other personal approaches as contributing to the ‘sense of belonging’ at university that equity researchers suggest is critical to international, non-traditional and under-represented local students (Devlin, 2012; Stone, 2017; L. Thomas et al., 2014).

Considering recent research which found that a lack of belonging had a major impact on students’ anxiety, depression and ability to study (Larcombe et al., 2021), the ways that racist or sexist learning materials might re-inforce negative self-views and increase mental health problems is an area for additional research. This is particularly the case as lecture attendance requirements drop and online learning increases.

The finding about examples of positive representation as exceptional and tending to occur in units where socio-cultural inclusion was part of the curriculum extends the current literature. The implication is that teaching critical readings skills to identify whose views are present and missing can be taught and would be an asset to contemporary curriculum.

Attitudes to open textbooks as a solution to current textbook issues

In our study, academic interviewees thought that currency or up-to-date-ness was an important benefit of open textbooks as it supported improved graduate skills and knowledge for all students – in addition to the cost benefits. Knowledge and content diversification was thought to be a part of what made the textbook current. This is a new finding and something of a different emphasis to the pedagogical innovations and freedoms narrative prevalent in the USA and Canadian literature. For example, the idea that open textbooks provide opportunities for innovation which represents “a new layer of academic freedom, as faculty are no longer bound by the limitations of the offerings of commercial publishers vis-à-vis content, currency, clarity, and cultural relevance (R. S. Jhangiani et al., 2018, p. 3).” The fact that students who had experienced a diversified open reading list also felt they were better prepared for their graduate roles, provides new empirical evidence from the student perspective.

Our findings did however align with the UK study that the motivations for open textbook adoption may be couched less in terms of financial savings than they are in the substantial body of North American literature. The UK and Australian use is through reading lists of multiple readings, with less mandating of essential or core texts here than in the US (Pitt et al., 2019). And following this, the popular North American discourse of swapping proprietary resources for open versions is less applicable here as in the UK context, and alternative arguments are needed (Pitt et al., 2019). Alternative motivations in the UK included the ease of access, pedagogical advantages; innovation; provision for smaller markets which are not well served by commercial publishers (e.g. Welsh Language) and co-creation of knowledge.

In Australia the “smaller markets’ argument had some traction but the leading additional ‘talking points’ were clearly overcoming digital access restrictions to learning materials and the need for updated readings that reduced sexist and racist stereotypes. There was also some interest in co-creation of open texts with students. Engaging students in the co-creation of OER is an emergent practice by individual academics overseas, and can be undertaken as part of a subject’s assessment schedule, as well as co-curriculum or even a voluntary alumni project (DeRosa & Robinson, 2017).

Co-creation with students can be appealing to academics who do not support the traditional textbook form nor the central place of it in the curriculum. Robin DeRosa called on colleagues to “stop fetishizing the textbook, which is at best a low-bar pedagogical tool for transmitting information” claiming that OER can do better than “replacing static, over-priced textbooks with static, free textbooks,” (DeRosa, 2015). Instead DeRosa and other proponents of open educational practices are more interested in open textbooks for their ability to support collaborative, active learning where learners help create the OER or open textbook “so that knowledge becomes a community endeavour rather than a commodity that needs to be made accessible” (ibid).

In terms of awareness of OER to address current issues with textbooks, Australian teaching staff had moderate awareness, a little higher than as reported in the comparative UK study. In the UK study (Pitt et al., 2020) the majority of respondents were either unaware (42.7%) or had heard of open textbooks but didn’t know much about them (31.5%) whereas 28 per cent of Australian survey respondents were aware of OER and understood some of their uses. This suggests that OER awareness-raising initiatives have had some impact but need to continue including academic and discipline focussed workshops such as those used in the UK project (Pitt et al., 2019).

Our findings also agree with the UK findings about library staff as key stakeholders. In Australia as in the UK, librarians “exhibited strong interest and are responsible for the budgets relating to textbook purchasing, and they represent a key stakeholder in open textbook adoption” (Pitt et al., 2019, p. 17). However, over a quarter (27%) of surveyed teaching staff did not see the support provided by library and e-learning staff to be a very important influencing factor for their textbook selection, with 38 per cent considering it somewhat important. Considering the technical complexities of OER discovery and the legal complexities of digital textbook licencing, the implication is that library staff need extra policy support to be engaged in textbook adoption and licencing decisions to ameliorate the most troublesome episodes of unfair student access to digital resources.

The only concern about OER use came from a small number of staff and students with no experience of OER who held fears about the quality of free resources. These results echo the earlier international literature which found quality concerns to be a significant barrier to OER adoption (Wiley et al., 2014). However as OER texts have matured, quality seems to be less of a concern in the North American literature; perhaps OER texts have benefitted from increased philanthropic and institutional investment, peer review and increased awareness (Jhangiani et al., 2018). However, in the Australian context, where awareness and practice are lower, quality concerns remain and will need to be addressed.

Our findings also suggest that Australian attitudes to the best opportunities to integrate open textbooks into the curriculum are different to the international literature. At this point, Australian interest in OER text adoption seems slightly skewed towards niche, specialist and advance topics with interest in authoring foundational topic texts with suitable Institutional support (see [La Trobe](#) and [USQ](#) catalogues for examples of this mix). Whereas the North American Institutional strategies for developing open textbooks tended to prioritise the larger first year classes, this may be more difficult and require extra time and investment in Australia due to the large numbers of enrolled students and teaching staff involved.

However, adoption for large first year classes might be more practical in subject areas where the content is similar to the current stock of North American books so that existing texts and the growing number of ancillary resources can be adopted with relatively few changes. The implication is that adopting existing OER texts could prioritise large enrolment first year general foundations subjects i.e. maths, chemistry, statistics, physics, management, IT and marketing as well as commonly required skills such as essay writing, academic writing and study skills. The USQ catalogue of open textbooks has two new titles published which have taken this approach, adapting an [Anatomy](#) text and an [Academic Success](#) (transition to university) text for the Australian context. Development in other topic areas that require writing from scratch might require more substantial institutional support and investment. For example, legal and accounting texts that rely on specific Australian legislation probably require local authoring. Sector or institutional collaboration and pooling of funds/authoring is recommended, and we suggest doing so would also improve the take-up and integration of the text into teaching.

Academics also felt that that the task of diversifying content could be undertaken strategically as part of curriculum renewal processes because one of the key findings of the study was that both staff and students felt that different topics do/don't lend themselves to diversification. The implication of this finding is that institutional strategies and course targets relating to curriculum diversification could influence the allocation of workloads, grants and resources to open textbook projects.

With regard to staff motivations and institutional support to engage in open textbooks, about a third of respondents do not seem interested in open textbooks under any circumstances of institutional incentive or support. This leaves about two-thirds of respondents who are indeed open to future use, authoring and adaptation of open texts if institutional support is provided. These findings were higher than expected based on the UK survey result where around 50 per cent of respondents expressed an interest in becoming part of a subject community producing their own open textbooks (Pitt et al., 2020). While institutional policies or strategies could recommend communities of practice within an institution, we suggest there would also be benefits to cross-sector communities of practice, perhaps along discipline lines. The UK project similarly recommended leveraging the high level of interest in co-authoring material with others working in the same or similar disciplines as "a gateway to engaging educators" (Pitt et al., 2020, p. 314).

While this study found strong interest in open textbook authoring, none of our interviewees were adapting existing OER texts from overseas. We spoke to one academic who planned to modify an existing text but ended up creating a new one as a separate addendum to the existing open textbook, as it was easier to do. This tends to reinforce findings in the international literature regarding "the re-mix problem", i.e. technical barriers to re-use including complexity of formats, skills and technical tools being required (Wiley et al., 2014). We note however that this may be changing with broader access to tools like PressBooks which provide better editing options, as evidenced by USQ (not one of our study sites) who have recently published two local adaptations of an OpenStax text.

Some teaching staff interviewed were cautious about focussing on the textbook or readings as the focus of curriculum diversification, not only because students don't always read from

the reading list but also due to a preference to undertake a range of inclusive, anti-racist and anti-sexist strategies in person, in lectures and tutorials.

These attitudes are also prevalent in the literature and can be summarised in the following quote from critical scholar Michael Apple.

We cannot assume that what is "in" the text is actually taught. Nor can we assume that what is taught is actually learned. Teachers have a long history of mediating and transforming text material when they employ it in classrooms. Students bring their own classed, raced, and gendered biographies with them, as well. They, too, accept, reinterpret, and reject what counts as legitimate knowledge selectively (Apple, 1990, pp. 29–30).

While this study did not focus on the comparative utility of textbooks versus lectures or class discussions to promote diversified perspectives on the curriculum topics, some staff did note dissatisfaction when the outdated language of the readings conflicted with preferred attitudes and terminology used in lectures. One interviewee said that students were sometimes marked down for using the deficit language of the textbooks on their exams instead of the language and attitudes modelled in the lectures. This suggests that as the gap between textbook and educator attitudes widen, students might receive mixed messages on race and gender norms, influencing their marks but also their workplace effectiveness as graduates. This is an area for further research.

Institutional policy and sector collaboration

Much of the international OER policy literature is targeted towards state and provincial legislature to stimulate and flow down into institutional actions. In the USA “nearly half of all states have passed legislation leveraging OER as a solution to higher education challenges, in some cases generating 10-20 times the return on investment” (SPARC, 2021, p. 2). Provinces such as British Columbia in Western Canada have been investing in OER texts for almost a decade and recent research showed that 75 per cent of institutions in the region use OER textbooks (Bates, 2019).

However in Australia higher education is not funded at the state/provincial level but federally – and the Federal government has made no recent signals for enacting policy support for OER (Bossu et al., 2012; Sadler et al., 2016). Instead, our research suggests that in Australia the focus is on sector collaboration and finding a place for OER in institutional policy.

Australia is strong on sector-wide collaboration and there are two sector-wide initiatives which could offer support for institutions to engage in OER. Firstly, CAUL have launched a new “[Enabling a Modern Curriculum](#)” program including a sector-wide pilot of the PressBooks platform to universities in 2021. This will allow universities who do not have their own installation to be able to trial the authoring platform without IT infrastructure costs. Secondly, Universities Australia recently launched the [Universities Australia Learning and Teaching Repository](#) (Universities Australia, 2021) which is a sector-wide open access repository of higher education research. While it has been launched to provide access to the full range of governmental funded research in recent years, the repository has a Content Advisory Group and is open to new submissions on topics of relevance sector-wide. It may be possible that OER texts on foundational subjects including academic transition and preparation could be reviewed and hosted which may enable wider take-up and sharing.

Certainly interviewees supported strategic institution-wide policy and funding for open textbooks as a transformative strategy which could produce wide-scale improvements for students. This is the case for institutions in North America who have instituted “Z-degree programs” which are transformative in terms of social justice for under-served students as

well as transformative for the reputation of the institution through creating a marketable difference and attracting new students (Daly et al., 2017; J. Hilton et al., 2016).

Our findings also highlighted a lack of clarity and institutional guidelines about whether authoring OER texts would count for workload, probation or promotion. Currently overseas institutions with many years' experience of OER as an institutional strategy are beginning to develop guidelines for how academics can evidence OER for tenure and promotion applications (Coolidge & McKinney, 2021), which may be a helpful starting point in Australia.

Institution-wide policies and funding can leverage and build on the ad-hoc work of interested individuals such as those interviewed in this research, whose work has ameliorated unequal access issues for students at the level of particular units as well as influencing other staff in their departments. We suggest that both individual and institutional actions are important at the early stages of any innovative initiative.

In addition, our study found that while institutional policy and funding support could encourage open textbooks, also the opposite was true: open texts could make a practical and useful contribution to many other current institutional policies. For example, similar to the situation in Canada (Antoine et al., 2018), many Australian institutions had some kind of strategic or policy ambitions towards embedding Indigenous knowledges into the curriculum and OER has the potential to amplify their efforts in making Indigenous knowledges and cultures more visible at university.

Open texts also have the potential to make concrete institutions' aspirations for gender parity in the professions through funding the revision of core texts. In particular, foundational STEM texts could be revised to promote a sense of belonging for women in STEM by ensuring women's leadership, innovation and other contribution to the fields are recognised and that women are visible in both imagery and case studies. These actions are aligned with many institutions' gender-equity policies and commitments, such as the Science in Australia Gender Equity (SAGE) Athena Swan Charter (SAGE, 2021) which commit institutions to many strategies including "addressing the loss of women across the career pipeline."

There is a rise in 'students as partners' programs at Australian universities (Mercer-Mapstone et al., 2017) which might support wider uptake of open textbook collaborations and co-creations between staff and students, particularly where institutions are upgrading assessment policy.

However, literature suggests that co-creation projects need to be undertaken with great care so as to not reinforce existing power imbalances. Developing new writing partnerships between Indigenous communities and non-Indigenous authors, white and non-white authors, and staff and student authors must be undertaken slowly and sensitively, building mutual trust and shared decision-making to avoid coercion and partnership or diversity lip-service (Ahmed, 2012; Funk & Guthadjaka, 2020). Although some models and guides are in place for curriculum reconciliation projects (see [Jindaola](#) at the University of Wollongong, Deakin Aboriginal Pedagogy guides, [Canadian Higher Education Indigenization Guides](#)) these are not widely used and more investment in utilising and adapting these guides for different disciplines communities is needed.

While large-scale institutional investments in open textbook authoring programs have many benefits, our results extend the international literature by finding that open textbook initiatives can be an enabler, connecting other institutional policies and strategic initiatives, such as students as partners, inclusive digital learning experiences, and equity and diversity policies. There are also opportunities to integrate diversification of reading lists and smaller-scale open textbook initiatives into regular staff teaching preparation and other existing resourced processes, such as revisions to assessment policy, major course review and new subject developments including transitioning subjects to distance/online learning.

Summary

In conclusion, taken together, the staff and student data sets suggest that OER texts have great potential in the Australian context for all three aspects of social justice i.e. redistributive, recognitive and representation justice. To maximise the potential benefits, open textbooks initiatives may do better as social justice or curriculum change projects that bring together diverse staff expertise and promote multiple policy aspirations rather than being viewed as technology innovation projects in isolation.

Staff and student interest in OER texts is strong – for the cost savings, immediate and unencumbered access and for addressing under-representation and mis-representation within the curriculum.

University libraries are bearing the brunt of dissatisfaction with digital licencing of learning materials. Investment in OER over the next few years is increasingly seen as an important way to control fair access while controlling costs of provision into the future.

Adopting and authoring OER texts is an emerging practice rather than a common practice, but awareness of OER's usefulness in updating and diversifying learning materials is growing. Interest in content diversification is particularly on the rise to address under-representation of women in leadership, STEM and the professions and embedding Indigenous and different cultural knowledges in the curriculum.

OER texts have great potential as digital initiatives with social justice benefits as they could be embedded within a range of institutionally supported practices. The time is right to use OER for curriculum diversification as there is already a building momentum, supportive related policies and the student data reported here shows a complementary need.

A range of institutional strategies, targets and support will be needed to communicate and realise the potential of OER texts to advance each institution's particular strategic priorities with regard to digital provision, student equity and diversity and inclusion.

Recommendations

As this report has shown:

- OER texts and diversified open access reading lists can provide **social justice benefits specific to under-represented, under-resourced and international students** related to the way they can reduce the costs of study and increase a sense of belonging through the reduction in racist and sexist stereotypes in curriculum materials.
- OER texts and diversified open access reading lists can provide an additional specific set of **more general benefits to all students**: access to free resources with no digital licencing restrictions, seamless integration of resources into universities' LMSs and provision of up-to-date knowledges (inclusive of Indigenous and diverse cultural knowledges) so that students graduate better prepared for their professions and a diverse workforce.
- Institutional investment in OER texts is a **transformational strategy** which may eventually render the current **ameliorative strategy** of textbook bursaries for under-resourced students as redundant.

For Institutions

To enable institutions to gain the maximum benefit from their engagements and investments into OER text projects, and for OER texts to provide the most support to existing equity related policies, the following recommendations are offered.

1. Universities should broaden the scope of their OER work to consider the social inclusion as well as the economic benefits to students.
2. Universities should re-frame OER as a strategic digital innovation linking their digital delivery and curriculum renewal aspirations to their equity/accessibility policies. This includes using OER texts as a way to positively change classroom and graduate workplace cultures in the pursuit of gender parity initiatives and commitment to Indigenous reconciliation, cultural safety, knowledges and support.
3. Universities should join up their efforts in open access publishing for research with their OER for teaching and learning work, and connect the benefits narrative of open access publishing to OER.
4. Universities should make clear statements to staff about how authoring OER texts would count for workload, probation, promotion and publishing outputs. Universities could pilot formal peer review of OER texts so they count for research output, particularly when OER texts are spin-offs from academic's research.

In addition to the above four high level approaches to open textbook initiatives, the following more detailed recommendations are made for consideration.

5. Universities could require all new courses and units (and those undergoing major review and/or accreditation) to work with the library to search for OER text options before setting commercial texts.
6. Universities could require OER alternatives for open book exams and costly books over a certain dollar amount i.e. \$50.
7. Universities could restrict selecting commercial texts without digital library access. Policies could restrict the selection of any text where the publisher will not provide a reasonably priced licence for the university library to provide digital access.

8. Universities could provide OER grant funding for strategic curriculum renewal and courses with diversity grant requirements.
 - a. Provide grant funding for courses or first year programs to work together to select/modify or author two to three OER texts for the whole year level or the whole course. Require grantees to refer to the OpenStax (or similar) guidelines for inclusive content development.
 - b. Provide grant funding for adopting or authoring OER for improving Indigenous knowledges recognition in all curriculum areas and improving gender representation particularly in Business, STEM and the professions. Require grantees to refer to the OpenStax (or similar) guidelines for inclusive content development.
9. Universities could develop professional development programs based on amplification or allyship strategies to encourage non-Indigenous academics to locate and amplify the voices of Indigenous experts in their reading lists. These strategies would also assist in helping heterosexual and non-disabled academics recognise LGBTQI+ and disability expertise in their curriculum and learning materials.
10. Universities could engage in **sector-wide collaboration**:
 - a. *100-level core text authoring*: Work with other universities to adapt and author 100-level core texts for the Australian context. Take a strategic consortia approach to divide up the different texts/discipline areas and share the work to adapt and author between universities with one university to lead each text with a number of contributing/chapter collaborators from different universities. Liaise with CAUL regarding taking a co-ordinating role.
 - b. *Discipline-based OER online platforms and SIG*: Co-invest and collaborate on drag and drop OER chapter platforms (like Noba for Psychology), and develop a more sustainable textbook/readings model to serve whole discipline communities.
 - c. *Foundations and Transition OER online platform and SIG*: Co-invest and collaborate on a common OER platform for open access university foundations skills, transition and FYE resources or utilise the new Universities Australia open access Teaching and Learning repository to house and share existing materials.

For Libraries

Libraries are encouraged to consider the following **transformative strategies for long-term benefit and economic sustainability**:

1. Develop and maintain discipline-based guides to OER for each of the Faculty/School areas. These should include lists of the known 100-level OER textbooks from local and overseas repositories as well as examples of more niche/advanced topics.
2. Collaborate and cross-promote other Australian universities' open textbook offerings to encourage wider take-up.
3. Develop a list of OER text examples where the contents have been diversified to ensure gender and cultural recognition and representation. Use these in workshops and consultations with academics.
4. Build capacity in teams that liaise with each Faculty area to search OER repositories to locate discipline specific learning materials and to evaluate them in terms of gender and socio-cultural inclusion/exclusion.

5. Offer a service to review reading lists for gender and socio-cultural exclusion and to locate/recommend alternative texts where needed.
6. Run discipline-based OER workshops led by OER adopters and authors in the area.
7. Run workshops for academics to search OER repositories to locate discipline specific learning materials and to evaluate them in terms of gender and socio-cultural inclusion/exclusion as part of their 'up-to-date-ness'.
8. Run workshops targeting academics considering writing a textbook about the pros and cons of signing publishing deals with commercial publishers.
9. Lobby Faculty and Teaching and Learning area leadership to set course targets and timelines for increased OER adoption and transition out of costly and restrictive commercial textbook arrangements that restrict digital access to students and/or libraries.
10. Collaborate with Teaching leaderships and/or the Technology Enhanced Learning area to review and create guidelines for acceptable costs and terms of using commercial textbook providers' online learning platforms, including integration with university systems and hours of support.

For Learning and Teaching leaders and staff

Learning and Teaching leaders and staff are encouraged to consider the following **transformative strategies to enhance their support of teaching practices:**

1. Collaborate with library staff to consider courses/units where digital access restrictions and/or high required textbook costs are most impacting students and set targets and timelines to replace with OER where possible. Where there are gaps in available OER, prioritise these areas for OER authoring grants.
2. Pilot a process of collaborating with library to convert required/essential texts in all 100-level units of a high-enrolment course to OER. In the following year convert 200-levels and in the third year 300-level.
3. Encourage academic developers and learning designers to advocate for OER inclusive of diverse perspectives as a good way to keep curriculum updated, keep costs to students down and as an alternative to Eurocentric/North American texts.
4. Remind staff of the difficulties students face in meeting learning material costs and promote the outcomes of student affordability surveys to all staff.
5. Help staff and management connect the dots between their equity policies/strategies and their aspirations for open access, OER and digital strategies. Promote a shared narrative about the use of OER taking a social justice perspective to support goals in more than one policy area.
6. Form an open access Special Interest Group and bring together teaching and research staff from all university areas to form a coalition and develop a strong shared narrative about OA/research benefitting individual academics' control over what they can use in their teaching materials, and the benefits of putting these out as OER.
7. Consider staff and student OER co-creation as an authentic assessment option and integrate it into programs that encourage staff to update assessment practices. Work with the library to develop tips and guides to OER co-creation assignments including introducing Copyright and Creative Commons licencing training early in semester, so that students are consenting in an informed way.

Conclusion

This study has found that open textbooks have the potential to support social justice of under-represented students in the Australian context in ways both similar and different to overseas. Social justice approaches suggest that students require and deserve equality of success in addition to equality of access of learning materials. To get to equality of success for all students, this study finds we need to pay attention to what is inside the textbook as well as how much it costs and how easy it is to access.

To reflect the outcomes of this study we offer the following as a new definition of open textbooks to guide future research and practice.

Open Textbooks are a recent innovation in free, digital texts that can be:

- distributed digitally at no cost;
- printed at cost-price; and
- modified for local needs, such as to correct gender, socio-cultural and indigenous under-representations and mis-representations in the curriculum.

Textbooks are not only common artifacts for students, they are also inscribed in organisational cultures and practices and legitimised by particular forms of institutional rhetoric and policy (Palmer et al., 2013). While studies have found that changing textbooks and therefore changing the status quo of curriculum can be challenging, social and technological upheaval can produce “jolts” that motivate institutions to adopt innovation rhetoric which creates a climate where adopting new textbooks is possible and even desirable (Palmer et al., 2013, 2018). In Australia, a trifecta of “jolts” appears to be creating the kind of institutional cultures where textbook innovation is possible: rapid transition to online learning, combined with a reduction of the library’s ability to provide students with cost-effective access to readings, and a rise in awareness of the need to indigenise, globalise and diversify curriculum.

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Appendix A: student interview data table summary

Student interviewee demographics and summary of social justice views

NB: S01 – S09 are campus-based students from one University, all but TWO are postgraduate Business students.

S10 – S19 are undergraduates from a second University studying mostly remotely.

Code and demographics	Impacted by digital licencing or lack of library e-text access	Concern re costs?	Notice lack/presence of diversity?
S01 Male, 21, MBA International (3 units) from India	Irritated by limited time and download access via library. "So I don't prefer reading at the library because of so many copy rights issues and stuff like that ...it's not all user friendly, so I do refer to two other sources where I can get the easy access... because it's more user friendly to me in a PDF format rather than sticking it online because of copyright issues."	Yes, the financial text cost c\$300, did not buy others.	At first does not notice, says textbook content as "universal", diverse examples is the role of lectures. When provided with an example of inclusive texts (women in STEM) begins to reconsider and notes that in fact Indigenous communities and perspectives are not included. Suggests that welcome to country 'scripts' are mystifying, not sufficient to explain Indigenous knowledge to international students.
S02 Female, age 22, MBA International (4 units) from India with an undergraduate degree in Engineering	Notes that all texts have download restrictions of 30 pages a day, not even a whole chapter. However she has adapted to reading online and is OK.	"It would be a certain sort of financial burden." Access online through the library "it's really a blessing."	Multi-cultural examples "don't matter to me" not expected to be in textbooks. Later notes women missing in her Business texts, particularly in Finance
S03 Male age 26, MBA International (4 units) first semester student	2 of the 3 library e-books have limitations to time online and chapters downloaded. Workaround: strategic download of chapters to minimise note-taking for exams	Yes, very shocked to see the price so decided to use eTexts from the Library.	No, notes some Australian focus, some global focus and examples depending on topic.
S04 Female age 25, Master of Commerce (first semester, 3 units) international student from China	6-7 students got together and paid \$5 each for platform access. Not a big reader, uses PPTs mostly until assignment is due.	".. the price is too high ... I just need for this semester and some of these not really necessary."	Generally no, then later noted there were no Asian women in her textbooks and "it's a little bit unfair but I think because the men ... They can do really well, but I think women can do it as well as they can." Also noted no black people in the textbooks.

Code and demographics	Impacted by digital licencing or lack of library e-text access	Concern re costs?	Notice lack/presence of diversity?
S05 Male age 24, Master of Commerce (2 nd year, 4 units), from Vietnam	No. Only used e-texts to study for exams. Prefers hard copy, gets second hand if he can't borrow from the library (friends, Amazon, Facebook marketplace)	High. Very price sensitive.	No/unaware until hypothetical cultural representation example discussed. Then the student "lit up" and recounted a story of first seeing a paper written by a Vietnamese academic, huge sense of pride and hope for his own future, that it's possible for a Vietnamese person to be a professor.
S06 Female age 26, MBA post-grad (4 units)	Somewhat - "but it will show only some parts of the textbook is it so it's I can't read it all" Prefers to buy texts secondhand and also uses PPTs only for one unit.	Yes. "...the price quite quite high so I can't afford..."	Notes gender imbalance in business texts "...the previous is already have men men and men again." Gives specific example of lack of cultural diversity, says that "Nelson Mandela" is missing as a business/comms leader in the textbook.
S07 Female age 31, MBA international (4 units) from India, in her final year	Generally no, uses hard copies borrowed from the library (and ordered well in advance of next semester) or from a friend. However notes cannot rely on electronic access (not enough licences) for use in the open-book exam so is planning to buy.	Yes. Needed to use financial workbook, borrowed from a friend.	Very aware, mature age woman with experience of racial and gender discrimination at work and in WIL units. Re her texts: "barely women are mentioned. It's all about the men. Even the textbook for retail management, which is a female dominated workforce, did not have women visible in it."
S08 Female age 19, Bachelor of Science, under- grad, (4 units)	Not mentioned. Avoided paying \$400 for multiple texts by sourcing cheaper PDF and online options.	Yes, "a bit ridiculous" sought cheaper options.	Yes both cultural and LBGTI, giving both + and - examples. Notes chemistry to be N/A.
S09 Female age 20, Arts, Under-grad, Anthropology major (4 units) 3 rd year	All prescribed readings available online with no problems with access.	"In the sociology unit where I had to buy a textbook ... we didn't use the entire book and it was a much bigger and much more costly book than the other ones I was having to purchase...it was a big book and it wasn't used a huge amount."	<i>Student states that the Anthropology and philosophy units allow students to explore diverse viewpoints through readings and research.</i> "There is actually quite a diversity of names, with philosophy being the exception to this, it's generally mostly a boys club and mostly a Western males boys Club. But in Anthropology, we get a huge array of names because it's kind of anthropology rests on that multicultural and global kind of view. So yeah, I'd say that there are more definitely more names of diverse backgrounds in anthropology texts."

Code and demographics	Impacted by digital licencing or lack of library e-text access	Concern re costs?	Notice lack/presence of diversity?
<p>S10 Female age 26, Education PE major, (3 units)</p>	<p>Student found no e-book versions in the library for some titles, only found hardcopy but couldn't access them as she lives in a different state. Purchased e-textbooks where possible.</p>	<p>"The electronic ones expires in a year though, and the hard copies were dramatically more expensive... online one was good because it was a reasonable price."</p>	<p><i>Student notes that in the class with open access reading list:</i> discusses Multiculturalism, which she enjoyed.</p> <p><i>For her other units,</i> student finds that majority of authors and contributors are male, anglo-saxon or European.</p>
<p>S11 Female age 26, Nursing under-grad (3 units)</p>	<p>In some cases relied on screenshots of e-books from library if she could not download the whole book. "There were some copies that were available online through the University Library website but you are limited to how many people can view it at once and obviously around exam time if you're wanting to use that textbook or assignments even it's harder to get your hands on it because people are wanting to use it. So yeah, I guess there's a lot of pressure to buy it. I myself didn't."</p>	<p>"If I were to purchase all the textbooks brand-new, I would have just over four hundred dollars, and for everyone, it doesn't really matter what stage of life you're at, having to pay that much money for books that you have to use for such a short period of time and may or may not ever pick up again isn't particularly appealing... people often don't use them beyond that unit and that semester."</p>	<p><i>Student notes that the units studied were</i> "fairly topic heavy in fields of Nursing in these particular units we certainly didn't talk about for example different comorbidities or complications that can arise medically or in the nursing setting with regards to ethnicities and backgrounds because sometimes obviously that can really affect your health and you know certain races and ethnicities are just more susceptible to certain things and that wasn't really covered this semester but there might be a future thing."</p>
<p>S12 Female age 27, Nursing under-grad (4 units)</p>	<p>No prefers had copies for highlighting, avoids e-texts. "So all of my books were from past students or students that had not completed their course and that kind of thing. So I saved money in that kind of regard, which was good. My husband's very nifty with getting on Marketplace and that kind of thing which is good."</p>	<p>"They are so expensive ... I think it was like you have to buy a bundle... it's huge and I think that was like \$160 or something like that brand-new." In the class with open access reading list: "I felt that ... it was more equality because ... like they add up if you're studying four subjects and each subject is \$160 for a textbook</p>	<p><i>Student notes that in the class with open access reading list:</i> "I think I got like the most diverse kind of learning was definitely from cultural studies. There was so many different cultures represented and so many different readings represented on how to think about different things in different ways."</p> <p><i>In other units,</i> "I definitely think that definitely the nursing, I felt like it was very much male orientated coming from like the more male side."</p>

Code and demographics	Impacted by digital licencing or lack of library e-text access	Concern re costs?	Notice lack/presence of diversity?
		and not everybody can afford it."	
S13 Female age 29, Psychology, Diploma, (2 units per trimester)	Yes -Textbooks not available as an e-book. They use an online textbook platform with interactive features that students need to purchase with time limited access.	Student pays then gets a code for access from lecturer. While it is interactive and good, it is 'annoying' that the subscription is only for a limited time like 3,6, 9 or 12 months. "I don't like paying for something that I don't have access to whenever I want..."	Student felt that this online interactive textbook database they used was representative and inclusive "It had a lot about the current culture of Australia and even other Western countries in it, even like the Asia countries, and that it had a lot of more updated information... relevant to the times right now." <i>Her other text lacked cultural diversity:</i> "So...it was very much like a Caucasian sort of driven book from like a western culture that there wasn't really much of a cultural sort of difference within the people that are writing. The only nice part was that there was a nice mix of male or female and that was kind of it though."
S14 Female age 35, Nursing under-grad 2 nd year (3 units)	Yes "I just went into the library to get as much of the chapter downloads that I could before it ran out to say I couldn't get anymore." Purchased a couple of books. Relied on a facebook group to share information from a book she couldn't get: "there was a couple there I couldn't find through the library But yeah, I just end up reading the abstracts and then we used a Facebook group. And chatted amongst ourselves on what that topic was meant to have been ... I just stuck to the group and just hope the information the Facebook group is giving is correct because that's what I've got to go off."	"It's just too expensive. I did find that QBE actually offers after-pay. So if there's a book I'm not able to get online then that would be where I go." "I didn't have the finances and I wasn't able to purchase the textbooks that they required... (and work placement costs) and the University ... said to me that I wasn't committed enough to my studies .. so I ended up taking leave from them."	Student noticed authors from different backgrounds in the content used <i>in the class with open access reading list:</i> <u>In other units:</u> "I think there's just more room there to have other cultures in there, especially because I'm studying nursing so to me, I'm interested in learning more and more about those cultures. So I feel that if I learned that, that would help me have an insight to helping my patients when I'm at work."
S15 Female age 44, Counselling & social work, under-grad (3 rd)	Purchased one textbook. Borrowed the textbooks for the other 3 units from the library for a short amount of time "but it made things	"I can't afford any [textbooks] like it's all going to be expensive anyway. I'm	"In the sociology one as well. It's all old white guys from a hundred years ago."

Code and demographics	Impacted by digital licencing or lack of library e-text access	Concern re costs?	Notice lack/presence of diversity?
trimester of study, 4 units)	a lot more difficult... So they might have a textbook for a unit with like 200 students, but there was only six available copies at any one time. So you had to be really careful with your time and trying Log in and use it when there was no one else using it."	putting it all on HECS so I don't have any money. I will have to worry about that later."	
S16 Female age 30, Nursing under-grad (4 units) international student	No due to reliance on lecture notes and readings given by lecturer and purchase of e-books. Wasn't aware about access issues in library.	Student finds that it is more affordable for her to purchased the e-versions of the textbooks as they are half-price of the hard copy.	Student says there is not cultural diversity representation in textbooks, but that is not a concern for her "I don't know because I think ... this content it will not influence my learning outcome. I think it should be fine."
S17 Female age 34, Early childhood education, under-grad, 3 units	Yes. Books available only hard copy. Student can't borrow them as they live in a different state. Student purchased them.	"I was seriously shocked at the price. They were really expensive."	<i>Student mentions that maybe they are very basic and introductory units that she has taken so far, they do not have room for an Australian context.</i>
S18 Female age 59, Nursing under-grad (3 units)	Yes purchased hardcopies. "I do have a problem with the online version- might be that there is a limited number of people can access it at once, and that can make things difficult when everyone's trying to use the same textbook."	Student finds the textbook "outrageously expensive, looking at \$200 I think for one of them." "A lot of people can't study ... because ... you have all these peripheral costs of textbooks and you're already paying for equipment, you know, you've got to have an up-to-date computer."	<i>Student notes that in the class with open access reading list: "we have videos and extra material from the Indigenous researchers at CDU that's incorporated into that subject. That's fantastic. And the whole subject is about learning about diversity and equity in professional workplaces as well as during studying... it naturally integrates much more diversity into the voices that we hear, the journal articles come from a more diverse background. There's more women. There's more people of color...it's just it's just much more integrated into the syllabus in that unit."</i> <u>In other units:</u> "It [content]'s not representative of anyone. .. And the content is very often very Eurocentric so you don't get input from a lot of scholarly material that's out there from Asia or India and there's an enormous amount of Indian work on feminism for instance." "I noticed the men names always seem to come first and they always look very Anglo,

Code and demographics	Impacted by digital licencing or lack of library e-text access	Concern re costs?	Notice lack/presence of diversity?
			the names...they're not very Multicultural, there isn't a lot of diversity in the authors."
S19 Female Nursing, under-grad, 2 nd year, 2 units	"I think that he has a certain amount of copies and obviously there's a lot of students.	"Textbooks are really expensive for the amount you use them I don't think they're worth the actual price ... last semester I had a textbook that I used twice ...a waste of like \$200."	"Not so much the ones I'm reading now. Previous units I've had pictures and stuff, but they don't really represent the cultural side or different views and stuff."

Appendix B: different institutional contexts for the staff interviews

Institutional differences: contexts for staff interviews

La Trobe: Library-lead multi-phase OER publishing service and committee

La Trobe University was “founded half a century ago to broaden participation in higher education in Melbourne's north and, later, in regional Victoria.” (<https://www.latrobe.edu.au/about/vision/values>). La Trobe currently serves around 2,800 staff and 38,000 students. La Trobe library launched their “eBureau” OER textbook publishing service in 2016 (<https://library.latrobe.edu.au/ebureau>). The eBureau aims to support La Trobe authors to develop quality, peer reviewed open access resources for La Trobe’s online and blended courses. The eBureau also aims to support equity in higher education by reducing costs for students through providing open textbooks, at no cost and available anytime, anywhere, and openly licensed.

The eBureau was founded with an Innovation Grant of \$110,000 from La Trobe Digital Learning Strategy which established the platform, published its first two texts, and developed a design identity kit. The eBureau put out a call to academics and subsequently developed four textbooks in 2017, four textbooks in 2018, one textbook in 2019 and two textbooks in 2020. In recent years the eBureau has not received additional funding and so has been resourced by ongoing staff within the library. The eBureau has been an effective way to raise awareness and interest in OER and open access publishing for student benefit. The eBureau currently outputs textbooks with a relatively restricted licence CC-BY-ND-NC, however they are consulting with Legal Services with a view to change this to offer more flexible CC license options.

Since its inception in 2016, the eBureau has had 59,295 webpage views across 36,479 sessions with downloads overwhelmingly from Australia. Some visitors have viewed from U.S., UK, and Mauritius. Most use has been with La Trobe students and staff however some titles have attracted external and international attention. For example, *How to do Science: a guide to researching human physiology* was evaluated and found to be successful to support third year students needing to design their own scientific investigation (Julien et al., 2018). It has also been adopted by overseas institutions such as:

- Pennsylvania State University
- Indiana University
- Ciputra Medical School in Surabaya, Indonesia

Democracy in Difference has attracted accolades from international experts and has been adopted for the UTS course Communicating Difference. It has also been included in community activism and advocacy resources such as the Creative Equity Toolkit and the Commons Social Change Library.

To assess, co-ordinate and plan for increased use of OER and OER texts at La Trobe, a library-wide OER working group was formed in 2020. In 2021, the working group will drive strategic OER actions, such as:

- facilitate a university-wide Zero Dollars for Students OER strategy
- establish a central OER website to engage academic practitioners
- analyse results of national OER survey of academic attitudes to open textbooks
- systematically advocate for the La Trobe eBureau and OER awareness

Deakin: connecting the dots between library access, Diversity policies and CloudFirst practice

Deakin University was founded in 1974 and teaches 60, 000 students a year from campuses in the Geelong and east Melbourne regions as well as online through its Cloud Campus. Deakin has a history of distance education and social inclusion of non-traditional students.

Deakin's interest in OER has been driven through its library leadership and staff as part of a commitment to fair and accessible digital delivery. Like all library staff we spoke to both informally at workshops/events and formally through interviews, Deakin library staff have been troubled by the rise in commercial publisher power to determine the terms of their e-text access contracts in ways that restrict the library from being able to provide student access to resources. They produced a detailed guide to searching for OER learning materials in 2019.

In previous years a group of staff in the Biological Sciences put a link to the OpenStax Anatomy and Physiognomy textbook in their "Cloud Deakin website" ie teaching website in response to feedback from students that they couldn't afford to buy the commercial anatomy text. In 2020 staff in the Chemistry and Biology were also adopting the OpenStax texts for large 100 level undergraduate cohorts. Deakin has no particular OER policy, strategy or funding but has clear policy and strategy aspirations for widening participation, diversity and inclusion, indigenising the curriculum and CloudFirst delivery of courses (investing in redesign of courses so they work fully online.) Staff interviewed generally spoke positively of the potential of OER to assist its social justice aspirations through the lens of one of these strategic drivers.

Charles Darwin University: commitment to Indigenous knowledge sovereignty and respect for cultural diversity

Charles Darwin University (CDU) is a dual-sector university which provides training and education to more than 21,000 students across its eight campuses and centres in the Northern Territory and Australia. Indigenous students make up around seven per cent of higher education and almost 30 per cent of VET enrolments at CDU. CDU graduated their 1000th Indigenous higher education student in October 2019 (Charles Darwin University, 2019). CDU is an experienced provider of online education and values "creativity, adaptability and freedom to embrace the history and traditions of First Australians and the multitude of nations represented by our international student population" (<https://www.cdu.edu.au/about-cdu>). Like Deakin, CDU has no particular OER policy, strategy or funding but has clear policy and strategy aspirations for digital renewal as well as a strength in Indigenous Knowledge recognition, partnerships and representation. CDU is interested in institutional publishing and began using Pressbooks in 2019/20. The Pressbooks installation currently sits with the marketing division rather than the library.

RMIT case: policy vision, OER advocacy and events

RMIT is a dual-sector multi-campus university based in Melbourne serving over 84, 000 students. In recent years it has been focussed on digital transformation including the development of RMIT Online. RMIT has numerous high-level advocates for digital and open education including through Prof. Belinda Tynan (Deputy Vice Chancellor (Education) from 2016-2020) who was previously at the Open University in the UK and is known for digital innovation. RMIT launched it's Open Textbook Initiative in 2018 to "to establish a university culture in the use and adoption of open educational textbooks" (<https://emedia.rmit.edu.au/oer/the-project/>). Associate Director, Library Services Anne Lennox led the development of an Open Educational Practices Framework to guide teaching and learning in 2020. Library leaders Anne Lennox and Frank Ponte have provided ongoing leadership and OER advocacy to the sector and been instrumental at organising key collaborative sector events advocating for OER adoption including the #DownUndOER tour

of 2018 (<https://twitter.com/thatpsychprof/status/1063923149354414080>). While focussing on top-down policy and bottom-up awareness raising, RMIT is planning to pilot PressBooks in 2021. The initiative will be led from the library and they are actively planning for internal and possibly external collaborations on the authoring of OER texts in 2021.

QUT: Open access in the DNA

In 2020 QUT's Learning and Teaching Centre ran a Pressbooks pilot in response to a proposal from the (previous) University Copyright Officer, Narelle Quatermass who had been instrumental in driving OER initiatives. This has been a further expression of QUT's commitment to open access which one interviewee described as being "in QUT's DNA". There is a history of Creative Commons being located at QUT and they currently host Prof. Ginny Barbour who works three days per week as the leader of the Australasian Open Access Strategy Group ([AOASG](#)). QUT was the first university in the world to have an open access Policy (see http://www.mopp.qut.edu.au/F/F_01_03.jsp this was first endorsed in 2003) and Australia's first OER policy (endorsed in 2016 see http://www.mopp.qut.edu.au/C/C_07_02.jsp first Australian Institutional OER policy).

The 2020 Pressbooks pilot was strongly focussed on pedagogical benefits and engaged staff from a range of disciplines in the development of open textbooks. One of the aspects that staff were keen on is the integration of audio and video materials including H5P interactive videos.

Through this project there has been growing interest from academics in writing their own textbooks, and liaison librarians support these initiatives but at this stage the notion of diversifying the contents to meet equity objectives was not yet something they had been asked to support. However, the project was in its early pilot phase and QUT's current strategic plan or "blueprint" has a focus aspiration and inclusion, but [embedding Indigenous perspectives in curriculum](#). As staff interviewee QT6 said, "there are different spheres of activity around that. And one of them is about co-designed Indigenous Australian teaching, research and learning. So there's a lot of professional development around Indigenous perspectives and in learning and teaching, so there's lots of scope there. ... there's certainly a lot of co-writing with the with the students and getting their participation and their perspectives as well."

In summary OER projects were initiated for different reasons at participating Institutions, including:

- early interest in OER;
- a culture of Open Access and investment in Open Access publishing;
- negative impacts of increasing study material costs on students;
- concern with recent commercial publisher strategies to control and restrict digital provision;
- strategic moves to expand online learning and digital media content; and
- grant outputs with requirements for open access research-dissemination strategies.

Appendix C: OER textbook exemplars

Exemplars of OER adoption and authorship from this study.

Note re naming: permission to be named was given as part of the ethical consent options for academics teaching with OER.

Academic's name (Uni), subject	Motivation for OER	What was done
Ben Whitburn (Deakin) EIE701: Personalising Learning	Commercial textbook was out of date. Interested to provide students with a free text while simultaneously bringing the textbook up to date with advances in the field including Indigenous education. The book also comes in accessible formats, can be read by screen readers.	Reviewed USQs OER text " Opening Eyes onto Inclusion and Diversity ", considered its strengths and alignment to course aims, and adopted it. Also kept a few of the chapters from the older commercial textbook on the reading list to cover some gaps, accessible via the library online.
Mathew Ling (Deakin) HPS111: Fundamentals of Human Behaviour	Major overhaul of a unit. Open access advocate, dissatisfaction with textbooks generally. Pedagogical aim to scaffold information literacy and research skills by modelling using journal articles as resources, as part of the assessment program.	As part of major review of a unit, got rid of the textbook altogether in favour of an accessible, interactive videos and a reading list incorporating open access book chapters, media and journal articles. https://www.youtube.com/watch?v=jdAFgp1PTRE
Kelly Menzel (Deakin) Nursing co-ordinator at National Indigenous Knowledge Education Research Innovation (NIKERI) Institute	Strategic imperative to embed Indigenous knowledges in the curriculum Deakin-wide as part of institutional focus on implementing Graduate Outcome 8 Global Citizenship.	Desire to work collaboratively with other Indigenous staff, students and allies to develop specific local cases of Nursing in Indigenous communities lacking in current textbooks. Interested to take a slow and steady approach, starting with a small group of interested authors to publish mini-cases CC-BY-NC on the Deakin "Nursing on Country" blog. These could be packaged into a textbook in the future. Blog is still under development and not yet public.
Johanna Funk (CDU) IAS201 - Cultural Capabilities	Bringing unit concepts and open textbook example to align with Australian context. Reading list was already available online as open access, with diverse authors.	Students contributed structured Cultural Capabilities case studies to an OER textbook on the topic . Each case-study became its own chapter.
Tonya Stebbins (La Trobe) Linguistics & language	Through conducting PhD fieldwork, Tonya could see the inequalities with white researchers and Indigenous communities, and wanted to work more collaboratively so as to avoid replicating these inequalities.	Published a version of her PhD thesis exegesis as a book in 2003. The book identifies a range of practical, theoretical and personal challenges associated with working closely with language activists in a First Nations community who are seeking to address language loss. Recently a second edition was published as OER " Fighting language endangerment: Community directed research on Sm'algyax "
Sarah Midford (La Trobe) Classics and Ancient History	"I have published open access texts because I believe that education should be freely available to everyone. My texts are research-based but written with a view to supporting tertiary curriculum. Making them freely available to anyone, anywhere, promotes inclusivity	Produced 2 niche and 1 foundational OER text with colleagues for La Trobe's eBureau (open access press). " Gallipoli, Anzacs and the Great War " " Caesar's triumphs over Gaul and Rome " " Key concepts in the humanities and social sciences "

Academic's name (Uni), subject	Motivation for OER	What was done
	through access. Publishing open access texts ensures those who are interested in learning, whether they are undertaking self-guided learning or formal education through an institution, have access to quality peer-reviewed research that supports their studies at no cost to them.”	
Steven Bartlett (QUT), Paramedic Practice	Part of the motivation for writing an OER text was that not a lot of students attend the lecture so having a comprehensive alternative way to provide key learning content was appealing. Also an OER text available as a fully online reference guide can be useful for students who graduate when they want to access or revise information.	Produced one text as part of the QUT Pressbooks pilot. Integrated lecture notes, YouTube videos and podcasts. “ Law, ethics and Paramedicine ”
Elise Pelzer (QUT), Anatomy	Elise and colleagues modified the OpenStax Anatomy text as part of the QUT PressBooks pilot. She said “we are looking to advance the digital transformation associated with this library of content at the university and looking for different platforms that we could use to actually package content so that it's engaging, it's interactive, it's portable, it's accessible to all of our cohort. So PressBooks was identified from that perspective, because we can use those open access resources. It was also appealing in so much as we weren't writing content from scratch. We could actually edit something that was already existing.”	The work is still under development and will eventually be published publicly at https://qut.pressbooks.pub/
Alex Dafoe (RMIT), Psychology	Alex and his colleagues have moved away from setting a core text because a lot of the theory gets outdated quickly and “across-the-board there were issues with textbooks being too broad of not really covering more specific examples and topics relevant to students”. Also keen to steer clear of services that give a few free resources then require subscriptions, prefers to stick to those that are fully Open Access and that students can freely use, noting that the choice of OER for Psychology has really increased recently.	Noba Textbooks - has constructed an open access custom reading made up of textbook chapters using the Noba drag and drop modularised textbook platform for first year Psychology students.

Exemplars of OER textbooks with diversified content developed overseas

Academic's name, subject area, University	Type of diversification	What was done	Outcome (Link if available)
Dr Amy Nusbaum, Psychology, previously at Washington State University now at	Address a lack of recognition of the contribution of female and scholars of colour to the discipline of Psychology. Desire to avoid replicating under-representation and mis-representation of women and people of colour in the teaching of Psychology to future generations.	Put out a public call for participation to review and recommend areas for diversification	https://opentext.wsu.edu/ospsy/chrevisions/
Arley Cruthers, Business Writing for Everyone. Kwantlen Polytechnic University, Canada.	A text about how to write for everyone should certainly model being inclusive.	See the adaptation statement which shows how narratives from a First Nations leader are woven into most of the chapters.	https://kpu.pressbooks.pub/businesswriting/
Michella Nakano, Botany. Kwantlen Polytechnic University, Canada. (NB. "Red Seal" is the standard for tradespeople in Canada.	KPU's intro to botany book talks about how First Nations people have used plants for health for millenia in the first paragraph of the text. It's woven into the text seamlessly.	Text meet curriculum standard for Botanical trades in Canada. Was adapted from KPU Botany course lecture notes.	https://kpu.pressbooks.pub/plant-identification/

Appendix D: interview questions

Student Questions

1. Course context and textbook use:
 - a. Please tell us:
 - i. your name
 - ii. the course that you are studying, how far are you in your course?
 - iii. Units you are studying.
 - b. To date, do you have prescribed/recommended text for each?
 - i. Is it paper or online?
 - ii. Did you purchase your textbook/borrowed them (library e-book)
 - c. What do you like about the textbook that you are currently using for your unit, and what don't you like about it?
 - d. Are you someone who works better with a hard copy textbook or online?
 - e. Have you been offered to lease your textbook online and what are your thoughts on that?
2. Economic dimension:
 - a. What do you think about the cost of the required textbooks and recommended readings you've purchased so far for your course?
 - b. How much of the textbooks did you use?
 - c. Do you know about free online textbooks like OpenStax or the Merlot website for free learning materials?
 - d. How comfortable are you learning from many smaller free online learning materials as compared to a textbook that steps you through the material?
3. Recognition and Representation dimensions:
 - a. How much do you feel that your textbooks represents contemporary Australia and the views and knowledges of the people and issues here? Is that important for you?
 - b. When going through your textbook and learning materials, was there a diversity of women and men of different cultural backgrounds (such as pictures and case studies)?
 - c. Have you noticed the contributors, authors or experts in your textbook? Is so, are they women and men of different cultural backgrounds? Is that important for you?
 - d. Whose views might be missing from your textbook? How noticeable is this? How important is it to you that this is corrected?
 - e. How much do you think diversifying the textbook and learning materials can help make all the different kinds of students feel like they belong in the profession they are studying? How important is this?
4. Do you have any further comments or suggestions you would like to share?

Teaching staff questions (open textbook adopters or authors)

1. Your teaching and current textbook selection and use:
 - a. What units do you currently teach and what kind of textbooks or learning materials do you require or suggest your student read?
2. Economic dimension:
 - a. What do you think about the cost of the required and recommended textbooks that has been prescribed for your course, and the value for money in terms of how much use you make of them?
 - b. Do you ever make use of free online textbooks like OpenStax or search the Merlot website for free learning materials?
 - c. How comfortable are you teaching from many smaller free online learning materials as compared to a textbook that steps you through the material?
3. Recognition dimension:
 - a. Do you feel that the current textbook is representative of students from various backgrounds?
 - b. Do you think that students can see examples and pictures of people like themselves doing work in the profession they may be thinking about?
4. Representation dimension:
 - a. How much do you feel that this textbook represents contemporary Australia and the views and knowledges of the people and issues here?
 - b. To what extent do you think that diverse women and men of different cultural backgrounds have contributed to your textbook and/or learning resources?
 - c. Whose views might be missing from your textbook? How noticeable is this? How important is it to you that this is corrected?
5. If you have been given a chance to contribute to improving the textbook by diversifying the content:
 - a. How much involvement did you have and what did you learn from it?
 - b. What do feel is important about the process?
 - c. What challenges did you face and how did you overcome them?
6. What suggestions do you have for the university institution in relation to free online textbook adoption and diversification of content?
7. Do you have any further comments or feedback you would like to share?

Interview Questions for Key Stakeholders involved in adopting and/or adapting an Open Textbook

1. What is your institution's current **policy** with regards to Open Textbooks and Open Education Resources (OER)?
2. What is your institution's current **practice(s)** with regards to Open Textbooks and Open Education Resources (OER)?
3. Economic benefits:
 - a. What is your institution currently doing to explore/adopt/adapt Open Textbooks or free OER for economic benefit to students? Is there anything particular you are doing to consider the benefit for under-represented students?

- b. In your role, what are you doing to explore/adopt/adapt open textbooks or free OER for economic benefit to students including under-represented students?
- 4. Socio-cultural benefits/content diversification:
 - a. What is your institution currently doing to explore/adopt/adapt Open Textbooks or free OER for socio-cultural benefits to students? Is there anything particular you are doing to consider the benefit for under-represented students?
 - b. In your role, what are you doing to explore/adopt/adapt open textbooks or free OER for socio-cultural benefits to under-represented students?
 - c. Have you any experience with projects to diversity the contents of learning materials or create new ones?
- 5. Suggestions and comments:
 - a. What suggestions do you have for the university institution in relation to free online textbook adoption and/or diversification of content?
 - b. Do you have any further comments or feedback you would like to share?

Appendix E: online staff survey questions

This survey is being conducted as part of the [Australian Open Textbooks Project](#) to understand how educators use textbooks in their teaching.

The survey is part of a Deakin-led national scoping study investigating the potential of Open Textbooks to act as social justice for under-represented learners in the Australian University context. Open Textbooks are a recent innovation in free, digital texts that can be: distributed at no cost; printed at cost-price; and modified for local needs, such as to correct gender, socio-cultural and Indigenous under-representations in the curriculum.

By answering the survey questions below, you are consenting to us using your anonymised data for research and dissemination purposes.

Any information you provide will be stored securely and not released to any third party. We will not collect any IP addresses, and it will not be possible to identify any individual from any published account of the results of this study.

The survey should take approximately 10-15 minutes to complete. You can stop answering the survey at any time by closing your browser.

Completion of the questions in the survey that follows indicates that you have read and understood the above information and in doing so, consent to be part of this research. If you have questions regarding this study, you may contact us by email: Habiba.Fadel@deakin.edu.au

Your participation is greatly valued.

Introduction

About you and your teaching

1. Where in Australia are you located?

- New South Wales (NSW)
- Victoria (VIC)
- Queensland (QLD)
- Western Australia (WA)
- South Australia (SA)
- Tasmania (TAS)
- Northern Territory (NT)
- Australian Capital Territory (ACT)

2.a. What type of education institution do you mainly work in? (multi-select)

- Higher Education
- Further Education, TAFE

- Dual-sector(TAFE and Uni)
- Distance or mostly regional Institution
- Mainly metropolitan institution
- Other (please specify)

2b: What university are you working in? (if more than one select the one for whom you do the most teaching or have the most influence over teaching decisions)Deakin University

- La Trobe University
- RMIT University
- Charles Darwin University
- Swinburne University
- University of Southern Queensland
- Queensland University of Technology
- Sydney University
- Other Australian University

3. What is your employment status?

- Full-time
- Part-time
- Casual

4. What is your age?

- Under 35
- 35–44
- 45–54
- 55+

5. How many years of teaching experience in total do you have?

- 1 to 3
- 4 to 5
- 6 to 9
- 10 to 15
- 16 to 20

- ` More than 20

6. Select which best indicates your main teaching subject area:

- Medicine, dentistry & health
- Agriculture, forestry & veterinary science
- Biological, mathematical & physical sciences
- Engineering & technology
- Architecture & planning
- Administrative & business studies
- Social studies
- Humanities & language based studies & archaeology
- Design, creative & performing arts
- Education
- Other

7. Prior to Covid19 emergency remote teaching, which of the following did you teach during the previous academic year? Please select all that apply.

- Face-to-face course (A course where all meetings are face-to-face, may use a learning management system (LMS) or web pages to post the syllabus and assignments).
- Blended/Hybrid course (A course where sufficient content is delivered online to create a reduction in the number of face-to-face class meetings).
- Online Course (A course in which all, or virtually all, the content is delivered online. Typically have no face-to-face class meetings).
- Other (please specify)

8. What best describes your current role in which you teach?

- Primarily teaching (e.g. teacher, instructor, tutor)
- Leader of an individual module/unit/course within a programme, including teaching.
- Leader of a collection of modules/units/courses within a programme or course, including teaching
- Faculty/division leadership with teaching
- Institutional leadership with teaching

9. In order to help us understand your usual (pre COVID19) instructional style, please use the slider below to indicate where your instructional tendencies and preferences fall.

- a. Develop my own curriculum and content ↔ Utilize existing third-party content
- b. Preference for lecture to deliver content ↔ Preference for facilitated exploration of content
- c. Prefer print materials ↔ Prefer digital materials

About your PRE-COVID19 use of textbooks.

10. Thinking about your use of textbooks in 2019, did you use textbooks or sections of textbooks in your teaching?

- Yes
- No (*If NO, jump to Q 20*)

11. In 2019, how did you recommended textbooks to your students?

- I recommended one or more core textbooks for essential reading
- I recommended one or more core textbook plus supplementary reading
- I provide a reading list without specifying which is core and which is supplementary
- Other:

12. In 2019, what were your expectations about students purchasing textbooks for a course?

- I expected students to purchase two books or more
- I expected students to purchase one book
- I didn't expect my students to purchase books

13. In 2019, which type of textbook formats did you mostly recommend to your students?

- Textbook in print version
- Textbook available digitally (e.g. downloadable PDF, Kindle version)
- Textbook available digitally but not downloadable (e.g. only viewed online)
- A mixture

14. In 2019, which of the following described the way you mainly used textbooks in your teaching?

- Reading lists of textbooks accompany each module / study unit and I expect students to refer to them
- Supplementary or recommended (not prescribed or required)

- I refer to the textbooks within my teaching sessions
- I base my modules / study units around the textbook content
- I utilise fully the textbook content alongside other items provided by the publisher e.g. multimedia resources, question banks.
- Other (please specify)

15. If your face to face or blended courses went fully online due to COVID19, what changes did you make in 2020 as a response? Select one or more as needed.

- a) I increased the amount of learning materials online
- b) I replaced required textbooks with a mixture of online materials
- c) I made sure the textbook was available electronically
- d) I made sure all the materials were available online through the library
- e) I added more communication, feedback and support for the materials
- f) I replaced an open-book exam with something else
- g) I modified other assessment/s
- h) Other – please explain.

16. What is your role in selecting the textbooks for your students?

- I am solely responsible for the selection
- I lead a group that makes the selection
- I am a member of a group that makes the selection
- I influence the selection, but do not have decision-making power
- Others make the selection, I have no role

17. Which of the following would influence your selection of textbooks to use in your teaching?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Textbooks that are free from cost to students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Whether the book is stocked in the library (<i>in print or e-book format</i>)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A textbook with comprehensive content and learning activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Works with my institution's VLE or LMS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recommended by other teaching colleagues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Textbook affordability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability as an e-textbook					
Able to include hyperlinks and multimedia resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Familiarity with textbook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relationship with the publisher					
Reputation of the author	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Available in accessible formats	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. Please indicate your reaction to the following statements about textbooks generally.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
They are an important part of course and programme development discussions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Textbooks are recommended at start of term in handbooks or online	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Textbooks aren't really referred to in teaching classes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students supplement their learning through reading textbooks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students don't wish to use textbooks anymore	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students don't buy textbooks anymore					

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
They are considered during course or programme development and then largely forgotten	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using academic textbook(s) is a core part of student identity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students only use books as references for assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. How aware are you of each of the following licensing mechanisms?

	Unaware	Somewhat aware	Aware	Very aware
Public domain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Copyright	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creative Commons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Publishers' contractual licences which restrict use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. How aware are you of Open Educational Resources (OER)?

OER are defined as "teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others." Unlike traditionally copyrighted material, these resources are available for "open" use, which means users can edit, modify, customize, and share them.

- I am not aware of OER
- I have heard of OER, but don't know much about them
- I am somewhat aware of OER but I am not sure how they can be used
- I am aware of OER and some of their use cases
- I am very aware of OER and know how they can be used in the classroom

21. How aware are you of open textbooks?

Open textbooks are a type of OER; they are textbooks that have been funded, published, and licensed to be freely used, adapted, and distributed. These books can be downloaded for no cost, or printed at low cost.

- I am not aware of open textbooks
- I have heard of open textbooks, but don't know much about them
- I am somewhat aware of open textbooks but I am not sure how they can be used
- I am aware of open textbooks and some of their use cases
- I am very aware of open textbooks and know how they can be used in the classroom

22. Do you use open textbooks in your teaching already?

- Yes
- No
- Don't know or unsure

23. Thinking about open textbooks (books that are written to be freely used, shared, downloaded), please indicate how you feel about the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Students should have access to open textbooks as they are free or low-cost	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A textbook that is adaptable / editable would be important to my teaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be interested to modify an open textbook to Make it more relevant to the Australian context	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be interested to modify an open textbook to Make it more representative of the women, LGBTIQ, Indigenous people and people of colour who tend to be absent from textbooks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would consider using open textbooks in the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'd like to be part of a community of practice producing our own open textbooks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Textbooks costs wouldn't have much impact on student debt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'd use open textbooks if I had support at my institution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would use open textbooks if they were easy to find for my subject	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wouldn't be interested in using open textbooks in the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would adapt/create an Open Textbook if provided with financial incentive.					
I would adapt/create an Open Textbook if it were linked to academic promotion					

24. Do you have any other comments regarding your use of textbooks or open textbooks?