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Calculating the costs of supporting people with disability in Australian higher education

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Disclosure statement

Authors of this report are employed within, or derive income from, universities but have no direct involvement in the provision of support or management of disability services within their institution. Reference to any specific university within this report, including but not limited to institutions employed by report authors, is made on the basis of relevance to research questions and methodology.

Research limitations

This research was undertaken throughout the COVID-19 pandemic. The research sought to better understand relationships between financing and outcomes for students with disability, hypothesising that investment in inclusion may vary along the continuum of digital delivery.

Like the global higher education sector, the research had to pivot at a time of great disruption. The basis of the research pivot was mandated because the research confronted significant challenges, exacerbated by COVID-19, in obtaining valid and comparable data on the two key variables the research sought to explore – data on the participation of students with disability and data on revenue and expenditure linked to students with disability.

The research adopted a different research design to that initially intended. The research still delivers novel insights into the participation of students with disability, but there remains a significant gap between the questions that the research sought to answer, and the questions that can be answered due to limitations of data collection, management and reporting at institutional and sectoral levels.

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Abbreviations

ADCET	Australian Disability Clearinghouse on Education and Training
ASSD	Additional Support for Students with Disabilities
CRPD	Convention on the Rights of Persons with Disabilities
CSP	Commonwealth supported places
DDA	Disability Discrimination Act (1992)
DPF	Disability Performance Funding
DSE	Disability Standards for Education (2005)
DSF	Disability Support Fund
DSO	Disability support officer
DSP	(Higher education) Disability Support Program
EFTSL	Equivalent full-time student load
NCCD	National Consistent Collection of Data on School Students with Disability
NCSEHE	National Centre for Student Equity in Higher Education
NDIS	National Disability Insurance Scheme
UDL	Universal design for learning
UN	United Nations

Executive summary

This report details findings of the National Centre for Student Equity in Higher Education (NCSEHE) funded project *Calculating the costs of supporting people with disability in Australian higher education.* The project sought to investigate how the Australian Government and universities invest to support the inclusion of people with disability in higher education. The study recognises that higher education today enrols many thousands of people with disability, that many students with disability require supports to enable their successful participation, and that institutions have different strategic orientations that may influence disability inclusion. Through this investigation we aimed to provide:

- Critical information regarding the ways in which institutions support people with disability.
- A better understanding of how policy incentives might best be focused to support the successful participation of people with disability in Australian higher education.
- A rationale to develop a rigorous assessment tool for calculating the full cost of supporting people with disability in higher education.

Through this research we aim to better understand the costs of supporting students with disability in higher education by adopting a mixed method approach to determine how institutions invest in the inclusion of students with disability. The three types of investment we analyse are:

- Recurrent expenditure: for example salaries for disability support staff.
- Non-recurrent expenditure: for example provision of ergonomic equipment on a case-by-case basis.
- Indirect expenditure: for example expenditure on accessible enterprise systems.

The mixed methods approach used in this study allows us to examine both quantitative and qualitative data These are:

- A survey of national and international research in this area.
- A quantitative analysis of data relating to the financial support provided to higher education institutions by the Australian Government for students with disability.
- A qualitative analysis of further evidence of financial support provided by higher education institutions.

The key findings from this study are:

1. The Australian Government provides financial support for higher education students with disability through several streams. Chief amongst these are:

    a. Base funding to support the participation of domestic students which in 2019 included over 70,000 students with disability.

    b. Additional Support for Students with Disabilities (ASSD) payments made to institutions to help defray the costs of educational support and/or equipment provided to students with disability.

    c. A Disability Performance Funding (DPF) component which allocates shares of a fixed amount of funding to institutions using a calculation based on access, participation and success indicators for students with disability.

    d. Funding to support the national Australian Disability Clearinghouse on Education and Training (ADCET).

2. Excluding the funding for ADCET, in 2019 the combined ASSD and DPF components averaged $104 per student with disability or $157 per equivalent full-time student load (EFTSL). Institutional funding ranged from as low as $23 per student/$32 per EFTSL, to as high as $347 per student/$466 per EFTSL.
3. Our analysis showed that levels of Australian Government funding for disability support is not correlated with increased participation, study mode nor improved retention for students with disability. However, this would require further analysis including multiple variables before drawing any concrete conclusions; this may be limited by the current collection of higher education data, specifically as it relates to students with disability.
4. Our study found that the degree of space dedicated to disability and disability funding in Australian university annual reports is highly variable and inconsistent. Critically, what is missing from the annual reports is a fully inclusive approach that proactively welcomes people with disability.
5. Staff specifically tasked with supporting students with disability were, generally, able to clearly identify and quantify the value of goods and services that their institution dedicated to the support of students with disability, relating to both recurrent and non-recurrent expenditure. They were less confident in identifying and quantifying indirect sources of expenditure. Their estimates varied considerably and did not appear to correlate with the number of students with disability at their institution.

In considering the broader implications of our results, we make the following recommendations:

Recommendation 1

That the Australian Government conduct a holistic review of the participation of students with disability to ensure that higher education is free from discrimination, aligned with the requirements of the Disability Discrimination Act (1992) (DDA) and Disability Standards for Education (2005) (DSE), and consistent with Australia's commitment to the Convention on the Rights of Persons with Disabilities (CRPD). This review should include reference to the adequacy of financing to support these policy objectives.

Recommendation 2

That the Australian Government undertake an independent audit of higher education providers to quantify the financial investment being made in supporting students with disability beyond the additional funding provided to the sector by the Commonwealth. This audit should encompass the full extent of investment, including recurrent, non-recurrent and indirect expenditure.

Recommendation 3

That Australian governments (State, Territory and Commonwealth) should require higher education providers to adopt consistent reporting frameworks for describing equity goals and performance, inclusive of activities that enable the participation of students with disability and that quantify financial investment in equity and disability. It is further recommended that the Australian Government work with the sector to redesign and standardise the disability enrolment declaration to capture more valid information about disability services.

Introduction

Access to higher education is not equal for all Australians. In particular, people with disability have experienced not only lower rates of access but also success and post-graduation outcomes. The status of people with disability as a formal equity group in Australian higher education was affirmed by the White Paper *Higher education: A policy statement* in 1988, also known as the Dawkins reforms (Department of Employment, Education and Training [DEET], 1988). Variations in legal protections for people with disability in higher education were standardised by the introduction of the Disability Discrimination Act (1992) Cth (DDA) and the Disability Standards for Education (2005) Cth (DSE). These legislative frameworks have made it clear that, in the words of the latter (Department of Education, Skills and Employment [DESE], 2005, p. 11), higher education institutions must ensure that:

> *A person with a disability is able to participate in courses or programs provided by an educational institution, and use the facilities and services provided by it, on the same basis as a student without a disability if the person has opportunities and choices in the courses or programs and in the use of the facilities and services that are comparable with those offered to other students without disabilities.*

Compliance with the DDA and DSE and, before it, state-based anti-discrimination and equal opportunity legislation, has seen universities and other education institutions provide additional services to people with disability so that they can participate on the same basis as students without disability. Students may require, for example, access to buildings, sign language interpreters, Braille learning materials, or additional time in examinations if they are to participate on the same basis. These services come at an additional cost, and there is little information available, nor research that has been undertaken, to quantify the cost, source of funds, efficacy or efficiency of any investment made to support people with disability in higher education.

Our aim in this study is to investigate how universities invest to support the inclusion of people with disability in higher education. The study recognises that higher education today enrols many thousands of people with disability and can therefore be considered to be more inclusive of students with disability. Australian universities, notwithstanding the sector-wide COVID-19 pivot to online education, have adopted different strategic orientations to face to face and online delivery modes which have implications for the types of adjustments, and quantum of investment, needed to support the inclusion of students with disability.

Through this investigation we aim to provide:

- Critical information regarding the ways in which institutions support people with disability.
- A better understanding of how policy incentives might best be focused to support the successful participation of people with disability in Australian higher education.
- A rationale to develop a rigorous assessment tool for calculating the full cost of supporting people with disability in higher education.

Background

This background covers details regarding the inclusion of students with disability in higher education and outlines relevant policy, legislation and obligations, and financial responsibility.

Before beginning our analysis, it is important to acknowledge that there is no universally accepted definition of disability (Palmer & Harley, 2012). Indeed, each institution, policy, policy review and academic theorist might measure and define disability differently according to so-called models of disability. Rosemarie Garland Thomson's (2002) definition of disability as encompassing environmental, embodied and attitudinal limitations provides a useful starting point for our discussion of the costs of supporting students in higher education and throughout the report we refer to the various ways disability is measured according to these criteria.

This report attempts to bring together discussion of the costs of supporting students with disability with the social imperative to do so in line with Jamil Samli's argument that "greater priority must be given to students with disability in terms of defining their needs, providing sufficient resources, and empowering higher education institutions to place this dimension high on their equity agenda" (p. 12). A discussion of the medical and social models of disability as they shape and influence strategies to support students with disability is offered in the literature review later in this report.

Higher education policy affecting people with disability

The first major review of Australian higher education in 1957 recognised the impact of disability on student success but did not offer any strategies for supporting this group of students. The so-called Murray Report (Committee on Australian Universities, 1957, pp. 40–41) noted:

> *… physical disabilities, often unrecognized, contribute in no small measure to the unsatisfactory performance of students… Experience has shown that the presence of a university medical officer can be of very great value to students and also to the teaching staff in their dealings with them.*

However, it took until the 1988 higher education White Paper (the Dawkins White Paper) for the issue of disability to be properly addressed (Department of Employment, Education and Training, 1988). As part of its review, the Department of Employment & Training (1990) proposed doubling enrolments of people with disability by 1995 and, as strategies to this end, recommended:

- Offering specialist [sic] equipment and facilities.
- Employing advisers/contact people to help students with disability.
- Promoting distance education opportunities.
- Modifying materials and curriculum.
- Providing flexible timetabling and course requirements.
- Presenting information to students with disability about services available.

This discussion paper accompanying the Dawkins White Paper included one of the earliest known quantifications of higher education participation of people with disability, referencing a 1985 survey that found "while 7 per cent of the Australian population was physically disabled, the total proportion of students with disability at post-secondary institutions in 1981 was only 0.17 per cent" (Department of Employment, Education and Training, 1990, p. 41).

In 1992, the Department of Employment, Education and Training commissioned a study into the additional costs of education and training for people with disability. Via a survey of

institutional disability support personnel, the researchers concluded that, in an estimated population of 4,641 students with disability enrolled in 152 universities and vocational providers:

- Students surveyed had an average of 2.14 support needs met by the provider.
- The five support needs most frequently met were assistance in assessments and examinations, specialist tutoring, counselling and related services, enrolment assistance, and note-taker services.
- Meeting student support needs was predominantly undertaken by the educational institutions (as opposed to, for example, social services or personal finances).
- Staff-related costs averaged $58,974 for higher education institutions, or $349 per 100 students enrolled in the sector.
- The most "expensive" services were interpreting, audiotapes of lecture materials and books, supported accommodation on campus, provision of a text reader, accommodation near or on campus, and bridging courses. Most institutions provided some support requirements on a "no extra cost" basis.
- Extra costs for supporting students with disability ranged from $600 for students with a health-related disability to $10,000 for students with a hearing-related disability. However, for some high-cost students, these figures might increase to $1,000 and $17,000 respectively (Andrews & Smith, 1992).

The next two major reviews of higher education (the West Review in 1998 and the Nelson Review in 2006) made only passing mention of people with disability. The 2008 review (the Bradley Review) was the first in two decades to place a particular focus on disability. The review observed that, whilst participation for people with disability rose from 3.4% to 4.1% from 2002–2007, "this increase has not been matched by a rise in support funds, which have been static since 2004" (Bradley et al., 2008, p. 29). Consequently, the report recommended (p. 159):

> *The current disability support funding initiatives, including the highly-targeted additional support for students with disabilities, have been successful and should be continued in their current form. Funding should be increased to $20 million per year in recognition of the increasing costs of disability support.*

The Government supported this recommendation, consistent with recommendations of the Bradley Review, that funding for equity equate to 4% of grants for teaching and learning (Commonwealth of Australia, 2009, p. 62). Funding for disability remains static however, with subsequent increases primarily due to indexation.

Relevant legislation and obligations for supporting students with disability

Disability Discrimination Act (1992) (DDA)

The DDA protects people with disability against discrimination in many areas of public life. The DDA was preceded by several State-based pieces of anti-discrimination legislation emanating largely in the early 1980s (Tyler, 1993). Specifically in regard to education, the DDA makes it unlawful to discriminate, on the grounds of the person's disability:

- By refusing or failing to accept the person's application for admission as a student; or in the terms or conditions on which it is prepared to admit the person as a student.
- By denying the student access, or limiting the student's access, to any benefit provided by the educational authority; or expelling the student; or subjecting the student to any other detriment.

- By developing curricula or training courses having a content that will either exclude the person from participation, or subject the person to any other detriment; by accrediting curricula or training courses having such a content.

The definition of disability used within the DDA is broad, including, for example, imputed disability and presence of viruses capable of causing disease (Brett, 2016). This broad definition creates a number of methodological challenges in researching disability in higher education. It contributes to a large number of students who may align with broad definitions of disability – like the DDA – which may be parsed to various sub-categories of disability with varying degrees of relevance to higher education participation. It is also worth noting that, while all higher education institutions are bound to the DDA, the quality of the actual support provided varies between institutions greatly, as well as across different physical, psychological and emotional illnesses or conditions (Hughes, Corcoran, & Slee, 2016).

Disability Standards for Education (2005) (DSE)

The DSE clarifies obligations under the DDA in relation to education and training. The effect of the DSE is to give students and prospective students with disability the right to education and training opportunities on the same basis as students without disability (Australian Disability Clearinghouse on Eduation and Training [ADCET], n.d.a).[1]

This occurs through an "adjustment" – a measure or action taken by an education provider to assist a student with a disability in relation to admission, enrolment, participation in a course, or access to institutional services and facilities more widely. Adjustments ensure that the student with disability can enrol, participate etc. on the same basis as a student without a disability. An adjustment is considered reasonable if it "balances the interests of all parties affected" (DESE, 2005, p. 12). Therefore, judgements regarding reasonableness are affected by the particular circumstances of the student, institution or adjustment.

Adjustments are not allowed where they compromise essential elements of a course that all students must meet. However, these elements are not always self-evident and are stated in ways that are often unclear or inconsistent, or are developed without adequate discussion with relevant stakeholders (Brett, Harvey, Funston, Spicer, & Wood, 2016).

The DSE have been reviewed in 2010, 2015 and 2020, and in each case the broad result has been stability in the framing of rights and responsibilities of institutions in terms of inclusion for students with disability.

Convention on the Rights of Persons with Disabilities (2007) (CRPD)

The CRPD was adopted by the United Nations (UN) and ratified by Australia in 2007. In regard to education, the CRPD recognises the right of people with disability to education, that education systems shall be inclusive, that reasonable "accommodations" or adjustments of the individual's requirement are provided and, more specifically, that "support measures are provided in environments that maximize academic and social development, consistent with the goal of full inclusion" (UN General Assembly, 2007, p. 8).

Whilst the CRPD does not add any further requirements on Australia that are not already covered under the DDA or the DSE, is does make Australia "more accountable… and promotes Australia as an international leader in disability rights" (Australian Government, 2017). The CRPD conceptualises disability as an interaction, not a personal attribute (Cukalevski & Malaquias, 2019). Therefore, the right to education is not just a right of the individual learner; education is now required to be inclusive (Graham et al., 2020).

[1] In 2020, the DSE underwent a review, with recommendations released the same year. The research informing this project was undertaken prior to the report of the review being released.

Furthermore, the CRPD has effectively created new rights – by explicating them – such as "reasonable accommodations", "communication access" and "support" (Kanter, 2019). To these ends, the CRPD calls for education systems that are: *available* to people with disability; *accessible,* including physical, social and learning environments; *acceptable* in terms of quality and substance; and, where necessary, *adaptable* in terms of providing necessary accommodations/adjustments (Byrne, 2019).

Financial responsibility for supporting higher education students with disability

Responsibility for supporting higher education students with disability is shared by various authorities; however, whilst shared, responsibility is not equal. This section outlines the primary sources of funding, both direct and indirect, that can be used to support students with disability in higher education.

The primary means by which students with disability participate in higher education is through the core features of Australian higher education financing policy. This includes revenue derived from students, including tuition fees in full fee-paying courses and the student contribution component of Commonwealth supported places (CSP), where the cost of participation is co-financed by the student and the Commonwealth. In 2015, revenue from domestic students with disability amounted to $301 million (DESE, 2020[2]). The Commonwealth contribution amount in CSP in 2015 amounted to $367 million (Brett, 2018, p. 22). Combined, therefore, the base funding of domestic students with disability amounted to $668 million in 2015.

This base funding is non-trivial and contributes to the resource base by which universities educate students with disability. This is, however, not the only funding that provides a foundation for the participation of students with disability. A proportion of students are also in receipt of student income support in the form of Austudy, ABSTUDY Living Allowance, Youth Allowance, Student Start-up Loans and other schemes. Some students will be in receipt of the Disability Support Pension. The proportion of students with disability receiving payments through these programs is not routinely reported.

In addition to base funding and additional resources, students may also require additional support directly related to their disability, or directly related to studying as a person with a disability for which additional government funding is available.

The National Disability Insurance Scheme (NDIS)

The National Disability Insurance Scheme (NDIS) provides those Australians under the age of 65 with a permanent and significant disability who have been approved as scheme participants with the reasonable and necessary supports they have been assessed as needing. As an insurance scheme, the NDIS is framed as a lifetime approach, investing in people with disability early to improve their outcomes later in life (NDIS, n.d.-b). The NDIS funds individuals "to access 'reasonable and necessary' services and supports to help achieve their goals" (NDIS, n.d.-a).

Specifically, the NDIS advises that a support will *not* be funded if it "can be more appropriately or effectively delivered by another system, such as health or **education** [authors' emphasis]" (NDIS, n.d.-a). However, this distinction is not binary, as ADCET (n.d.-b) explains:

> *Some NDIS participants will require additional support as a result of their disability in order to undertake further education. The NDIS will fund supports that enable participants to engage in higher education or VET courses which are*

[2] Source: data provided for the project by the Department of Education, Skills and Employment

> *related to the participant's disability… The NDIS will not be responsible for learning and support needs that primarily relate to the person's further education and training success… The [Higher Education provider] is required by law… to provide support that is directly related to a person's studies. [However] a person with a disability will need to fund their own everyday items and student costs, such as: laptop or desktop computer; textbooks, stationery and USBs; course and student fees; food and drink on campus; home internet connection and ongoing charges.*

Thus, in addition to base funding that underpins the participation of all Australians in higher education – including students with disability – there is a distinction between support for people with disability who require additional services to *engage* with higher education, and support for them to *succeed* in higher education.

Federal funding for higher education through the Disability Support Program (DSP)

The Australian Government Department of Education, Skills and Employment administers a range of equity programs for which students with disability may benefit, including the Regional Loading – targeted to support students from regional and remote areas – and Higher Education Participation and Partnership Program – currently targeted to support students from low socio-economic backgrounds. Any benefit is, however, indirect as there is no specific recognition of disability in the funding formula of either. This also applies to the program to replace both from 2021, the Indigenous, Regional and Low-SES Attainment Fund.

Specific funding for disability is the lowest of the designated equity groups in receipt of funding (Brett, 2018, p. 22), and is managed through the Disability Support Program (DSP) – specified in the Other Grants Guidelines (Education) Act (2012) – which, between 2012 and 2019, had three components:

- Additional Support for Students with Disabilities (ASSD).
- Performance-based Disability Support Funding, referred to here as Disability Performance Funding (DPF) for clarity.
- The Australian Disability Clearinghouse on Education and Training (ADCET).

In 2020, the first two components merged to form the Disability Support Fund (DSF) which, alongside ADCET, now forms the current DSP model.

Additional Support for Students with Disabilities (ASSD)

Under the ASSD scheme eligible higher education providers can apply for reimbursement for costs incurred in providing educational support and/or equipment to students with disability. The ASSD places limitations on the types of services that are reimbursable, excluding expenditure on infrastructure, salaries for the operations of disability support services, personal care, and services available through the NDIS. The institution is liable for the first $500 of support costs of each student supported. Once all the claims have been received, proportional repayments are made to each institution. Eligible institutions receive partial reimbursement for their disability expenditure, in part because not all expenditure is eligible, in part because of the threshold for claims, and in part because total claims for reimbursement exceed available funding.

Limiting the institutions and services eligible for reimbursement are not neutral in their effect. For example, students may enrol in institutions where there is greater certainty of accessing government funded support. Students who require personal care, beyond hours allocated by the NDIS, may not have the care they need for full participation. The rising numbers of students with mental health conditions in higher education require services that include more

time with disability support staff or counsellors that are ineligible for reimbursement. Universities and other providers routinely provide services that are not eligible for reimbursement consistent with their legal obligations under the DDA and DSE. We have little visibility of the cost of these services, nor understand the extent to which the learning of students with disability may be impeded by the finite capacity of institutions to provide services beyond that funded through the NDIS and ASSD.

Disability Performance Funding (DPF) / Disability Support Fund (DSF)

The objective of the DPF component of the DSP was to encourage higher education providers to implement strategies to attract and support students with disability. Funding is based on a combination of factors, including access, retention and success. From 2020 the DSP structure changed, merging the ASSD and the DPF together to form the Disability Support Fund (DSF). The main consequences of this change were to repeal the DPF in order to: split the funding available through the DSP between funds based on enrolments and costs of supporting students with high support needs; and increase threshold for eligibility for reimbursement to $10,000. The introduction of this change to the DSP coincided with major corrections to university revenues as a result of COVID-19. This shifted the emphasis of DSP from a contribution to the support costs of students in receipt of receiving eligible services above a specified threshold, to now include a contribution to the support of all students with disability.

The Australian Disability Clearinghouse on Education and Training (ADCET)

ADCET was not affected by the above merger. The Australian Government provides funding under the higher education DSP to maintain the ADCET website, currently hosted by the University of Tasmania. This site provides information and other resources designed to promote inclusive practices for people with a disability. There is no set amount or formula for this component of funding. Rather, the relevant section of the legislation advises that "Funds will be provided to the higher education provider hosting ADCET as determined by the *Minister*" (Commonwealth of Australia, 2012, Section 1.105.5.5). ADCET plays an important role in higher education but, for the purposes of this research, is placed outside of scope for primary analysis. ADCET provides services that support the broader sector within a resource base that is relatively small, and modelling the impact of ADCET on institutional investment requires a different methodological approach than that adopted in this study.

Of the original three funding streams of the DSP, the largest is the ASSD component at over $6.5 million. The DPF/DSF component is approximately $1 million, and funding for ADCET currently stands at just over $150,000. Combined funding in 2020 totalled $7.6 million[3]). As noted above, the DPF has been repealed and will no longer feature in future allocations. However, given other student data available for this research is available only up to 2019, it is unavoidable that the research explore the disability funding in place at the time in which student data is available (Figure 1).

[3] source: https://app.heims.education.gov.au/HeimsOnline/IPInfo/Determination

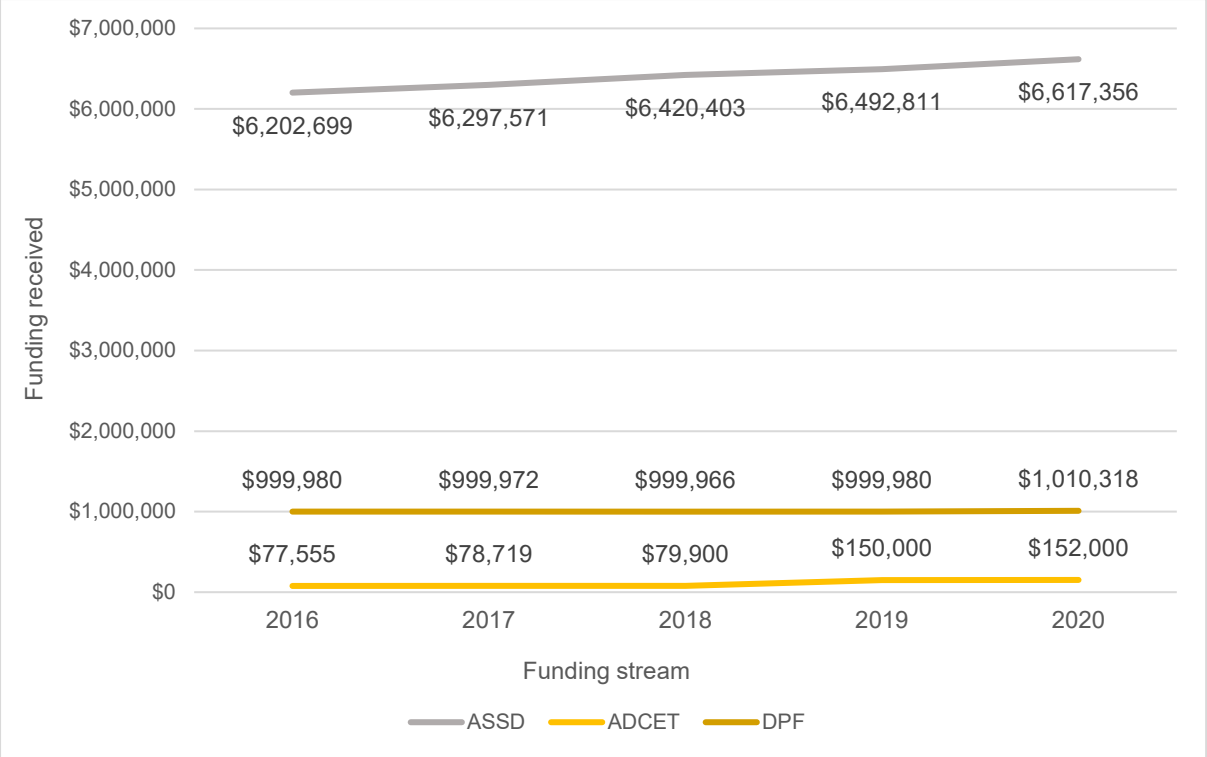

Figure 1. DSP funding: 2016–2020[4]

Indirect or general higher education funding for disability support

Both the DDA and the DSE make it clear that ultimate responsibility for supporting higher education students with disability lies with the higher education provider. Therefore, if specific disability support funding is not available for, or is insufficient to meet the needs of, a person with disability to succeed in higher education, the higher education institution must draw this support from other funds. As mentioned above, university revenue associated with domestic students with disability in 2015 was $668 million, comprising around 2.2% of total university revenue of $28.6 billion (Department of Education and Training, 2016). This macro financing picture is relevant to financing the full participation of students with disability in that investment decisions about any costs relating to inclusion, not covered by base funding for students with disability, the NDIS nor the DSP, arise within a large resource base and complex institutional setting with many competing demands for internal allocation.

[4] Although the DPF changed to the DSP in 2020, since ASSD amounts are reimbursed in arrears, the 2020 figure relates to the previous year's expenditure, i.e. under the old DPF scheme.

Literature review

Current university narratives straddle the terrain of excellence and equity. There is a prescribed tension between these objectives. Universities as spaces of and for higher order thinking are structured around academic achievement and success, innovation and change, social growth and hard work. However, as educational institutions, they are also at the cornerstone of ongoing and foundational equity projects for an evolving society, whereby increasing access to individuals and demographic groups that have not traditionally been included in the academic cohorts is an increasingly visible and important project.

To that end, attracting students from lower socio-economic groups, regional and remote locations, mature age groups, Indigenous communities and, most significantly for this project, people with disability has been at the forefront of efforts to diversify graduates and offer wider opportunities for knowledge growth (Moriña, 2017, p. 4). Within this context, adjustments that are legislated for people with disability to adequately and effectively access higher education are unevenly deployed and activated because they often service the promotion of equity while neglecting the interests of excellence. This leads to a slide into a stalemate whereby institutions leverage a cultivation of bespoke and responsive adjustments for individuals but are still deeply entrenched in a medical approach to disability.

This literature review identifies four key areas of prior research. First, the enduring impact of medical and social approaches to disability and the different priorities of these two so-called models of disability. Second, the reasons for the lower participation of people with disability in higher education both in Australia and internationally. Third, the importance of universal design for learning (UDL) principles to facilitate inclusion and, lastly, the positive and negative effects of studying online for students with disability. This section provides a summary of the full literature review which is available on request.

Models of disability

While disability is typically thought of as a medical problem, a significant body of social and critical approaches to disability emerged in the latter half of the twentieth century to problematise the approach towards disability taken by institutions such as higher education. Michael Oliver's seminal re-definition of disability as "the restriction of activity" imposed on top of or in response to a person's impairment continues to offer important insights regarding the ways people with disability are subject to social restrictions (e.g. Oliver, 2013).

Oliver and others highlight issues with the persistent hold of a medical approach to disability which continue to influence and dominate institutional policy and processes within the higher education sector. This has been the case for decades, whereby disability has been situated within a hierarchy of conditions such as disease, disorder, impairment and handicap (Hutchison, 1995). The medical model has been useful for describing the loss of function, or physical restrictions, experienced by the individual and has been the norm for classifying disability for educational purposes for centuries (Triano, 2000). However, it does not adequately address the various social structures – including attitudes – that restrict people with disability above and beyond the functional realities of their personal circumstances (Hutchison, 1995). This is inherent to the medical model as it conceptualises disability in terms of individual impairment, thus locating the "problem" within the person (Zarb, 1995).

In contrast, the social model of disability locates the "problem" of disability within inaccessible socially created environments. There has always been tension between the medical model of disability, which emphasises an individual's physical or mental deficit, and the social model of disability, which highlights the barriers and prejudice that exclude people with disability from fully engaging in society ("Disability: Beyond the medical model", 2009). Furthermore, the medical model of disability gives power to the "expert" (the doctor) and

marginalises the advice and experience of people with disability as “non-experts” (Brisenden, 1986).

The idea behind the social model of disability emerged in the mid-1970s, whereby people with disability argued that they were not disabled by their impairments but by the disabling barriers they faced in society (Oliver, 2013). While the social model called attention to the ways disability was forced onto certain bodies and not others, criticism eventually started to emerge regarding the lack of attention to the body. For example, critics of the social model have suggested it risks implying that impairment is not a problem by suggesting that people are disabled only by society not by their bodies (e.g. Shakespeare, 2006). In response, advocates of the social model deny that they ever claimed the social model was an all-encompassing framework meant to replace the individual/medical model (Oliver, 2013). Rather, it seeks to draw attention to the deficiencies of these approaches or, as Barnes (2012, p. 18) puts it, “the social model of disability is a tool with which to provide insights into the disabling tendencies of modern society in order to generate policies and practices to facilitate their eradication”.

Alternatives to the binary of the medical model – situating disability within individual bodies – and the social model – situating disability within social contexts – include biopsychosocial models of disability such as the International Classification of Functioning Disability and Health, and ecological models of disability adopted by the Andrews and Smith (1992) study of costs. Ecological models recognise that disability is a product of interactions between people and their environment, not an intrinsic feature of the individual (Ebersold, & Evans, 2003). The ecological model of disability provides important insights for higher education in particular. The model draws on Bronfenbrenner’s (1979) bioecological model of human intelligence as a “complex series of interactions between the individual and environment”. Hewett, Douglas, McLinden, & Keil (2020, p. 755) note the importance of institutions changing their orientation to seek out “how best institutions might work with students to promote an independent learning experience” (Hewett et al., 2020, p. 755). As Hewett et al. (2020, p. 767) explain, students must partner with higher education institutions to develop strategies of support in the form of progressive mutual adjustments. For example, in an earlier publication, Hewett et al. (2016) located financial support as a form of adjustment.

Increasingly, educational institutions are adopting functional approaches to supporting students with disability. The functional approach has elsewhere been referred to the interactional approach (Smart, 2009). This approach focuses on the adjustments that need to be made to ensure the student can access and participate in education to the same level as all students. Approaches like this recognise that disability “is a contingent phenomenon imposed on the individual by social hindrances and restrictions *on top of* the social effects impairment may bring about for the individual” (Reindal, 2008, p. 144). This approach is based on the provision of supports “that do not call into question the underlying pedagogical assumptions in Australian higher education” (Williams, 2016, p. 8). The focus is on the adjustment that needs to be made, not the disability itself. Nonetheless, the procedures designed to support such an approach invariably revert to some medicalisation of approach; for example, by requiring the student to provide evidentiary documentation – i.e. a doctor’s certificate – to support their request for adjustment.

Access, participation and success for students with disability in higher education

There is a wealth of literature demonstrating that, internationally, students with disability generally experience rates of access, participation, retention and success that are lower than those for students without disability (e.g. Getzel, 2008; Herbert et al., 2014; Kilpatrick et al., 2017). Data reported annually by Australian higher education institutions to the DESE

confirms this is also the case in Australia (DESE, 2019a). In Australia, participation[5] rates in tertiary education for people with disability have been steadily rising in the last decade. In 2009, the participation rate for people with disability at Table A institutions was 4.27, rising to 6.96 by 2018 (DESE, 2019d). However, it is probable that these numbers are an under-representation given that some people with disability choose not to disclose. This is as true internationally as it is in Australia. A study by Grimes, Scevak, Southgate and Buchanan (2017) estimates that the share of enrolment of students with disability at one institution might be as high as 19%. This Grimes et al. paper also cites international studies to suggest the same pattern of undercounting existed in the UK and US (Aronin & Smith, 2016; Gabel & Miskovic, 2014; Miskovic & Gabel, 2012; Newman & Madaus, 2015, as cited in Grimes et al., 2017). Internationally, the most common reasons cited by countries for under-representation are: insufficiently adapted infrastructure; lack of appropriate teaching and learning materials; and funding problems (Lane, 2017).

Universal design for learning (UDL) principles

UDL is built on the principles of inclusive design, in which institutions are designed in such a way that all students can participate and all are treated as valuable (Moriña, 2017). It includes adapting the built environment, software and hardware, teaching methods and organisational procedures with the aim of ensuring the needs of the largest number of students are met without the need for additional adaptation or support. This approach aligns with a pedagogical shift from “teacher” to “learner”-focussed approaches (Bel & Bradburn, 2008).

Key to the principles of UDL is “empathetic modelling”, referring to the ability of the relevant designer/s to step into the role of the student. This requires more than just understanding their needs; it “necessitates being immersed in the lives, experiences and ways of living of diverse populations” (Altay & Demirkan, 2014, p. 5). If this understanding can be achieved, then there is potential to design the educational experience in such ways that students with disability will have less need to rely on support systems that are secondary to the original design, e.g. of the curriculum or built environment, etc. (Silver, Bourke, & Strehorn, 1998). This can also help overcome social barriers experienced by students with disability who, in the process of being supported with their disabilities, experience ostracising through the very support they are being offered. In one study, it was observed that students who were exempted from taking their final examinations alongside their “normal” peers, in order to make specialist arrangements to support them, resulted in them not being mainstreamed because of the pejorative attitudes of others towards disability (Whitburn, 2015).

By adopting UDL principles, higher education institutions can help overcome problems encountered when students choose not to disclose their disability for fear of stigmatisation. In a US study of more than 1,500 students with disability, it was found that more than half who identified in their first year of study did not identify in the following year. As the authors observe, “Disability identification is often assumed to be static [however] our findings suggest quite the opposite: a large percentage of students with disability are much more fluid in their identification” (Aquino & Bittinger, 2019, p. 11). The greater the take-up of UDL, the less, potentially, the impact of not knowing the circumstances of individual students might be.

Finally, the benefits of UDL principles often extend to those other than originally intended. For example, whilst captioning of lectures has been initially taken up by higher education institutions in order to support students with disability – for example, being hard of hearing

[5] Throughout this report, the term ‘participation’ is used to refer to the overall rate/share of enrolments of students with disabilities. This reflects the terminology used in the official higher education data collection series. It is acknowledged that, in a wider sense, participation includes issues concerning support, acceptance, inclusiveness and the overall success of the higher education experience.

or d/Deaf – research has shown that the benefits are felt by many other students, assisting them to better absorb and review educational materials (Kent, Ellis, Peaty, Latter, & Locke, 2017).

Positive and negative effects of studying online for students with disability

It has been observed that students unable to attend classes, whether because of disability or location, may be enticed by the opportunity to study remotely (Henry, Pooley, & Omari, 2014). Kent's 2016 study, involving 356 online survey responses and 143 follow-up interviews, indicated that students with disability found that online study through Open Universities Australia was a preferred way to access higher education. In this study, there was a high prevalence of students with a mental illness, medical impairments and mobility impairments (Kent, 2016).

One challenge faced by students with disability studying online is that they may be less aware or even unaware of the support their institution can provide to them to make reasonable adjustments to their educational experience, as required by the DSE. The Open Universities Australia survey found that 43.9% of those surveyed were not aware of the types of adjustments that could be offered to them, and a further 27.3% were not sure (Kent, 2016). This might be in part because some students do not see certain services as relevant to them or that they can manage without assistance (Henry, 2018).

There are also challenges posed by institutional attitudes towards online teaching. Research conducted in 2017 found evidence that online education was regarded by many within higher education institutions as being less important or a lower priority than traditional on-campus teaching (Stone, 2017). One participant reported, "I just feel like [online students are] getting a lesser experience. In fact, I know they're getting a lesser experience than what my on-campus students are getting and that concerns me greatly" (Stone, 2017, p. 26).

As higher education institutions move increasingly to embrace online/digital delivery of education, there is the possibility of unintended, negative consequences for students with disability. A 2018 study of students at one Australian higher education intuition found that, whilst embracing digital innovations in general, people with disability felt this might lead them to feel even further overloaded with information and that online does not automatically equate with accessibility (McRae, Ellis, & Kent, 2018). Whilst a "techno-deterministic" view of digital technologies may argue that people with disability will be unambiguously assisted, others observe that these digital tools still reproduce many aspects of social and cultural exclusion (e.g. Moser, 2006; Pacheco, Yoong, & Lips, 2020).

Summary

In this brief summary of the wider literature canvassed in support of this project we have aimed to establish our understandings of key themes of research relevant for analysing the environment in which support for students with disability operate in Australia. This framing enables a critical engagement with the project which adds a dimension above and beyond the descriptive analysis of adjustments and pushed us as researchers to think further. The first section which examines models of disability in use enables us to engage criticality in our investigation about the supports available. The second section on access and participation shows us that there is a dearth of literature on the access and participation of students with disability in Australian higher education; however, what we have is useful, including relevant international comparisons that enable comparative literature to be drawn upon. Consideration of UDL principles in the third section offers us a novel – at least, compared to current Australian higher education practice – and important lens through which to view potential for thinking about access in a different way. The final section which reviews the

literature on online and digital delivery reminds that there are no easy, magic solutions and that needs are not monolithic for students with disability.

Each of these four elements offer insight into future developments of the higher education provision to make a more inclusive higher education system. While some may come with perceived increased costs to inclusion – although there is a scarcity of demonstrable data on this – other insights such as those canvassed in the third section on UDL principles offer potentialities of increased fairness of access and participation along with greater economies of scale. Particularly from the second section on access and participation we see how far we have to go in terms of understanding the realities of participation for students with disability – including, as shown by the fourth section, relating to online learning about current assumed solutions. This prompts us as researchers to reflect on how much better we might be able to support students with disability if we had more nuanced, detailed and well-evidenced notions of the needs of and provisions for students with disability. We understand from this review of the literature that there is a lasting perception that we know more about support of students with disability than we can actually evidence; as such, we hope that this project can contribute to illuminating further some elements of unexplored practices for the inclusion of all students.

Methods

This study and others have argued that the experience of disability is heavily influenced by social and cultural attitudes towards disability. These attitudes influence not just the physical buildings in which universities are housed or the types of learning materials distributed to students, they also influence the ways students with disability are interacted with and supported. As discussed, in the background a number of policies, legislation and funding mechanisms exist to support students with disability in higher education. Through this project we aim to better understand the full costs of supporting students with disability in higher education by adopting a mixed method approach to determine how institutions invest in the inclusion of students with disability. The types of investment we analyse are:

- Recurrent expenditure: this may include salaries for personnel with specific responsibilities for the participation of students with a disability that is described in their position description or performance goals.
- Non-recurrent expenditure: this may include provision of reasonable adjustments on a case-by-case basis. These adjustments may take the form of technology equipment and software, or services such as special examinations, sign language interpreters or Braille materials, and ergonomic furniture.
- Indirect expenditure: this may include the ways in which the participation of students with disability is facilitated by activities embedded within more general work roles, projects and activities. This may include recurrent or non-recurrent expenditure on accessible enterprise systems, and infrastructure or policies not otherwise captured in recurrent and non-recurrent expenditure categories.

This study adopted a mixed methods approach, using both quantitative and qualitative data. Part I analyses quantitative data, examining the financial support provided to higher education institutions by the Australian Government, contextualised against the participation, retention and success of students with disability. The data analysed were:

- Data relating to equivalent full-time student load (EFTSL), provided upon request by the DESE in 2020.
- Data relating to categories of disability, provided upon request by the DESE in 2020.
- Data relating to disability support funding, sourced from the DESE institution payment website: https://app.heims.education.gov.au/HeimsOnline/IPInfo/Determination
- Data relating to participation, retention and success of students with disability, sourced from the DESE higher education statistics website: https://www.education.gov.au/higher-education-statistics
- Data relating to higher education institution finances, sourced from the DESE university finance data website: https://www.education.gov.au/finance-publication

Part II examines other sources of financial support provided by higher education institutions via an analysis of their annual reports in order to ascertain qualitative data. The university annual report is a unique and important text for the study of disability funding in higher education. As a public-facing document, the annual report serves multiple purposes: it performs public accountability by providing a breakdown of yearly activities and expenditures; it communicates the achievements of the university; and it works to project the desired values and culture of an institution. Annual reports have “multiple audiences” and are read by a diverse range of interested parties whose concerns range from “questions of stewardship to outright promotion” (Thomas, 1997, p. 47). The importance of such publications therefore rests (Coy, Fischer, & Gordon, 2001, p. 14):

> *… in the provision of a wide range of summarized, relevant information in a single document, which enables all stakeholders to obtain a comprehensive understanding of a university’s objectives and performance in financial and non-*

financial terms. No other single source of such information is available to all stakeholders on a routine basis.

Universities have been under growing pressure to disclose the finer details of their income and investments since the global financial crisis, alongside an "increasing reliance on mechanisms of accountability and audit in the management of higher education" (Nixon, 2011, p. 8). As Schaffhauser-Linzatti and Ossmann (2018, p.233) highlight in their study of annual reports, "outwardly directed communication" has become increasingly critical as a result. In the context of intensifying public and governmental surveillance, annual reports provide an especially valuable resource for considering how information about disability funding is shared by Australian universities, and how much emphasis is placed on disability services within their promotional materials. These documents assist us in analysing what value is attributed to disability in both financial and non-financial terms.

During this project, the 2018 annual reports of 37 Australian universities were examined to locate mentions of funding received via the DSP, and any other references to funding and material investment in disability support. This study was undertaken to reveal how much information about disability funding is included within annual reports and compare how/if this differs between universities. Similar to the method set out by Schaffhauser-Linzatti and Ossmann (2018) in their analysis of sustainability reporting in university annual reports, the source documents for this study were downloaded from each university's homepage and assessed in relation to a set of research questions. For our study, the research questions were:

- Does the annual report make any reference to financial investment to support students with disability, where that investment is quantified?
- Does the annual report make any reference to financial investment to support students with disability, where that investment is not quantified?
- Does the annual report make any reference to other activities, programs or initiatives to support students with disability, from which a significant financial investment could be inferred?

The higher education institutions analysed for this study were the 37 "Table A" public institutions that received Australian Government financial support via the ASSD and DPF components of the DSP. A list of these institutions is provided in Appendix A.

The qualitative stage also included online interviews with disability support officers (DSO) employed at 24 of the Australian universities reviewed in this project. The DSOs were asked to outline their understanding of the types of recurrent, non-recurrent and indirect costs of supporting students with disability. While DSOs were not always able to provide accurate figures regarding institutional costs, they provided important on the ground insights into the specific types of support requested by students with disability.

Findings

Part I – Quantitative analysis: Government financial support

This section analyses the fiscal impact of the direct, specific support provided by the Government via two components of the pre-2020 DSP model:

- The ASSD component.
- The DPF component.

The third revenue source, ADCET, is not included in this analysis for two reasons. Firstly, since the funding is not disaggregated at either an institutional nor student level and secondly because the portion of overall funding directed to ADCET is relatively small, being only 1% of all direct funding.

We begin by analysing the impact of the ASSD in isolation as it comprises the overwhelming majority of the funding. Then, the combined effect of the ASSD and DPF components are analysed.

Sector-wide impact of the ASSD

The ASSD component represents the overwhelming majority of direct financial assistance for disability support provided by the Australian Government. In the five-year period 2016–2019, ASSD funding averaged 84.7% of the funding received via the ASSD, DPF and ADCET components. This indicates a Federal policy position that direct financial support for students with disability is primarily tied to specific educational services and equipment. Of these two, the majority of ASSD support flows to educational support (Table 1).

Table 1. ASSD allocations

YEAR	CATEGORY	SUB-TOTAL $
2015	Education support	$5,715,384
	Equipment	$366,937
	Total	$6,082,302
2016	Education support	$5,752,091
	Equipment	$450,629
	Total	$6,202,699
2017	Education support	$5,810,355
	Equipment	$487,236
	Total	$6,297,571
2018	Education support	$5,946,625
	Equipment	$473,797
	Total	$6,420,403
2019	Education support	$5,942,165
	Equipment	$550,663
	Total	$6,492,811
2020	Education support	$6,074,088
	Equipment	$543,268
	Total	$6,617,356

Source: data provided by the Department of Education, Skills and Employment

In the period 2015–2019, this equated to, on average, $1,694 per student for educational support (Table 2); a per student calculation for equipment support was not available, presumably because many equipment claims relate to items that are made available to more than one student. Each year the number of students receiving educational support has risen at a faster rate than the ASSD funding provided, meaning that the amount provided per student is falling in both actual and real terms.

Table 2. No. students represented by ASSD (educational support category) claims

YEAR	NO. STUDENTS REPRESENTED BY ASSD (EDUCATIONAL SUPPORT CATEGORY) CLAIMS	ASSD FUNDING*	PER STUDENT
2015	3381	$6,082,302	$1,799
2016	3728	$6,202,699	$1,664
2017	3746	$6,297,571	$1,681
2018	3820	$6,420,403	$1,681
2019	3916	$6,492,811	$1,658
Total	18,591	$31,495,786	$1,694

*Because allocation of ASSD funding occurs the following year, the figures here are the amount reimbursed the following year.

Source: data provided by the Department of Education, Skills and Employment

Furthermore, as participation for people with disability has increased, the amount of funding claimed by higher education providers is rising faster than the amount of ASSD funding available (Table 3). In 2019, only 57% of funding claimed was reimbursed, compared to 61% in 2014.

Table 3. ASSD claims versus reimbursement

YEAR	TOTAL $ CLAIMED	TOTAL $ REIMBURSED*	% REIMBURSED
2014	$9,904,048	$6,082,302	61%
2015	$9,957,298	$6,202,699	62%
2016	$11,355,661	$6,297,571	56%
2017	$11,615,872	$6,420,403	55%
2018	$11,687,602	$6,492,811	56%
2019	$11,585,057	$6,617,356	57%
Average	$11,017,589	$6,352,190	58%

*Because allocation of ASSD funding occurs the following year, the figures hereare the amount reimbursed the following year.

Source: data provided by the Department of Education, Skills and Employment

Sector-wide impact of the ASSD and DPF combined

Although the ASSD is the primary funding component, funding also flows directly to higher education institutions via the DPF component. In 2019, the combined level of funding from these two sources was $7.6 million, compared to $7.3 million in 2016.

To contextualise this increase in funding, it can be compared to the increase in participation by higher education students with disability over a similar period. Between 2016 and 2019, higher education participation for people with disability rose 21.8%. However, in the same period, funding rose by only 4.5% (Figure 2) (DESE, 2019c). Therefore, in real terms, Commonwealth funding for disability support has been steadily declining.

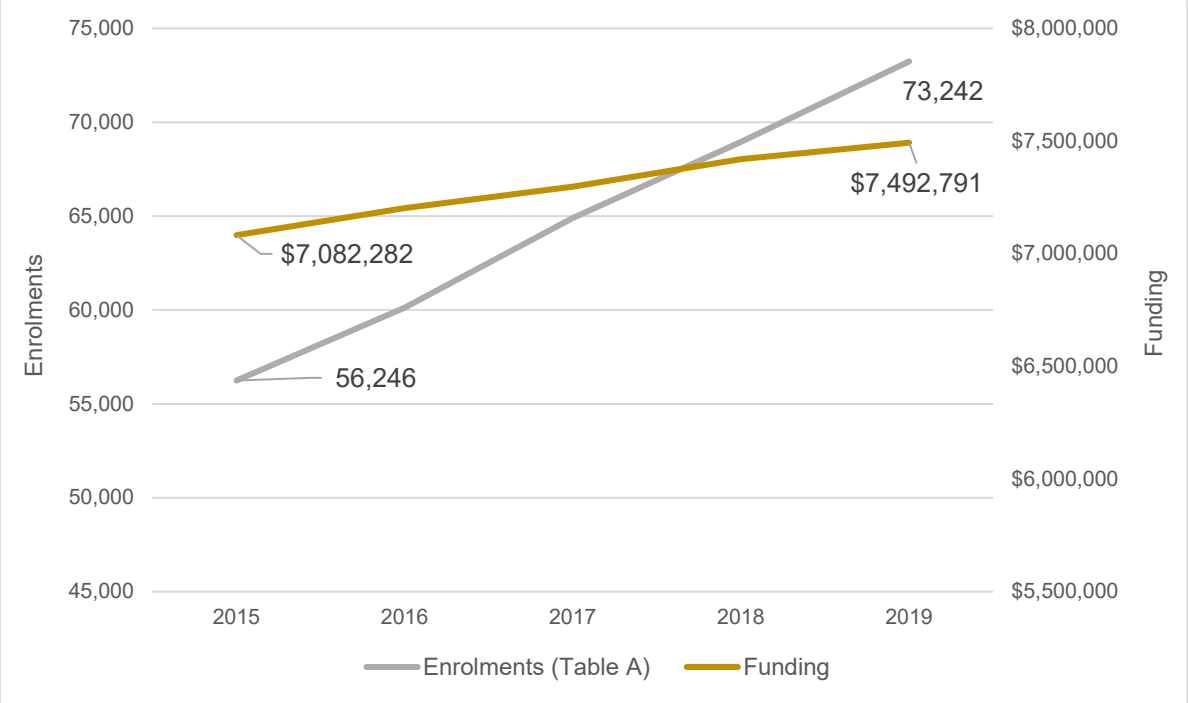

Figure 2. DSP support versus participation 2016–2019

It is noted that the DSP and ASSD between 2014 and 2019 are the result of reimbursement for specific, eligible services, for eligible students, above the $500 threshold[6]. From 2020 and beyond, a proportion of DSP allocations will be distributed on the basis of a university's share of domestic student enrolments of students with disability. DSP is being reframed from being narrowly targeted to a small cohort of students with disability (averaging 5.7% of students disclosing disability at enrolment from 2015–2019) to contributing towards the support costs of all students with disability (Table 4). The trend data of the growth rate in participation of students with disability exceeding the indexation of the DSP appears likely to continue and legitimises a retrospective analysis of DSP funding per student across time (Figure 3) (DESE, 2020).

Table 4. No. students represented by ASSD (educational support category) claims as percentage of all students

YEAR	NO. STUDENTS REPRESENTED BY ASSD (EDUCATIONAL SUPPORT CATEGORY) CLAIMS	DISABILITY ENROLMENTS	STUDENTS RECEIVING ASSD SUPPORT AS PROPORTION OF ALL STUDENTS WITH DISABILITY
2015	3381	56,246	6%
2016	3728	60,131	6%
2017	3746	64,906	6%
2018	3820	68,962	6%
2019	3916	73,242	5%
Totals	18,591	323,487	6%

[6] In 2020, the threshold was increased from $500 to $10,000.

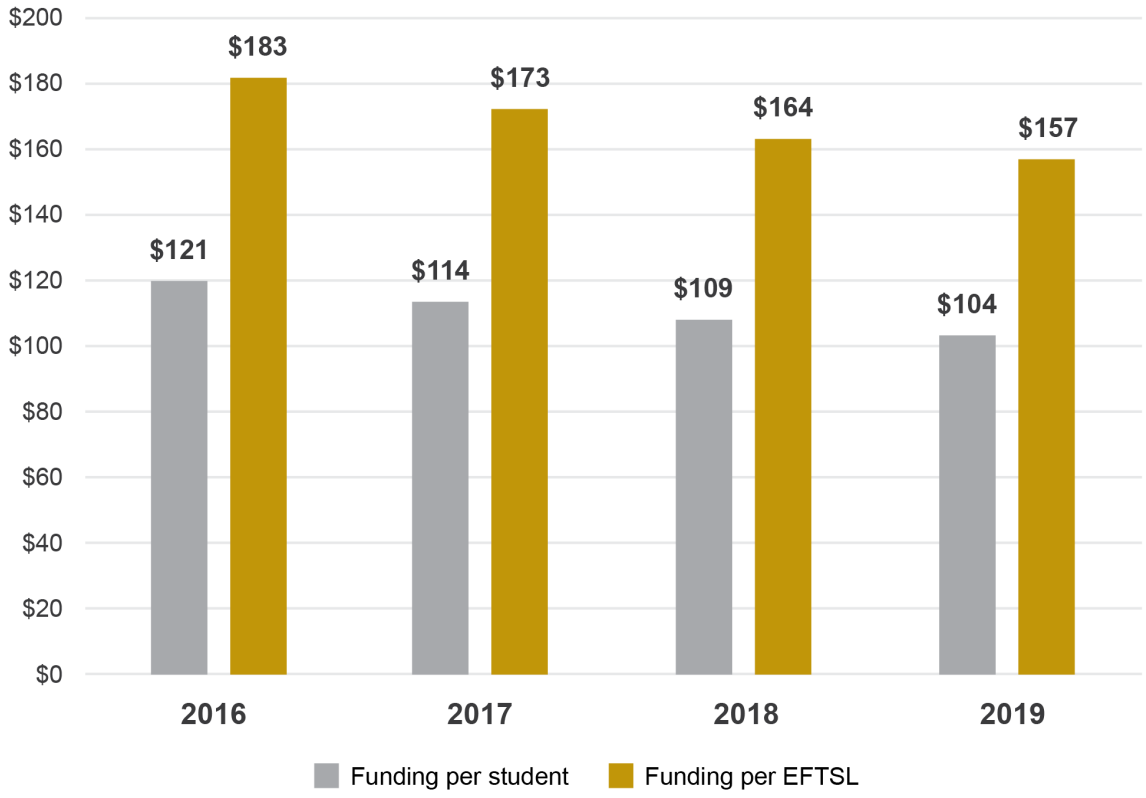

Figure 3. DSP funding per student with disability

This trend data reveals a striking and consistent reduction in per EFTSL or per student disability funding between 2016 and 2019.

Impact of the ASSD and DPF at the institutional level: Participation

There are significant differences in per-student (with disability) support at the institutional level. Figure 4 shows how much each institution received on average per enrolment and EFTSL via a combination of the ASSD and DPF components. The calculation used the 2018 enrolment numbers but the 2019 ASSD funding amount, since ASSD funding is retrospective. In 2018, the average disability funding, from the ASSD and DPF, was $106 per student or $160 per EFTSL. However, institutional funding ranged from as low as $23 per student/$32 per EFTSL, to as high as $347 per student/$466 per EFTSL (Figure 4).

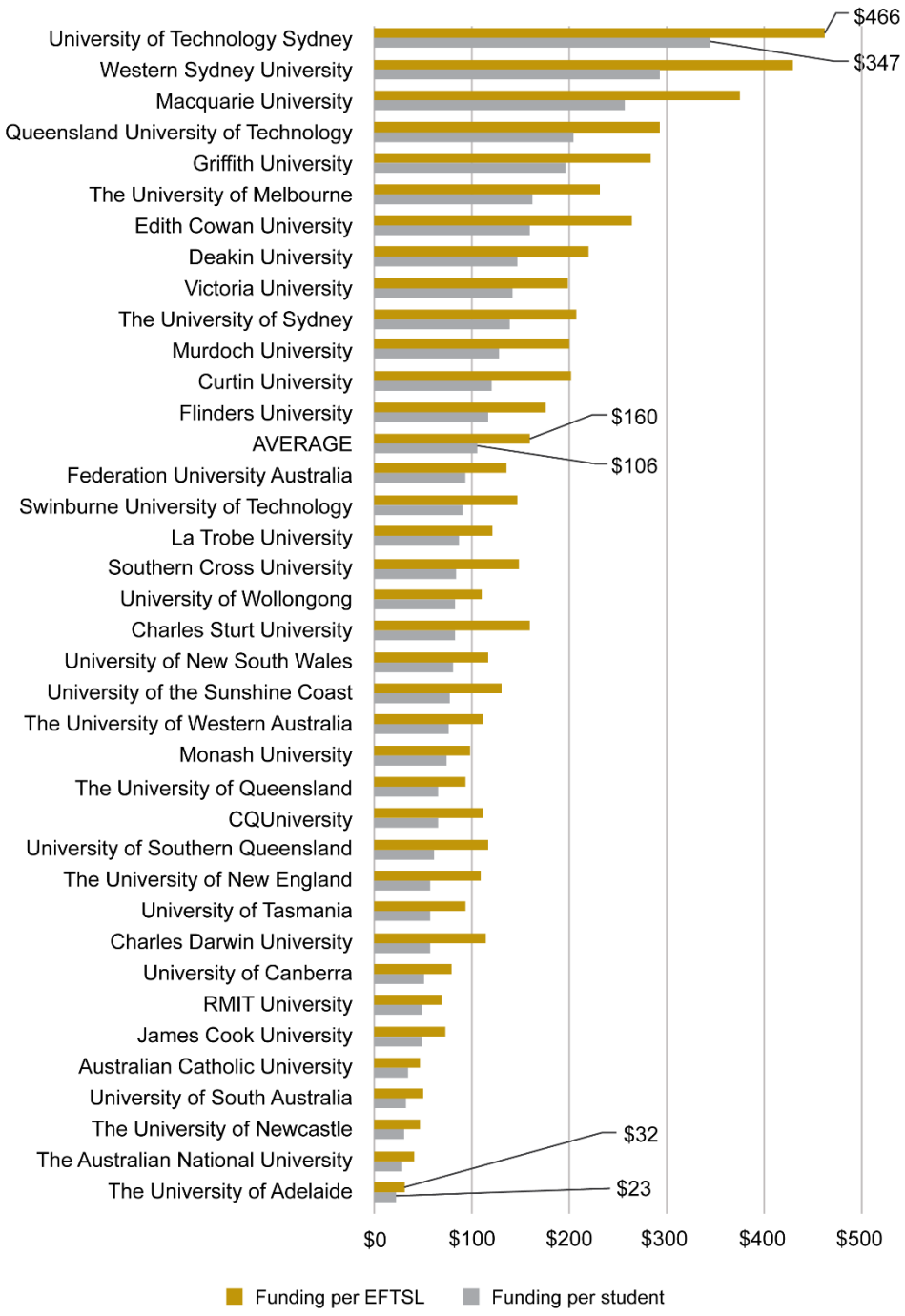

Figure 4. DSF support per student with disability versus EFTSL

It can be seen from above that the variation in DSP per institution is substantial.

Next, we analysed the relationship between funding and participation at the aggregate level for disability. We found a weak correlation of 0.5 between disability funding and total disability enrolments (Figure 5). For example, one institution with 2,304 students with disability received $69,135 in funding, whilst one with 2,128 students received $434,169. Another institution with 2,034 students received $162,341 in funding, whilst another with 1,807 students received $534,263.

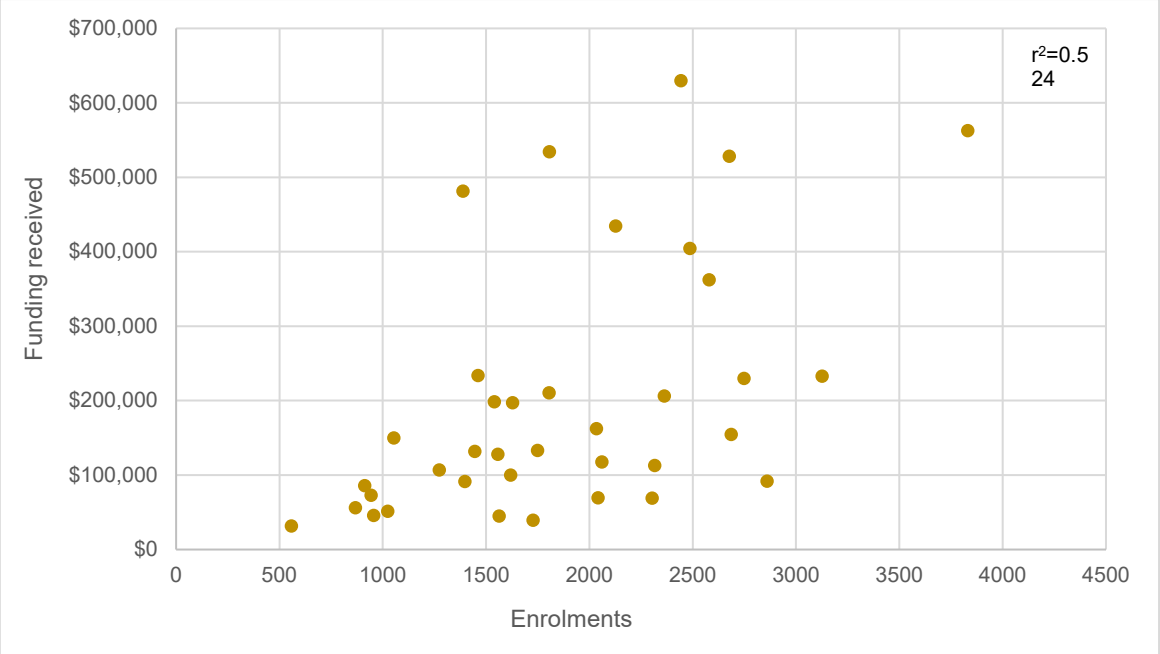

Figure 5. DSP funding versus total students with disability

Enrolment declaration data in the form of “needing services”, “category of disability” and “disability disclosures” provide no credible insights that would explain why the university with the highest $DSP per EFTSL is 14.6 times higher than the university with the lowest $DSP per EFTSL. This variation warrants further exploration, particularly in a context where, from 2020 onwards, the majority of DSP funding (55%) is being allocated on disclosures of disability at institutions. Will this funding reward institutions adept at low cost UDL, or provide welcome funding to support services like mental health support that currently falls beyond permitted expenditure? Will this funding serve to penalise those universities enrolling disproportionate numbers of students with higher disclosed support needs, or categories of disability eligible for support, where the level of reimbursement for services rendered is falling markedly? What incentives and disincentives will ensure that service delivery models are efficient and contribute to the full participation of students with disability consistent with the UNCRPD? The quantitative data provides little cues as to which of these outcomes, if any, will transpire. The quantitative data does, however, provide additional insight into whether the DSP makes a discernible impact on student success and retention.

One variable that may explain higher or lower DSP revenue per EFTSL is mode of delivery, both in terms of the strategic orientation of the university, and extent to which students with disability undertake face to face or online education. As described in Part I, some students with disability may prefer online study for both disability- and non-disability-related reasons. Notwithstanding individual preferences, there have been repeated references in higher education policy to the potential benefits of making distance education available for students with disability as a strategy for improving access and participation. These references stretch back to the *A fair chance for all* paper (DEET, 1990, p. 40). One might expect therefore, to see a higher proportion of students with disability enrolled online.

Table 5 highlights that in 2019 there was considerable variation in university orientations to on campus, blended or online delivery, and apparent preferences of students with disability to enrol on campus or online. On average students with disability were marginally less likely to study externally than students without disability enrolled in CSPs in 2019. There is considerable variation across the sector in the proportion of students with disability studying online study (spanning a minimum of 0% and maximum of 84.3%). The proportion of

students studying online with disability generally aligns with the proportion of students without disability studying online but is, on average, lower, noting a small number of outliers.

This variation in the proportion of students with disability studying online allows for an assessment of whether the proportion EFTSL studying online correlates with variations in revenue through the DSP. As with overall participation, there is no clear relationship between DSP revenue and external enrolments (Figure 6). This may also be a function of differences in how disability is disclosed and reported but, on the data available to the project, it is not possible to state this with any certainty.

Table 5. Proportion of CSP students studying externally 2019

INSTITUTION	WITH DISABILITY	NO DISABILITY	% DIFFERENCE
Curtin University	30.8%	19.5%	11.3%
Deakin University	33.8%	30.4%	3.4%
Griffith University	16.3%	13.4%	2.9%
Macquarie University	12.5%	9.9%	2.6%
Charles Sturt University	62.7%	61.2%	1.5%
University of South Australia	24.3%	23.1%	1.2%
Queensland University of Technology	7.2%	6.1%	1.1%
The University of Adelaide	1.0%	0.6%	0.4%
The University of Queensland	2.0%	1.7%	0.3%
James Cook University	14.8%	14.5%	0.3%
CQUniversity	58.8%	58.6%	0.2%
Monash University	2.6%	2.4%	0.2%
University of Technology Sydney	1.4%	1.4%	0.0%
The University of Newcastle	10.0%	10.0%	0.0%
The Australian National University	0.0%	0.0%	0.0%
Victoria University	1.0%	1.0%	0.0%
University of New South Wales	0.2%	0.2%	0.0%
The University of Western Australia	0.3%	0.3%	0.0%
Charles Darwin University	73.5%	73.6%	-0.1%
The University of Melbourne	0.8%	1.0%	-0.2%
La Trobe University	11.8%	12.2%	-0.4%
University of New England	84.3%	84.7%	-0.4%
Western Sydney University	6.2%	6.6%	-0.4%
Australian Catholic University	3.3%	3.8%	-0.5%
University of the Sunshine Coast	1.7%	2.2%	-0.5%
University of Wollongong	1.5%	2.0%	-0.5%
Average	18.9%	19.8%	-0.9%
RMIT University	3.8%	4.9%	-1.1%
The University of Sydney	4.6%	5.8%	-1.2%
University of Canberra	5.1%	6.4%	-1.3%
Edith Cowan University	26.4%	27.8%	-1.4%
Federation University Australia	5.7%	7.4%	-1.7%
Southern Cross University	44.6%	46.3%	-1.7%
University of Southern Queensland	68.2%	70.0%	-1.8%
Murdoch University	20.3%	22.5%	-2.2%
Flinders University	7.8%	10.2%	-2.4%
University of Tasmania	31.4%	48.3%	-16.9%
Swinburne University of Technology	19.7%	42.2%	-22.5%

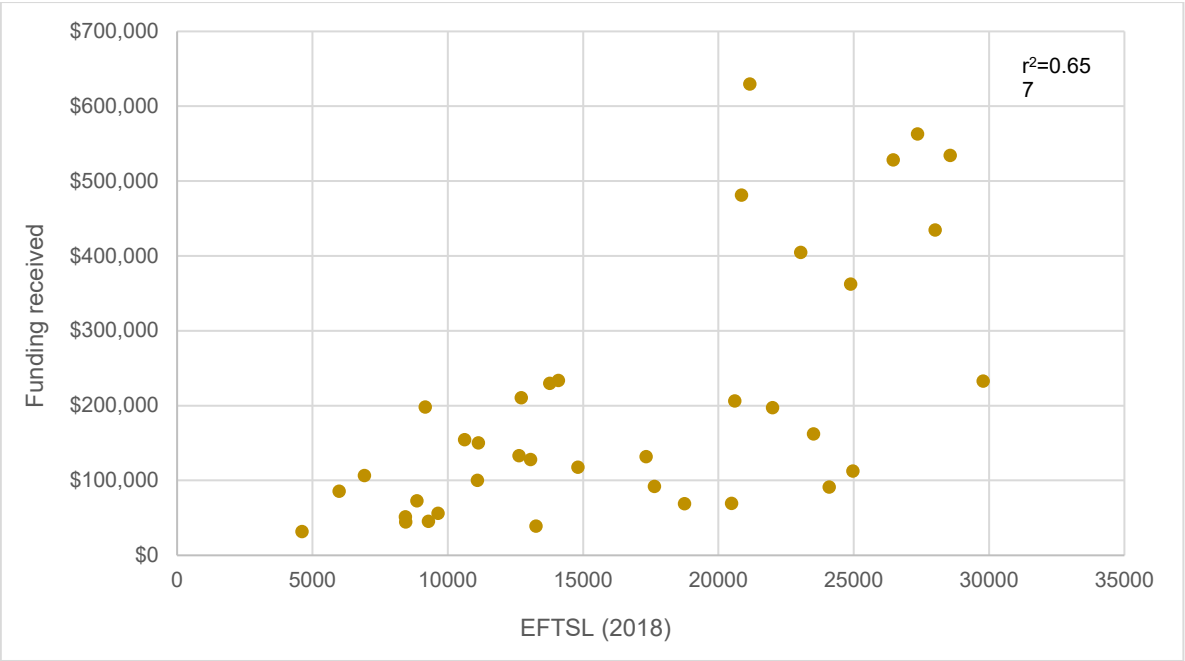

Figure 6. DSP funding versus external EFTSL – CSP students with disability

Impact of the ASSD and DPF at the institutional level: Retention and success

Next, we analysed the relationship between Australian Government disability funding received and the retention and success of students with disability. As with the participation analysis, 2019 funding and 2018 retention and success rates were used since the majority of funding provided is retrospective. This analysis again comes with the caveat that, before 2020, the DSP was targeted at reimbursement of costs for specific services, for specific students, representing only 5% of all students with disability enrolled in Australian universities. However, with the DSP changing emphasis in 2020 to be calculated on a formula that counts all students with disability within a consistent indexed budget envelope, a retrospective analysis of the relationship between DSP and performance of all students with disability is warranted.

Retention was defined as the number of students with disability who commenced their course in 2018 and continued in 2019. Success was defined as the proportion of EFTSL for units of study that were passed, divided by all units attempted:

- Commonwealth disability funding was calculated as the sum of the ASSD and DPF funding components. These two components already included a calculation based, in part, on the retention and success performance of the institution, relative to others. However, the ASSD component, which represents 86.7% of the funding, did not include any calculation of this type.
- Retention and success were measured in two ways – relative to sector and relative to institution:
- *Relative to sector* measured the performance of the institution relative to the sector's performance. In other words, how better or worse was the institution's retention/success rates for students with disability compared to the national average for students with disability?
- *Relative to institution* measured the performance of the institution's students with disability compared to all students at the institution. In other words, how better or worse was the institution's retention/success rates for students with disability compared to all of its students?

When measuring retention relative to sector, no correlation was found between increased disability funding and improved retention rates (Figure 7). On the one hand, this is unsurprising given the relationship between institutional profile and socio-economic forces affecting student outcomes. Prior research has shown that institutional student profiles vary distinctly, that these differences are correlated to socio-economic class, and this in turn has a significant effect on academic achievement, both prior to and post entry to higher education (e.g. Pitman, Koshy, & Phillimore, 2015; Sirin, 2005). Therefore, in this consideration, disability funding at this stage would be unlikely to offset a lifetime of disadvantage. On the other hand, given the majority of disability funding relates to specific adjustments provided to students, one might expect to see this disadvantage, if not offset, then ameliorated to some degree. However, our analysis did not show this.

There are many variable factors that would need to be taken into account including, but not limited to, student needs and levels of support, institutional practices relating to UDL, educator attitudes and skills, and socio-economic and related factors which impact on student self-sufficiency before drawing conclusions relating to the impact of funding levels and retention.

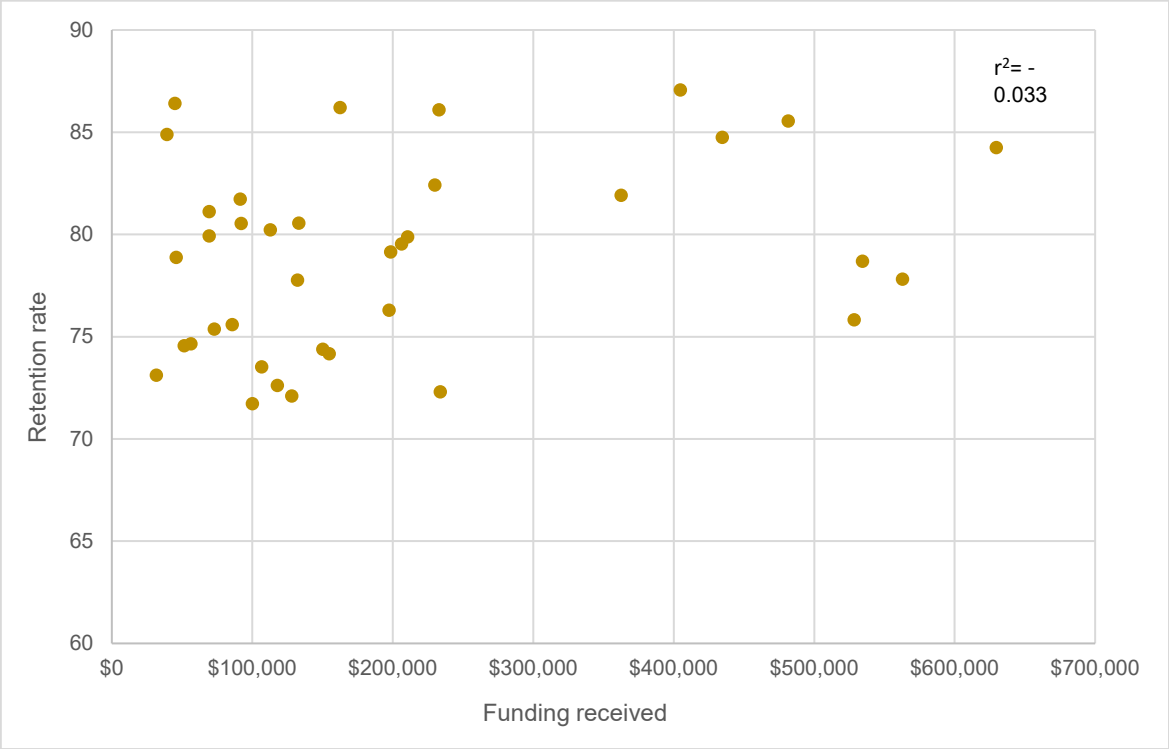

Figure 7. DSP funding versus student retention (relative to sector)

When measuring retention relative to institution, no correlation was found between disability funding and the difference – either positive or negative – between the retention rate of students with disability and the retention rate of all students. In other words, there was no evidence that increased levels of disability funding helped close the achievement gap between students with and without disability (Figure 8).

Figure 8. DSP funding versus student retention (relative to institution)

The same two analyses were undertaken for success rates. In both cases the results were the same as they were for retention rates, that is, we found no evidence of correlation.

Summary

Funding to support people with disability to participate and succeed in higher education comes from a range of sources. The core funding for universities – base funding comprised of Australian Government and student contributions in CSP and student full fee contributions – is the bedrock of financial support that enables the participation of students with disability. In addition, students with disability may require additional supports and services which includes the NDIS which can and does provide funding for people with disability to engage with higher education such as transport, assistive technologies, home modifications and coordination of supports. However, this support is primarily for people with disability to fulfil activities of daily life, enabling those with the motivation to *engage* with higher education, not to necessarily *succeed* in higher education.

Specific disability support funding is provided by the Australian Government in the form of subsidies for certain adjustments, performance-based funding and supporting ADCET to provide sector-wide resources. This funding equates to $106 per student or $160 per EFTSL. Furthermore, in real terms, this source of funding is declining as the participation of people with disability in higher education is growing at a faster rate than funding increases. The DSP has, by design, made a partial contribution to the participation of students with disability. This policy approach assumes that primary responsibility to make higher education accessible to students with disability – both ethically and financially – falls to the higher education institution. Both the DDA and the DSE make this responsibility clear. It is unclear, however, whether universities are allocating sufficient funds to disability access commensurate with this responsibility.

Our analysis showed that levels of Australian Government funding for disability support is not correlated with increased participation, online study, nor improved retention for students with disability. Whilst the research design cannot provide definitive answers, we offer the following observations which might explain the observed data:

- There is variability in the ways universities are enrolling students with disclosed high support needs.
- There is variability in the ways universities are enrolling students with disclosed categories of disability associated with higher eligible support needs.
- Universities with larger numbers of students with disability develop maturity in service provision and attract more students with high support needs.
- Universities have adopted inclusive practices – such as accessible online education – that decrease the need to expend money on additional support services.
- Universities have adopted exclusionary practices that decrease the need to expend money on additional support services.
- Universities have adopted highly inefficient practices in supporting students with disability.

This can be categorised into three themes: disclosed high support needs; disclosed disability in categories known to have high support needs; and the associated scale effects of disability specific funding versus participation.

Disclosed high support needs

It is possible that some institutions do not enrol students with high support needs and therefore have no need to claim reimbursement for expenditure through the DSP. The number of students with high support needs may be identified from the enrolment declarations from students who indicated they may need access to additional services. At enrolment, students are asked to disclose whether they have disability, which category of disability, and also whether they require adjustments. This can be defined as the 'needs services' question as that is how it is framed to the student and how it should be reported to the Australian Government.

In 2018, on average 55.9% of students with disability checked the needs services flag. However, this question is not particularly nuanced and does not indicate the extent, nor cost, of the service the student requires. Furthermore, our analysis of the needs services flag found evidence that its application is not being used consistently. One institution reported that only nine of its 3,145 students with disability checked the needs services box, whilst another reported that essentially all (1,686 out of 1,762) required adjustments.

An examination of the relevant institutional profiles found no evidence to support that there was anything distinctive about their students with disability profile. An examination of the disability statistics of relevant institutions found no distinctive variations about students with disability profile. Our conclusion is that these figures represented certain peculiarities in how this question is asked of students, or the way in which the institution reports data to the Australian Government. It is recommended that the Australian Government work with the sector to redesign and standardise the disability enrolment declaration to capture more valid information about disability services.

Disclosed disability in categories known to have high support needs

An alternative explanation is that different universities enrol disproportionate numbers of students across different categories of disability. There may be higher or lower cost patterns of disability support based on the type of disability reported. For example, in 1993, Andrews and Smith (1992, pp. viii–ix) estimated:

> *… extra costs ranging from $600 for students with functional limitations in the personal health area to $10,000 for students with limitations in hearing… For those with high support needs, costs… increase to in excess of $1,000 for students with personal health limitations and $17,000 for those with limitations of vision, based on typical clusters of support requirements.*

By way of another example, according to the most recent data, there are 152 higher education students who identity Australian sign language (Auslan) as the language used at home (DESE, 2019b). A plausible estimate of the support needs of these students – two Auslan interpreters at $100 each per hour (Auslan Services, 2017) per student, at an average of 11 hours per week, across a 26-week academic year – arrives at over 43,000 interpreting hours and over $8.5 million per annum for this cohort. Both this calculation and the example provided by Andrews and Smith (1992) are not presented as definitive figures but are indicative of the high cost for certain services likely to be used by specific cohorts.

An analysis of this type is possible, given that students are asked to specify whether their disability or disabilities fall into one or more of the following categories:

- hearing;
- learning;
- mobility;
- vision;
- medical; or
- other.

As with the needs services indicator, we undertook an analysis of the funding using these variables. And, as with the needs services flag, we identified no relationship between the types of disability reported and the funding received, either in raw or proportional terms. We conclude that this was partly a function of the definitions themselves and again, as with the needs services indicator, partly a function of institutional variance in how the questions are framed to the student and/or how the data are reported to the Australian Government. In regard to the definitions, the most common disability category indicated was the 'other' category which was used by 44.0% of all students with disability. This category is, by description, non-specific and gives no insight into the nature of the impairment of the student. It is worth noting here that the need for new definitions of disability was recognised in 2020, with the adoption of a new system of categorisation. The new categorisation expands the categories of disability from six to ten, maintaining a medicalised emphasis on impairment, and without capturing information on severity of impact. Notwithstanding this development, the data provided for this project used the old categories.

We do not conclude that DSP funding has no positive impact. Rather, it indicates that most of the financial support may be being provided by the higher education institutions themselves via other revenue streams. The level of this financial support may act to mask any effect the Australian Government assistance might have. In the next section, we attempt to shed further light regarding the nature and scale of this institutional investment.

Part II – Qualitative analysis: DSO engagement and universities' 2018 annual reports

This section covers three main themes – a survey of institutions' references to disability support in general, a survey of institutions' DSOs regarding financial support specifically, using their 2018 annual reports as a guide, and targeted engagement with DSOs to better understand the tools at their disposal to understand and model revenue and expenditure relating to students with disability.

Institutions' references to disability support

Our first research question addressed how much funding was declared as received by each university via the DSP in 2018. The intention of this question was not to quantify the amount of funding received, as this had already been established in the first stage of the analysis. Rather, it sought to examine whether higher education institutions sought to highlight this financial support in their annual report. While the majority (95%) declared their DSP, two

universities did not specify this income in their annual report – Charles Darwin University and The University of Queensland. In these cases, the DSP funding was presumably merged with other funding under the banners of “Government grants” and “Commonwealth grants” in their respective financial statements.

The DSP amount may suggest a certain level of institutional investment in disability; however, it does not provide readers with any indication of *how* these funds were spent. In order to look further into how disability funds may have been used, a second research question focused on mentions of disability within the narrative body of each report. The terms ‘disability’, ‘diversity’, ‘access’ and ‘accessibility’ were keyword searched in each document. Again, there was significant variety in the results – some reports (16%) included no mention of disability at all aside from their DSP declaration, while others dedicated whole sections to addressing the topic and foregrounding investment in disability services. The University of Tasmania, Murdoch University, Queensland University of Technology, The University of Adelaide, the University of South Australia and Federation University offer no mention of disability beyond their financial statements. In contrast, The University of Sydney dedicates three pages of their report to “Workplace Diversity”, including a section on disability inclusion for both staff and students. Multiple campus-wide disability programs and initiatives are cited, in addition to additional funding and scholarships that are made available to students with disability. In terms of communicating values, this annual report explicitly identifies “a culture of inclusion and diversity” as a core concern.

Within the annual reports, references to disability support appeared under four broad categories which, in descending order of appearance, were: awareness-raising activities; procedural support; specific financial investment; and related financial investment.

Awareness-raising activities

The 2018 annual reports contained 18 examples of awareness-raising activities. Most commonly, this was achieved through the provision of disability awareness training programs, including modules, workshops or seminars. Generally, little or no details were provided about this training other than the observation that it was available and/or had been rolled out.

Other awareness-raising activities included supporting or being represented at disability awareness events. For example, Griffith University launched a campaign entitled “I am more than my disability” which featured “current Griffith students and graduates who have achieved remarkable things and prove that disability is not a barrier to achievement” (Griffith University, 2018, p. 55). These activities were most commonly delivered online or on campus, with some being undertaken in conjunction with external partners such as Charles Darwin University’s support of the Northern Territory Disability Services and Inclusion Awards.

No specific amounts of financial support relating to awareness activities were reported in any annual report. However, associated costs were evident, including:

- Employment of appropriately trained institutional staff to deliver training/events, or contract payment of external staff to deliver these services.
- Provision of venues, catering or audio-visual equipment.
- Development or ongoing maintenance of websites, online training modules and other resources.

Procedural support

Nine annual reports made reference to the development of new procedures or processes directed towards the support of students with disability. Also included were expansions to or updates of existing policies. For example, The University of Queensland conducted a review

of recruitment, selection and onboarding processes for disability inclusion and, at the University of Canberra, improvements were made to the Reasonable Adjustments process in the disability support office to make appointments more flexible and accessible for students.

As with the awareness-raising activities, no specific amounts of financial support were provided, but it could reasonably be inferred that there were associated costs in staff time, in developing procedures, in communicating and enacting them, and in monitoring compliance.

Specific financial investment

Seven universities provided descriptions of specific, bounded investment to support students with disability. These were:

- The provision of a public toilet with hoists and a full-sized change table, and the addition of a hearing loop and reconfigured seating in a lecture theatre – Edith Cowan University, no amount specified.
- The participation in the Positive Action towards Career Engagement (PACE) mentoring program, delivered for a fee by the Australian Network on Disability – RMIT University, no amount specified.
- The establishment of a fully accessible 39 seat inter-campus shuttle bus – University of Southern Queensland, no amount specified.
- The creation of new positions within some Schools to coordinate support for staff and students with disability – University of Technology, Sydney, no amount specified.
- The allocation of a portion of the funds raised by the new amenities and student services fee to employ a disability liaison officer – Deakin University, no amount specified.
- The participation in an internship program for university students with a disability managed by the Australian Network on Disability, with four interns being employed across the year – University of Sydney, no amount specified.
- The allocation of a portion of the student amenities fee revenue towards funding disability liaison officers – University of Wollongong, no amount specified.

Related financial investment

Four institutions made reference to investments that implied a potential benefit to students with disability, without specifically mentioning them. These were:

- University of Southern Queensland's Student Endowment Fund which provided support to over 300 students throughout the year, including "more than 100 bursaries to disadvantaged undergraduate students with almost $126,000 worth of awards" (University of Southern Queensland, 2018, p. 28).
- Western Sydney University's "Western You" survey which "identified students who experienced severe depression, anxiety and stress. The First Responder team proactively contacted 242 of these students to provide support" (Western Sydney University, 2018, p. 23).
- Australian Catholic University's "Creating Opportunity" fund which provided 20 scholarships to enable students to overcome barriers to successful study: "Unlike many equity scholarships, which focus on financial hardship or a narrow set of criteria, these $4,000 scholarships have flexible criteria that address issues including students experiencing long-term medical conditions…" (Australian Catholic University, 2018, p. 17).
- The University of Melbourne's special entry and scholarship scheme for domestic undergraduate applicants which outlined those students "whose circumstances may have prevented them from achieving the best possible ATAR" (Melbourne University, 2018, p. 22). According to the annual report, 15% of applicants cited disability or

health as a criterion. However, the report did not clarify how many of these applicants were successful under the scheme.

In total, $1.28 million was quantified within the annual reports as relating, partly, to disability support. The vast majority was an investment by the University of Wollongong of $800,000 “to support undergraduate students who are registered with the UOW Disability Service” (University of Wollongong, 2018, p. 62). However, given the full amount was covered by an external donor, and the amount covered both the appointment of the disability liaison officers and other staff members, it was not possible to calculate the institution’s own, direct investment in supporting students with disability. The largest, quantifiable amount that could be directly related to disability support was $400,000 of capital works investment at Curtin University, as part of its Access and Inclusion works program, for projects such as upgrading accessible toilets.

Summary

Our study found that the degree of space dedicated to disability and disability funding in Australian university annual reports is highly variable and inconsistent. While the majority of reports note the presence of DSP funding, few went into detail regarding material changes or advancements resulting from this funding, and some made no mention of it whatsoever. Universities that addressed the topic in detail were clearly doing so as part of an organised strategy, with the intent of conveying specific inclusive values and attracting diverse students. Those reports that ignored or sidelined disability left the impression that such students were not of interest or concern. While it may not reflect the reality of each university’s engagement with disability, a lack of discussion risks leaving a negative impression. In terms of financial accountability and disclosure, it would be useful to mandate more consistent breakdowns of how DSP funding is being allocated in each annual report. Considering the multiple audiences who encounter these documents, it would also be wise to consider including more information in order to shape more positive perceptions of the university as an equitable space for the public.

Critically, what is missing from the annual reports is a fully inclusive approach which proactively welcomes people with disability. The annual reports also, as a group, lack a quantification of the recurrent investment in disability support, in particular investment in staff positions (e.g. DSOs), technology (e.g. standardised closed captioning of lectures) and inclusive capital works (e.g. accessible built environment). Although these amounts have not, to date, been quantified, it most certainly represents the largest percentages of financial investment made by higher education institutions.

Institutions’ disability support officers (DSOs) references regarding financial support

The final stage of our study involved surveying DSOs across Australia, asking them a series of questions regarding the financial costs of supporting students with disability within their institution. The survey was disseminated via ADCET, as well as direct contact with DSO managers.

A total of 24 valid responses were received from individuals. The low response rate was attributed mostly to the timing of the survey in that it occurred in 2020 during the coronavirus pandemic. Higher education staff in general, and DSO staff in particular, were under significant pressure to support students in an environment of reduced resources and this in turn impacted their willingness and ability to undertake the survey. Four main themes were identified – recurrent expenditure, non-recurrent expenditure, indirect expenditure and combined expenditure.

Recurrent expenditure

The first type of investment we sought feedback on was recurrent expenditure on supporting students with disability. Recurrent expenditure means expenses that are known in advance and budgeted for on an ongoing basis, for example, salaries for personnel with specific responsibilities for the participation of students with a disability that is described in their position description or performance goals.

Staff were asked to provide an estimate of annual recurrent expenditure based on the last 5 years of activity. Estimates averaged $848,125 per annum. The lowest estimate ($400,000) came from a regional university with approximately 3,000 students with disability, being approximately 13% of its domestic student population. The highest estimate ($1.5 million) came from a metropolitan university, also with a population of approximately 3,000 students with disability, being approximately 7.5% of its domestic student population.

Survey participants were also asked to describe the goods or services funded by recurrent investment. The most cited expense was “salaries”, but also included were:

- software and hardware;
- training for staff;
- projects;
- community connections;
- consultancy fees;
- professional memberships;
- repairs and maintenance of scooters;
- stationery and general supplies;
- travel and conferences; and
- examination and other adjustments.

This revealed that, beyond the salaries of professional staff to support students with disability, there were recurrent costs associated with the day-to-day activities of these people and their professional development. This was in addition to supporting the specific costs for providing adjustments, services, and equipment to the students themselves.

Non-recurrent expenditure

Non-recurrent expenditure refers to amounts that an institution will need to spend but can’t know in advance how much they will be, for example, provision of reasonable adjustments on a case-by-case basis, specialist equipment purchase, etc.

Estimates for non-recurrent expenditure averaged $457,625 per annum. The lowest estimate ($100,000) came from a metropolitan university with approximately 3,000 students with disability, being approximately 11% of its domestic student population. The highest estimate ($1 million) came from another metropolitan university, also with a population of approximately 3,000 students with disability, being approximately 7.5% of its domestic student population.

The most cited source of expenditure was for adjustments, including transcriptions, assistive technologies, specialist equipment and software. Also included were third-party services such as captioning or signing, and other staff employed as participation assistants.

Indirect expenditure

Indirect expenditure refers to amounts for things that are not specifically for students with disability but used, at least in part, to support students with disability, for example, a staff person who spends a portion of their time supporting students with disability or investing in

technology or infrastructure that is more accessible for all students so that both students with and without disability benefit.

Estimates for indirect expenditure averaged $165,000 per annum. The lowest estimate ($20,000) came from a participant who chose not to disclose their institution. The highest estimate ($500,000) came from a metropolitan university with a population of approximately 3,000 students with disability, being approximately 7.5% of its domestic student population.

Goods and services identified included:

- curriculum and course design, especially for online offerings;
- training and support for non-DSO staff;
- infrastructure;
- technology (hardware and software);
- campus signage;
- allocation of space/IT infrastructure for specialist assistive tech rooms in campus libraries; and
- web design.

Combined expenditure

Summing all types of expenditure, total expenditure averaged $1.3 million per annum. The lowest estimate ($745,000) came from a regional university with approximately 2,000 students with disability, being approximately 7% of its domestic student population. The highest estimate ($3 million) came from a metropolitan university with a population of approximately 3,000 students with disability, being approximately 7.5% of its domestic student population.

Other feedback

Some survey participants stated how difficult it was to estimate the expenditure requested. As one said:

> *These are estimates as it is hard to pull these amounts out… the spend on team wages and the spend on direct support are real costs – but the rest is a guestimate and probably much higher. [This] does not include activities of Advisory Committees for disabilities and many other areas of university regarding creation of access.*

There was a general sense from some participants that there was an overall willingness by their institution to invest what was required to support students with disability regardless of cost. According to one participant, it was “rare to have requests declined if a need is made clear. Money is found if something has to be done or changed to make it more accessible”. However, they continued:

> *… this is largely an ad-hoc approach rather than a strategic one. Identifying the true cost of this across the board has never been done at an institutional level. The cost of retrofitting physical spaces, redesigning courses and reconsidering learning opportunities in light of accessibility has never been truly calculated and I suspect would be significant. Our expected costs are relatively tiny. It’s the cost of delayed activity that is far more significant and far harder to provide a figure for.*

One participant expressed a degree of frustration that awareness of disability issues were not fully embedded across their institution:

> *Units across the university respond very differently according to the local leader's attitude, knowledge and skill set around inclusive practice. There is often an assumption that anything 'disability-related' should be funded by our team; however, I have been working specifically over the last three years to build people's understanding that disability access and inclusion is everyone's responsibility.*

Increasing participation of people with disability was championed; however, as one respondent said:

> *It's costing more and more to support students with a disability as more and more students are seeking support. The amount the government is reimbursing is not keeping up with the increased numbers of students needing support.*

Another participant noted that Government assistance was aligned only with domestic student participation, which did not reflect the reality:

> *As with all universities in Australia, depending on the number of international student enrolments and their individual requirements, the costs may be quite considerable if they require interpreters, or captioning, or participation assistants etc. We are not able to claim any of those expenses back so the university must absorb those costs. On average we incur a loss of approximately $150K each year in total, not only due to international student costs but expenses in general.*

Tools and systems

One institution was identified as having a sophisticated approach in place to finance-related questions. DSO contacts were able to quantify in specific detail the amount invested in disability inclusion by student enrolment through distance education and face to face delivery modalities. While highly developed, this institution's data collection was not without limitations, and did not capture the indirect costs of staff time involved in supporting students. The data collection was also used primarily for describing expenditure for reporting and other purposes, but was not used as an analytic tool. The view was formed that the institution was not at this point leveraging the data to its full potential, but could feasibly be used as a reference point to optimising service design and student success. Despite these limitations it is believed that the tools and systems in place provide an appropriate benchmark for other institutions as it is able to quantify cost differentials by mode of delivery, field of education, and disability category. Staff of this institution are happy to share their knowledge on request through the authors.

Summary

The final stage of our study revealed that staff specifically tasked with supporting students with disability were, generally, able to clearly identify and quantify the value of goods and services that their institution invested in, in order to support students with disability, relating to recurrent and non-recurrent expenditure. They were less confident in identifying and quantifying indirect sources of expenditure. However, we found that the estimates varied considerably and did not appear to correlate with the size of their student with disability population, whether expressed in raw numbers or as a proportion of the overall student body. This could have been because the service levels, or models of delivery, vary considerably between institutions. However, we find this unlikely, given both the professional and expert nature of the DSO profession and the legal requirements placed upon institutions under the DDA and the DSE. Rather, we find it probable that the current corporate, governance and reporting structures of higher education institutions make it difficult to determine the full cost of supporting students with disability.

Discussion

This research demonstrates that the primary financial cost of supporting students with disability is borne by the higher education institutions themselves. This is evidenced by the quantifiable financial support provided to universities via the ASSD and DPF components of the DSP and matching them against estimates given by DSO staff at the same institution, where the institution can be identified. Furthermore, the largest amount of funding provided by the Government, via the ASSD, is currently only covering a little over half the eligible expenditure by higher education providers.

The current reality of disability financial expenditure in the higher education sector is akin to an iceberg. There is one portion of investment that is visible – the amount provided by the Australian Government; however, the bulk of investment – that provided by the higher education providers – remains obscured. Annual reports of institutions provide little information, even to many within the institutions themselves.

There are known arrangements that could provide alternate models of data collection and reporting. Many Australian students will already have been part of one of these; namely, the National Consistent Collection of Data on School Students with Disability (NCCD) that occurs on an annual basis. This data is used as an evidence base to collect a nationally coherent collection of school students' needs and gives teachers, schools and sectors information about students with disability and the level of educational adjustment being provided in schools of each jurisdiction and every sector.

In the UK, there has been a long-standing provision of a specific allowance for higher education students, the Disabled Students' Allowance, where the needs of individual students are assessed by independent assessors; provision of personal support (including British Sign Language interpreters), necessary individual equipment, and extra costs such as photocopying and books are provided directly by the UK Government. Higher education institutions are not directly involved in this process with students but the numbers of students who receive the Disabled Students' Allowance functions as the "needs services" collection mechanism for the allocation of support funding.

In Australia, the absolute and proportionate numbers of students disclosing disability has risen unabated since the time that data collection for students with disability was first standardised in 1994. The DSP is one of many causal factors that have contributed to this outcome. Between 2002 and 2020 the Commonwealth recognised the additional support costs for students with disability utilising a model through which universities were reimbursed for their expenditure on students with high support needs, supplemented with a modest amount of performance-based funding. This model incentivised institutional attention on monitoring and reporting against expenditure on individual students. Whilst not precluding institutional focus on more systemic interventions like UDL, considerably less money was allocated towards structural reform than on individual reasonable adjustments. However, the absence of Australian Government funding for systemic and structural reforms for disability inclusion at an institutional level did not stop universities from being more inclusive. Noteworthy examples of the university investment in activities consistent with disability inclusion include the progressive adoption of mental health strategies, compliance with access to premises standards that has lifted the accessibility of university infrastructure, and changes to assessment practice evident under COVID-19 that have reduced reliance on in-person supervised exams.

The model that shapes funding flows for the DSP changed in 2020. This research highlights a growth in the number of students disclosing disability and the number of students represented in ASSD claims, as well as a decrease in the amount of DSP funding per student. As the model shifts from primarily one of reimbursement of expenses for high

support needs to one of distributing funds primarily on institutional share of disability enrolments, it is important to question the likely effects of this policy shift. Incentives to direct institutional focus towards monitoring and reporting on expenditure on individual students, are lower than in preceding decades, and it is unclear whether this will have overall positive or negative effects on the experiences of students with disability.

This research has highlighted a weak correlation between DSP funding and success and retention of students with disability. Any correlation might have been stronger if one were able to look at the success and retention of students with additional support needs who were supported by the program, not just all students with disability. The absence of more interrogatable data around disability remains a significant problem for evaluation of policies relating to students with disability, and is one that places limits on what this research has been able to discover.

As the funding driver changes from being just for some students, to all students with disability, the evaluation problem shifts. This research has endeavoured to assess the impact of a highly targeted program servicing a small proportion of disability enrolments through inferences based on more general disability cohort data. In future, any evaluation of impact will have to consider a diffusely targeted program that encompasses students with additional support costs, and the general disability cohort, with no additional funding beyond annual indexation.

As researchers with a commitment to the rights of students with disability, we support the intent of recent policy changes as being more inclusive of all types of disability and support needs, reducing non-productive administrative overheads in tracking expenditure, and perhaps reducing the potential stigma involved in tracking lower level support costs. We do, however, encourage interested stakeholders, including staff, students and Australian governments, to carefully monitor outcomes for students with disability. There is a risk that a shift in focus from individual costs may have the unintended consequence of limiting access to these services for those who currently benefit. There may be a zero sum trade-off between individual support and systemic interventions when there remains legal commitments to pursue each of these objectives.

Recommendations

As a result of this research, we make the following recommendations:

Recommendation 1

That the Australian Government conduct a holistic review of the participation of students with disability to assure that higher education is free from discrimination, aligned with requirements of the Disability Discrimination Act (1992) (DDA) and the Disability Standards for Education (2005) (DSE), and consistent with Australia's commitment to the Convention on the Rights of Persons with Disabilities (CRPD). This review should include reference to the adequacy of financing to support these policy objectives, encompassing Commonwealth disability-targeted funding, base funding, and institutional resources allocated towards disability. The review should include a provision for students with disability to voice their experiences of higher education.

A key component of financing for students with disability is the DSP. Our study shows that between 2014–2018, the proportion of university expenditure claims reimbursed through the DSP steadily declined. On average, only 58 cents in the dollar claimed by institutions for eligible support costs was reimbursed. Our study also shows that average funding per student with disability has been steadily declining.

This study does not draw conclusions on the adequacy of this funding but has highlighted clear policy goals relating to students with disability. The Convention on the Rights of

Persons with Disabilities (CRPD), the Disability Discrimination Act (1992) (DDA) and the Disability Standards for Education (2005) (DSE) each point towards the rights of students with disability to participate in higher education, free from discrimination, and with sufficient supports in place to participate on a level playing field. Accordingly, it is timely to independently review the extent to which these policy goals are being met, to clarify the adequacy of funding higher education, whilst integrating the voices of students with disability in the process.

Recommendation 2

That the Australian Government undertake an independent audit of higher education providers to quantify the financial investment being made in supporting students with disability beyond the additional funding provided to the sector by the Commonwealth. This audit should encompass the full extent of investment including recurrent, non-recurrent and indirect expenditure.

As our research clearly demonstrates, the only systematic data being collected on disability support investment is for the DSP, which does not represent most of the direct investment. Most of the direct financial support for disability support is made by the higher education institutions. Furthermore, there are significant indirect financial streams, namely the CSP funding by the Commonwealth and the private investment represented by the student contributions made by people with disability. An inability to quantify the totality of the financial investment severely hampers efforts on the part of stakeholders to ensure that disability support is being provided adequately, effectively and consistently. An independent audit would allow a more precise picture to be formed in this respect.

Recommendation 3

That Australian governments (State, Territory and Commonwealth) should require higher education providers to adopt consistent reporting frameworks for describing equity goals and performance, inclusive of activities that enable the participation of students with disability and that quantify financial investment in equity and disability. It is further recommended that the Australian Government work with the sector to redesign and standardise the disability enrolment declaration to capture more valid information about disability services.

This recommendation follows from Recommendation 2 and will further enhance the transparency of information provided by our higher education institutions.

Our study showed that, currently, institutions use diverse approaches to reporting disability support investment in their annual reports. Some adopt quantitative approaches, some qualitative, whilst some provide no information at all. The result is that we have a very unclear picture of the nature or quantum of this investment.

It is not the intention of this study to propose a prescriptive format for this disclosure, but note that is consistent with recommendations associated with research published by the NCSEHE including stronger performance and accountability frameworks (Brett, at, al.2017) and better diagnostic tools for institutions and government (Zacharias, 2017). Whatever framework is adopted, we recommend that it:

- Be quantitative but contextualised with appropriate qualitative information.
- Identify and include distinctions between recurrent, direct and indirect investment.

Whilst a national standard would be ideal, in the first instance, and considering that higher education institutions, with some exceptions, are State entities, State and Territory standards would be a positive first step. As noted in Part II, some institutions already have sophisticated tools and systems in place to track and report on financing for internal purposes.

Appendix A: List of Table A institutions

Australian Catholic University

Charles Darwin University

Charles Sturt University

CQUniversity

Curtin University

Deakin University

Edith Cowan University

Federation University Australia

Flinders University

Griffith University

James Cook University

La Trobe University

Macquarie University

Monash University

Murdoch University

Queensland University of Technology

RMIT University

Southern Cross University

Swinburne University of Technology

The Australian National University

The University of Adelaide

The University of Melbourne

The University of Newcastle

The University of Queensland

The University of Sydney

The University of Western Australia

University of Canberra

University of New England

University of New South Wales

University of South Australia

University of Southern Queensland

University of Tasmania

University of Technology Sydney

University of the Sunshine Coast

University of Wollongong

Victoria University

Western Sydney University

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