



NCSEHE

National Centre for Student
Equity in Higher Education



Curtin University

ISSUES AND TRENDS FOR STUDENTS WITH DISABILITY

Review of NCSEHE-Funded Research

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Make tomorrow better.

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1. BACKGROUND, PURPOSE AND AIMS

As identified by many researchers working in the field of disability research, there is a lack of comprehensive information as to: the participation and performance of students with disability, the various pedagogical issues impacting their engagement with higher education, and the best approach to developing services to support students with disability. This review focuses on presenting the key findings, recommendations and future directions for further research for the equity group of students with disability.

Typically, disability is described as “any limitation, restriction or impairment which restricts everyday activities and has lasted, or is likely to last, for at least six months” (Australian Bureau of Statistics, 2013). The Federal Disability Discrimination Act 1992 (2015) defines ‘disability’ more specifically as:

- Total or partial loss of the person’s bodily or mental functions; or
- Total or partial loss of a part of the body; or
- The presence in the body of organisms causing disease or illness; or
- The presence in the body of organisms capable of causing disease or illness; or
- The malfunction, malformation or disfigurement of a part of the person’s body; or
- A disorder or malfunction that results in the person learning differently from a person without the disorder or malfunction; or
- A disorder, illness or disease that affects a person’s thought processes, perception of reality, emotions or judgment or that results in disturbed behaviour.

According to the most recent Survey of Disability, Ageing and Carers (Australian Bureau of Statistics, 2016), people with disability represent 18.3 per cent of the Australian population, with roughly half that figure accounting for working age Australians. The Australian Network on Disability (2016) indicates one in six Australians have some form of hearing loss, over 350,000 Australians have a vision impairment, roughly 10 per cent of the population has dyslexia, and an estimated 45 per cent of the population will experience a mental illness within their lifetime.



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As per the Act, the definition of disability covers persistent, previously existing, predisposed future disability, and those imputed to a person (Disability Discrimination Act 1992, 2015). It is worth noting such a normative definition of disability and the classical categorisations which are associated with it can be problematic when the full spectrum of impairments which fall under the category of 'disability' are considered, as the reports commissioned by the NCSEHE reveal that disability is an exceptionally diverse field, particularly more so than the current taxonomy would suggest.

In Australia, tertiary education institutions are typically guided by the definition presented in the Disability Discrimination Act 1992 in order to offer specialist disability services to meet their obligations to students with disability, as well as develop course and campus design measures to provide inclusive curriculum and building design to accommodate students with a variety of impairments. Students are required to provide documentary evidence of disability or an ongoing health condition and how their access and/or study may be affected (Cupitt, Costello, Raciti, & Eagle, 2016). While institutions may differ in their methods of supporting students with disability, identifying where reasonable adjustments can be made to the learning process is a key aspect of reducing the detrimental impacts of disability on university studies. This can involve a number of supports including the loan of equipment (e.g. screen-reading software), and reformatting of course materials to accommodate specific impairments (e.g. reformatting for large print), or the provision of in-class and tutorial support. This may also include access to learning/academic support, counselling, assessment accommodations, or financial advice (Cupitt et al., 2016).

As a symbol of the Australian Government's commitment to make higher education more inclusive, the landmark report *A Fair Chance for All* (1990), established the rationale for developing objectives, targets and strategies to increase equity group participation in higher education, including students with disability (Brett, 2016). Current research has shown that students with disability have achieved substantial growth in both enrolments and representation in higher education since 2007 (Koshy & Seymour, 2015). While these outcomes are promising, the particular disadvantages experienced by students within this equity group are not adequately addressed within higher education institutions, as support services designed for these students are at times insufficient and often under-utilised. KPMG's (2015) evaluation of disability support programs found there are still gaps in awareness amongst students with disability as to the availability of university resources and how well their specific needs will be met. An issue also impacting students' access to resources is the diversity of disability classifications, which means that many students' specialised needs are not met by current support services.

Developing an understanding of how universities might best provide support to students with disability in order to ensure successful outcomes is a particularly pressing issue for equity policy development. Unlike many other equity groups, students

with disability require more support throughout their studies rather than before they commence, as they often display the capacity to succeed once their support needs have been met.

The purpose of this review is to:

- Identify detailed characteristics and national statistics pertaining to students with disability;
- Determine whether mechanisms utilised by the higher education sector to facilitate the successful participation of students with disability (including institutional policy, learning environment design, pedagogy, service delivery and other mechanisms) are meeting higher education and equity policy objectives;
- Highlight particular challenges evident in supporting the participation of specific cohorts of students with disability; and
- Identify current gaps in implementation of policies, services and supports that would better enable the participation of students with disability.

Based on this analysis, the review aims to also posit recommendations aimed at improving the effective participation of students with disability across the following domains and groups:

- Institutional staff that influence the accessibility of higher education learning environments;
- Equity practitioner policy and program implementation;
- Institutional administration of disability support services; and
- Future research priorities.

2. SAMPLE AND APPROACH

As part of its national mandate to highlight and address issues pertaining to student equity in Australia, the NCSEHE has undertaken an analysis of recent findings from research funded via the NCSEHE Student Equity in Higher Education Research Grants Program, with a focus toward students with disability. The findings to be included in this review were to:

- Identify key aspects of students with disability and the retention, success and employment of graduates within this equity group;
- Detail critical pedagogical issues and challenges involved in facilitating the learning process for students with disability;

- Assess current support policies and strategies intended to assist students with disability to achieve success in higher education; and
- Generate identifiable findings which could serve to inform policy, research and practice in other institutional contexts.

Based on the criteria above, nine studies were identified for inclusion in the review; six reports with a specific focus on students with disability, and three with a broader focus but detailed crucial findings for this equity group. Those identified are presented in the following table.

Table 1 NCSEHE funded studies included in review

Study Number, Title & Authors	Date	Method(s)	Status	Domain Availability
2014 and 2015 Funding Round NCSEHE Research Reports (students with disability focus)				
1. Kilpatrick, S., Johns, S., Barnes, R., McLennan, D., Fischer, S. & Magnussen, K. Exploring the Retention and Success of Students with Disability	2016	Mixed – student data analysis, and semi-structured interviews with institution representatives	Completed	Report available at ncsehe.edu.au/publications/exploring-the-retention-and-success-of-students-with-disability/
2. Fleming, M. & Grace, D. Best Practice in Supporting Indigenous Students with Disability in Higher Education	2016	Mixed – literature review, data analysis of DET data, and disability advisor survey	Completed	Report available at ncsehe.edu.au/publications/best-practice-in-supporting-indigenous-students-with-disability-in-higher-education/
3. Owen, C., McCann, D., Rayner, C., Devereaux, C., Sheehan, F. & Quarmby, L. Supporting Students with Autism Spectrum Disorder in Higher Education	2016	Mixed – literature review, survey, and photo-voice analysis of students with disability	Completed	Report available at ncsehe.edu.au/publications/supporting-students-with-autism-spectrum-disorder-in-higher-education/
4. Brett, M., Harvey, A., Funston, A., Spicer, R. & Wood, A. The Role of Inherent Requirement Statements in Australian Universities	2016	Qualitative – desk top audit; usage of Inherent Requirement Statements across 38 Australian Universities	Completed	Report available at ncsehe.edu.au/publications/the-role-of-inherent-requirement-statements-in-australian-universities/

Study Number, Title & Authors	Date	Method(s)	Status	Domain Availability
5. Ganguly, R., Brownlow, C., Du Preez, J. & Graham, C. Resilience/Thriving in Post-Secondary Students with Disabilities: An Exploratory Study	2015	Mixed – analysis of survey data, and deductive analysis of interview data	Completed	Report available at ncsehe.edu.au/publications/resiliencethriving-in-post-secondary-students-with-disabilities/
6. Kent, M. Access and Barriers to Online Education for People with Disabilities	2016	Mixed – quantitative and qualitative analysis of survey and interview data.	Completed	Report available at ncsehe.edu.au/publications/access-and-barriers-to-online-education-for-people-with-disabilities/
Other relevant 2014 and 2015 Funding Round NCSEHE Research Reports				
7. Li, I.W., Mahuteau, S., Dockery, A.M., Junankar, P.N. & Mavromaras, K. Labour Market Outcomes of Australian University Graduates from Equity Groups	2016	Quantitative – analysis of anonymised student data and Australian Graduate Survey data	Completed	Report available at ncsehe.edu.au/publications/labour-market-outcomes-of-australian-university-graduates-from-equity-groups/
8. Zacharias, N., Cherednichenko, B., Ryan, J., George, K., Gasparini, L., Kelly, M., Mandre-Jackson, S., Cairnduff, A. & Sun, D. Moving Beyond 'Acts of Faith': Effective Scholarships for Equity Students	2016	Qualitative – case study analysis of 3 Universities survey responses.	Completed	Report available at ncsehe.edu.au/publications/moving-beyond-acts-of-faith-effective-scholarships-for-equity-students/
9. Richardson, S., Bennett, D. & Roberts, L. Investigating the Relationship Between Equity and Graduate Outcomes in Australia	2016	Mixed – analysis of Australian Graduate Survey data, and interviews from OLT commissioned project	Completed	Report available at ncsehe.edu.au/publications/investigating-the-relationship-between-equity-and-graduate-outcomes-in-australia/

3. SUMMARY FINDINGS

Having reviewed the studies, the findings across these reports have been aggregated under the three key areas of (3.1) student cohort characteristics, (3.2) pedagogical issues and challenges and (3.3) support policies and strategies and presented in the following sections. Sources of findings are indicated by the number labelled against each study in the previous table, i.e. 1-9.

3.1 Student Cohort Characteristics

3.1.1 Disability: Definitions, Indicators, and Data Collection

- Department of Education statistics categorise students with disability by six classifications: hearing, learning, mobility, vision, medical, and other [1].
- The 'other' category for disability classification often includes broad disability types such as mental illnesses and autism spectrum disorders [1, 3, 6].
- The lack of disaggregated data in regards to mental illnesses in particular is problematic given the large percentages of students disclosing such disability [1, 6].
- As noted by Brett (2016), "as long as the disability indicators remains superficial and poorly aligned with robust theoretical frameworks, an evidence base that might trigger more innovative approaches is absent" (p. 104).

3.1.2 Representation at University

- In the years since 2007, the percentage of enrolled students with disability at Australian universities has increased from 4.4% (in 2007) to 5.8% (in 2014) (Koshy & Seymour, 2015).
- There were no significant changes in the distribution of disability types between 2007 and 2013. However, there has been a shift toward the 'other' category, as distribution across hearing, learning, mobility, visual, and medical has reduced slightly [1].
- Smaller universities with 10,000-30,000 students have a larger proportion of commencing and enrolled students with disability, compared to large universities with more than 30,000 students [1].
- As with issues raised in the previous section the data collection provides some, but not all, the relevant information. Data on disability only captures self-disclosed or medically verified impairment which can lead to inaccurate figures for less visible disability types such as mental illness and learning disabilities [1, 3, 6].

3.1.3 Retention and Success

- When comparing students with disability to the total student population, students with disability have a slightly lower success rate and consistently lower retention rate [1, 9].
- In comparison to the total disability cohort, students with learning, medical, and 'other' categories exhibited consistently lower retention and success rates [1, 8].
- Scholarship provision resulted in varied retention and success rates for students with disability, dependant on institution and scholarship type: [8]
- At Deakin University, scholarship recipients had greater retention and success rates than non-scholarship recipients.
- Queensland University of Technology recipients had higher retention than non-scholarship receiving students with disability, but lower success than all non-recipients.
- Those receiving scholarships at University of Sydney had higher success rates than non-scholarship students with disability, but lower success than all other students and lower retention than both groups of non-recipients.
- Success rates of students with disability according to university size have converged over time [1].

3.1.4 Labour Market Outcomes

- Students with disability experience significant labour market disadvantage following graduation [7, 9].
- Graduates with disability were less likely to be in work than those without, and compounding disadvantage decreased the likelihood of being employed further [9].
- Graduates with disability earn less than those without disability [9].
- The few characteristics resulting in an increased likelihood of employment following graduation for students with disability were: [9]
 - Engagement in paid employment during the final year of studies;
 - Gender, with females more likely to be employed than males;
 - Attending a GO8, ATN or IRUA affiliated institution;
 - Studying natural and physical sciences, agriculture, or health; and
 - Age, with graduates aged 22 or under more likely to be employed.

3.2 Pedagogical Issues and Challenges

3.3.1 Support Seeking Behaviour

- Students who identify and seek support for their disability have greater academic success and display retention and completion rates comparable to overall student cohort rates [1, 3, 5].
- Disclosure rates are likely to be unrepresentative of overall need for services as stigma continues to be an issue, particularly for students with non-physical disability [1, 2, 3, 4, 5, 6].

3.3.2 Institutional Culture

- Current disability standards legislation regarding built environment design tends to be focussed on mobility and physical access, with little attention paid to inclusive design for other disability types [3].
- There has been broad acknowledgement of the need for significant overhaul of institutional culture concerning disability [1, 2, 3, 5].
- Issues continue to arise whereby academic and administrative staff are not adhering to institutional principles and standards (such as applying reasonable adjustments) regarding students with disability [2, 4, 5, 6].

3.3.3 Professional Development and Training

- Cases have been identified whereby staff have not provided educational adjustments when provided with appropriate documentation, in potential violation of the Disability Discrimination Act 1992 [5].
- Mandatory disability awareness training modules and professional development training in consultation with disability practitioners and support workers represent an appropriate means of ensuring institutional standards are adhered to [3, 5].
- Consistent discussion regarding the need for more training in disability awareness suggests this must be a core part of institutional business, and disability practitioners should be involved in the training of all staff to ensure planning, design, administration, and education staff are aware of the impact of their work on students with disability [1, 2, 3, 4, 5, 6].

3.3.4 Educational Content Delivery

- Learning spaces themselves – both physical and digital – can present significant barriers to participation for various disability groups [1, 2, 3, 6].
- E-learning spaces have been touted as particularly beneficial for some students with disability, however current tools and platforms used do not have the capacity to address the needs of many students with disability, for example:
 - The problems of hearing-impaired students may be magnified in the context of e-learning where audio recordings are more common than visual learning aids [6].
 - Students with autism spectrum disorder can experience significant barriers when faced with overstimulating online platforms [3].

3.3 Support Policies and Strategies

3.3.1 Adequate Service Delivery

- A number of students with disability are unaware of the range of support available through university services, or that support exists at all [5, 6].
- Many institutions lack culturally sensitive support services for students from various cultural backgrounds [1, 2].
- Support options need to be expanded beyond face-to-face provision in order to accommodate students unwilling to engage with such services as well as online students with disability [2, 3, 6].
- The provision of services for students with non-physical disability represents an area of disability support requiring significant further investment by universities [3, 6].

3.3.2 Reasonable Adjustments Provision

- Teaching staff at some institutions appear to be unclear as to how and when reasonable adjustments should be provided, especially when applied to students with varying disabilities [1, 3, 5].
- Course integrity and equality of opportunity are common concerns raised by staff regarding reasonable adjustments, displaying a lack of understanding as to the fundamental rationale for providing reasonable adjustments [1, 3, 4, 5].
- There is an inconsistent approach across institutions regarding the provision of Learning Access Plans (LAPs) as an effective means of applying reasonable adjustments, though most are developed with fundamental principles in mind [1, 3].

3.3.3 Inherent Requirement Statements

- The provision of clear details concerning inherent requirements appears to be inconsistently dealt with at an institutional level [4, 5].
- There is a paucity of consideration given to the potential conflicts between signalling inherent requirements, transparency in their application, compliance with anti-discrimination legislation, and serving the best interests of students [4].

4. SPECIFIC RESEARCH FINDINGS

4.1 Exploring the Retention and Success of Students with a Disability

Though the number of students with disability at university can vary significantly across the country, a closer look at the figures show student share is another issue. Kilpatrick et al (2016), showed that the distribution and share of students with disability shows little variation across university groupings, with only a slightly increased share studying at Regional Universities Network affiliated institutions. In addition to this, the success and retention of these students is also relatively consistent across university groupings, albeit still lower than the total student population's success and retention figures.

Despite this relative lack of difference in share and performance, the authors identified attitudes and options for support varied greatly. Few institutions had easily accessible information regarding the support offered at the institution, and some did not have a supportive approach to the use and implementation of Disability Action Plans. However, some institutions were identified as beginning to move disability support services to student services divisions, indicating a positive move away from framing university provided disability support under a medical model to an inclusivity model to assist in retention and success.

4.2 Best Practice in Supporting Indigenous Students with Disability in Higher Education

There is a wealth of literature pertaining to the challenges faced by Indigenous students across the education system, though there remains a relative lack of analysis focussing on the particular difficulties associated with identifying as an Indigenous student with disability. As with many cross-sectional equity identities, issues in access, participation, and success are often amplified for such students, as Fleming and Grace's report (2016) identifies. As is often the case for Indigenous students in general, a lack of cultural awareness can impede their ability to embody a sense of belonging at universities, and the lack of coordination between Indigenous education units (IEUs) and disability units (DUs) identified by this research only serves to exacerbate these disadvantages.

This uncoordinated approach goes further than a mere lack of communication between IEUs and DUs. The project identified that less than half of the surveyed DUs asked for details on cultural heritage and identity upon interaction with the support services. This coupled with the lack of coordination suggests cultural awareness concerning the nuanced difficulties faced by Indigenous students with disability needs to be included as part of standard training across DUs across Australian universities.

Along with significant improvements in communication and consultation between IEUs and DUs, the authors recommend such changes are vital for ensuring Indigenous students with disability are best served by the support services available through Australian universities.

4.3 Supporting Students with Autism Spectrum Disorder in Higher Education

For students with disability, the concept of universal design in teaching and assessment is often touted as a critically neglected principle. As Owen et al. (2016) discuss, students with autism spectrum disorder (ASD) can face significant barriers to higher education participation in this regard, as assessment requirements such as group work and oral presentations can present insurmountable challenges for those with particularly prominent issues with social interaction. As mandated by federal disability rights legislation, the authors note that mechanisms such as reasonable adjustments delivered through disability action plans and other disability supports (such as mentoring and transition support) are showing to be effective methods for addressing teaching and learning challenges for students with ASD.

The most significant finding of this report however, is the way in which the design of university spaces (both physical and digital) can affect a student with ASD's ability to engage in higher education. Whilst digital platforms which are overly complex, visually stimulating, and illogically structured can present significant challenges to participation, it is the built environment which is often overlooked as a potential barrier for students with ASD. Episodes of sensory overload and forced social interaction are only heightened by not having suitable quiet zones for these students to escape to, and creative design elements can lead to difficulties navigating for those students with ASD who have trouble following 'illogical' signage or pathways. Through their analysis of the impact physical space has on students with ASD, Owen et al. recommend a series of measures institutions can take as they redevelop their campus spaces to be more inclusive to all students.

4.4 The Role of Inherent Requirement Statements in Australian Universities

Students with disability should have every right to participate in higher education, despite their level of disadvantage. However, it is incumbent upon universities to appropriately communicate to prospective students the particular capabilities required to adequately engage in a course of study, in order that they may make an informed decision about the expectations for a

course of study they intend to begin. For this reason, inherent requirement statements have become a means by which universities may signal to students whether a particular course may present significant difficulties for those with disability. However, this research shows the practice is far from consistent across the higher education sector.

As Brett et al. (2016) note throughout the report, inherent requirement statements are only provided for a minority of courses, and the level of detail can vary greatly between institutions. With no standard guidelines for the construction of inherent requirement statements or coordination across the sector as to which courses need to include them, statements which should be a means of providing crucial information to prospective students to foster inclusion, may risk falling foul of anti-discrimination legislation through exclusionary language and practices. Given the inconsistent approach to what is an exceptionally delicate balancing act between evolving professional standards, federal and state legislation, and institutional values and policies, this report highlights the dire need for further detailed and systematic analysis of inherent requirement statements.

4.5 Resilience/Thriving in Post-Secondary Students with Disability

As the first research project funded by the NCSEHE focussed on students with disability, Ganguly et al.'s (2015) report detailed the dire need for further research into the university experience for these equity students. The authors found that resilience amongst students with disability, and levels of engagement with university study and life were consistently higher amongst those students with disability on a GPA greater than 5.5. These findings indicate that for students with disability who are able to achieve greater than a passing grade through adequate support and study methods/habits which facilitate active participation in their studies, their level of disadvantage is not particularly indicative of their capacity for resilience and ability to thrive throughout university.

Perhaps the most significant and alarming finding of this report, was the identification by a number of interview subjects of incidents where teaching staff disallowed reasonable adjustments provided by disability support policies (such as disability action plans) at the university. As some of the most critical support mechanisms which allow for equitable participation amongst students with disability who may face unavoidable, sporadic interruptions to their studies, it is particularly concerning that disability support policies may be circumvented where teaching staff may not have adequate disability awareness training. Not only is the knowledge of such occurrences alarming due to the likelihood they may cast doubt over the reliability of evaluative data analysis of such support policies, but these incidences appear to violate the spirit of the Disability Discrimination Act 1992, as well as international declarations on the rights of individuals with disability.

4.6 Access and Barriers to Online Education for People with Disabilities

Online education is a rapidly growing source of higher education participation, particularly for students with disability for whom structured attendance at university campuses may present an unfeasible study option. As a major online provider, Open Universities Australia (OUA) serves as the source of Kent's study (2016) on the issues faced by students with disability in online education, which include unique challenges associated with the nature of multi-institutional online education provided by OUA. The research found that as students are required to access courses across a number of universities throughout their degree, students with disability are forced to go through disclosure processes numerous times in order to access necessary accommodations and support available through each institution. A major finding of the student surveys conducted in this research was many students found the lack of an option to automatically disclose placed an unnecessary administrative burden on them, and risked enflaming concerns and anxieties surrounding their self-efficacy and reception amongst teaching staff by repeatedly having to identify as a student with disability.

Beside administrative and technical difficulties faced as a result of the evolving field of online education, the study made an alarming finding concerning the current state of universal design principles and course structure in fully online higher education such as that offered by OUA. Issues with universal design have been identified in blended modes of study available on campus, however this research shows that purely online higher education instruction exhibits many of the same issues due to courses largely attempting to recreate on-campus teaching methods rather than utilising the opportunities for more inclusive course design offered by the online space. In addition to this, rather than presenting more flexible term structures, many students surveyed noted the continuous study periods offered by OUA to be more inflexible than on campus courses, one of the common reasons students with disability turn to online education in the first place.



5. RECOMMENDATIONS AND FUTURE RESEARCH DIRECTIONS

The reports consulted for this analysis each made a range of recommendations resulting from the literature consulted and from their own original research findings. Whilst some of the recommendations were unique according to the specific research conducted, there are a number which suggest similar policy or research actions be taken. As such, we have conducted a synthesis of the most pertinent recommendations from the listed reports to provide an indication of where the current gaps in research and practice lie, in order that they may provide direction as to where further research and policy action needs to be directed.

5.1 Synthesis of Recommendations

5.1.1 Recommendation 1

That disability related data collection and performance indicators be refined to generate a better understanding of the participation of students with disability in higher education.

A number of reports found significant deficiencies in the classification of disability types, particularly concerning large percentages of students such as those with mental illnesses or medical impairments. Some classifications have a tendency to relegate large groups of unrelated disability types to the 'other' classification, which can inhibit support delivery and student cohort analysis. However, merely providing additional classification types for students to self-identify may not sufficiently address the fundamental flaws inherent in such data collection. Another option may be to standardise classifications in line with other comprehensive datasets on disability classifications, such as the Survey of Disability and Carers Census.

The point is also raised repeatedly that data collection relies heavily on self-identification, acceptance, and disclosure of a student's disability, and as such this data is highly unlikely to be entirely indicative of the actual representation of students with various disabilities at university. Additional identification and data collection methods may need to be considered, particularly for accurately measuring statistics regarding retention, performance, and success.

5.1.2 Recommendation 2

Universities must ensure Inherent Requirement Statements are clear, transparent, and in accordance with the Higher Education Standards Framework, Disability Discrimination Act 1992, and Disability Standards for Education 2004.

Inherent requirement statements provide universities with a means to communicate to students with disability whether they are likely to experience insurmountable barriers to completion of a course of study, where particular physical proficiencies are required to effectively demonstrate learning outcomes have been achieved. However, as legislative measures such as the Disability Discrimination Act 1992 and Disability Standards for Education 2004 dictate, no student with disability may be unfairly excluded from a course of study because of their disability. As a result, inherent requirement frameworks must be carefully described and revised as necessary to ensure full compliance with anti-discrimination legislation.

Additionally, the report recommended that universities "monitor the impact of inherent requirements on prospective, enrolled and graduating students" (Brett et al., 2016, p. 3). This would allow universities to ascertain whether inherent requirement statements are providing an effective means of communicating realistic expectations regarding university course content to students with disability, and to measure their effectiveness for the purposes of informing reasonable adjustment provision.

5.1.3 Recommendation 3

Pedagogical methods, materials and technology should (where possible) adhere to the principles of universal design, and further efforts should be made to provide a variety of options for engaging with learning content and spaces.

Given the nature of particular disabilities (such as hearing or vision impairments) efforts should always be made to provide content through a variety of modes (i.e. closed captions or audio files) in order to ensure no student with disability is unable to engage with learning material provided for the purpose of achieving the learning outcomes of a particular course. However, additional participation options to address barriers for students with other impairments, such as learning disabilities, mental illnesses, or persistent medical conditions, must also be considered to ensure equitable participation in higher education is achievable. Such measures to reorient pedagogical design toward universal, inclusive environments for all students could have the additional benefit of reducing the necessity for disability service provision to address disadvantages experienced by students with disability when participating in normative learning structures.

Ensuring group collaboration is not mandated where it is not required to achieve learning outcomes to cater for students with mental illness and learning disabilities who may not thrive in such environments; providing low sensory stimulation

spaces to enable students with autism spectrum disorders to retreat; enabling students to learn at their own pace rather than mandating persistent engagement through weekly assessment, are a few specific options suggested throughout the reports in order to improve the participation of students with disability.

5.1.4 Recommendation 4

That disability awareness training be made a mandatory component of induction materials and institutional policy training modules for all administrative and academic staff, to ensure staff are competent in their understanding and administration of disability support provisions.

A common theme throughout the disability support research has been that some staff members are unaware of, and/or unwilling to adhere to, institutional disability support provisions. Lack of communication between disability support units and teaching staff as to the requirements for accommodations and adjustments has occasionally driven such a disconnect in policy and practice, however a number of reports also identified lack of knowledge and understanding of disability support provisions as significant barriers to application of policy. It is therefore imperative institutions make further efforts to require completion of disability awareness training to ensure all staff are aware of practices and policies concerning students with disability. Additionally, there is a need to include in such material extra information concerning intersectional understanding of the particular challenges for students who identify with other equity classifications (particularly Indigenous and NESB) in addition to students with disability.

5.1.5 Recommendation 5

That the option for increased agency be provided to students as to the management of information and disclosure regarding their disability.

Concerns around disclosure have been raised throughout most of the reports as a persistent point of contention for students with disability. Part of the problem with disclosure involves the prevalence of stigma regarding many disability groups, which may be addressed through increased awareness training and more deliberate attempts to normalise disability in the curriculum. In some cases though, the way in which disclosure processes are perceived as onerous and confronting results in lack of disclosure, particularly for disability groups prone to stigmatisation. In environments such as OUA where students are engaged at multiple institutions, the necessity for repeated self-disclosure is not only time-consuming but occasionally financially burdensome where official documentation is required. As such, greater flexibility for students wishing to automatically disclose where necessary should be an option, and greater communication concerning disclosure processes and options should be made available.

5.1.6 Recommendation 6

Develop a more holistic approach to support for students with disability, providing study and organisational skills in conjunction with Learning Access Plans and in consultation with faculties and other educational support units (such as Indigenous Education Units for Indigenous students with disability).

The need for partnerships between disability support providers, Indigenous Education Units, and faculty as part of a whole of university approach to supporting Indigenous students with disability was a specific recommendation of Fleming and Grace's report (2016). Along with ensuring Indigenous students play a key role in the decision making process for support initiatives, these measures would go a long way to not only recognising the intersectionality of multiple disadvantages faced by Indigenous students with disability, but also provide scope for greater partnership and communication between student service providers throughout institutions.

Additionally, the broadening of service delivery to include non-academic skills development support alongside formal equity policy implementation would assist in reducing further disadvantages faced by students with disability.

5.1.6 Recommendation 7

There is a need for support services and study terms to offer more flexible options for students with disability.

It has been noted that disability support/health services often only operate on campus, during daytime hours, and on weekdays. This is a significant issue for many students with disability who may have work or class schedule commitments which affect their ability to seek appropriate and timely support (Ganguly, 2015). Given university students tend to have less consistently structured schedules, greater flexibility in the delivery of support services associated with institutions should be considered to adequately address those student's needs.

In a similar manner there is scope for more flexibility in study term options to address learning preferences of students with disability. The perpetual study model of OUA's 13 week study periods has been identified as a model which may be beneficial to some who prefer consistent engagement and structure, yet significantly detrimental to others who require breaks between study periods to recoup and consolidate what they have learnt. It is recommended therefore that greater choice in study term intensity and structure be provided to students when considering course delivery.

Whilst the NCSEHE funded a substantial range and depth of research concerning students with disability, many of the reports identified a number of future directions for higher education disability research to take in order to further understanding of this equity group.

5.2 Future Research Directions

5.2.1 Achievement and Retention

A number of the reports suggested directions for further research to better understand a range of aspects impacting on student achievement and retention:

“More research is needed into institutional and other factors that impact on the retention and success of students with a disability, and particularly for different disability types. Such research should adopt a student lifecycle focus, incorporating outreach and recruitment, as well as transition out of university, including transition to a vocation or career” (Kilpatrick et al., 2016, p. 51).

“Further research needs to be conducted to clarify and/or verify the responses of participants who scored high or low in resilience. If this finding [GPA < 5.5 associated with low resilience] holds true in a larger sample and across different disability categories, it has enormous implications for improving the retention rates of students with disabilities” (Ganguly et al., 2015, p. 57)

5.2.2 Disability Classifications and Cohort Characteristics

Although strongly recommended in a number of reports that classifications for disability types should be expanded, Kilpatrick et al. (2016) identified that further research might assist in the implementation of greater quality in data collection:

“Further research should be conducted to identify appropriate methods of disclosure and data collection, including Commonwealth data collection and reporting, to more accurately reflect retention and success statistics for students by disability type” (Kilpatrick et al., 2016, p. 51).

Some recommendations for further research indicated more detail is needed on specific disability types and cohort characteristics:

“Individuals with ASD represent an important, growing population of higher education students [...] and further research is needed to determine best practices [in pedagogy and support for these students]” (Owen et al., 2016, p.20).

“Further research would be useful to identify further the particular challenges of female students with a disability” (Ganguly et al., 2015, p. 60).

“These two categories [mental illness and medical impairments], to date, also have little or no literature around inclusive design in learning and teaching in higher education, particularly in an eLearning context [...] research into this area must be seen as a matter of significant priority” (Kent, 2016, p. 148).

5.2.3 Pedagogical Approaches and Support Programs

Although findings regarding pedagogical approaches and support policy formed the bulk of recommendations, a few areas for further research were identified, particularly in regards to students with Autism Spectrum Disorders (ASD):

“Further research on a comparison between mentoring programs, the approaches within institutions that would best supplement this approach, and the effectiveness of the approaches in terms of student experience and academic progression is required” (Owen et al., 2016, p.67).

“Further research needs to be undertaken to clarify the type of support available to higher education students with ASD under the NDIS” (Owen et al., 2016, p.7).

“Further research is required to ascertain from academic, teaching, professional and administrative staff their current knowledge, and the types of supports required to increase their skills in working with students with ASD. Moreover, it is important that this is combined with efforts to develop broader public awareness of ASD and foster a culture in which difference is not only recognised but also celebrated” (Owen et al., 2016, p.67).

5.2.4 Inherent Requirements

In addition to providing specific recommendations in regards to inherent requirements, Brett et al.’s report (2016) noted a couple of areas where further research could inform analysis and development of inherent requirements:

“Universities are simultaneously seeking to: increase enrolments by promoting the participation of students with disability; provide transparency for all prospective students on essential course requirements and skills; ensure that reasonable adjustments are made for enrolled students as required by legislation; promote the employability of all students; and satisfy the demands of professional and registration bodies, all in an increasingly complex and competitive environment. The potential tensions between these objectives, and their implications for prospective, enrolled and graduating students, require further research and investigation” (Brett et al., 2016, p. 3).

“Further research is required to assess the impact of requirements on potential, enrolled and graduating students, and that particular work is required to capture directly the voices of affected students” (Brett et al., 2016, p. 19).

5.2.5 Employment Outcomes

As with all equity groups, it is not enough to address only those disadvantages which affect access and participation, but also those relating to success and transition into employment. Recent research (Li, Mahuteau, Dockery, Junankar & Mavromaras, 2016; Richardson, Bennett & Roberts, 2016) has shown some groups display equitable employment outcomes compared to overall student cohorts, but others – including students with disability – still lag behind:

“The most pressing priority for research and policy innovation is around employment. It is concerning that the labour market participation statistics for graduates with disabilities are so different from those evident with those without disability” (Brett, 2016, p. 104).

5.2.6 Recruitment and Outreach

Students with disability continue to be severely underrepresented in higher education. In 2015, almost one in five Australians were identified as persons with disability (Australian Bureau of Statistics, 2016), yet students with disability still account for less than six per cent of the student population. Although there is an implicit focus on recruiting students from other equity groups through outreach and recruitment initiatives – such as low SES, Indigenous, regional and remote, women in STEM, and non-English speaking background – there are few, if any, initiatives targeted at attracting students with disability to universities.

“Further research into the impact of relationships between NDCOs and universities on the recruitment of students with disability is recommended [...] research should adopt a student lifecycle focus, incorporating outreach and recruitment” (Kilpatrick et al., 2016).

“Students in a number of impairment categories suggested that universities actively promote themselves as disability friendly, and more specifically welcoming and accommodating of specific disability communities and impairment types” (Kent, 2016).

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